

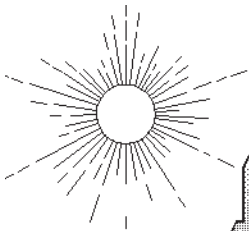
**ADAW**

4529 W. Park Place  
Glendale, AZ 85306-1512

PRSRT STD

U.S. POSTAGE PAID

PHOENIX, ARIZONA  
PERMIT NO. 701



**ADAW**

**Arizona Desert Aire Waves**

Vol 33, No 8

August 2008

**ARE YOUR DUES CURRENT?**

**Check Your Club's Listing  
on Page 2 for Information.**

## **SCHEDULE of EVENTS**

### **SARC**

Aug 6th  
Scottsdale Senior Center  
7:30 PM

### **AARC**

Aug 14th  
Red Cross Bldg. - Phoenix  
7:30 PM

### **OPRC**

Sep 10th  
Arizona Building at Tucson Medical Center  
7:15 PM

# ADAW MEMBER CLUBS

## ARIZONA AMATEUR RADIO CLUB

The Arizona Amateur Radio Club meets on the **SECOND THURSDAY** of each month at 7:30 p.m. in the Red Cross Building, located at 6135 N. Black Canyon Hwy., Phoenix ( N. of Bethany Home Rd., E. side of Freeway on frontage Rd.).

President	Gary Hamman	K7GH	602.996.8148
Vice President	Bob Milburn	KB7TWF	480.991.1702
Secretary	Larry Penrod	AC7FC	602.955.0349
Treasurer	Bob Hodges	K7JJT	602.274.1647
Red Cross Liason	Larry Penrod	AC7FC	602.955.0349
ARCA Liason	Dick Baum	NS7A	602.870.1135
Membership	Bob Hodges	K7JJT	602.274.1647

AARC c/o Bob Hodges, K7JJT, P.O. Box 56483, Phoenix, AZ 85079-6483. DUES: \$15.00/YR, Prorated (\$18.00 Family, \$9.00 Student), MEMBERSHIP YEAR BEGINS FEB. 1.

## SCOTTSDALE AMATEUR RADIO CLUB, INC.

The Scottsdale Amateur Radio Club meets the **FIRST WEDNESDAY** of each month at 7:30 p.m. in Room 8 at the new Scottsdale Senior Center located at 1700 N Granite Reef Road (west side of Granite Reef Rd., 50 yards north of McDowell Rd. Parking on site). The club also holds a net every Tuesday night at 7:00 p.m. on the 147.78/.18 repeater.

President	Paul Finell	W7EFQ	602.998.7024
Vice President	Bob Johnsen	K7TR	480.946.1427
Secretary	Paula Jones	KD7TNB	
Treasurer	Tom Barry	W7UF	480.998.8494
Past President	Bob Johnsen	K7TR	480.946.1427
Membership	Terry Cross	NK7T	480.969.8943
Board Members	Jerry Jacques	KD7GYM	
At-Large	Terry Cross	NK7T	480.969.8943
	Ed Nickerson	NU7S	480.949.5162

SARC, P. O. Box 10878, Scottsdale, AZ 85271-0878. Phone: 602.735.3988. DUES: \$20.00/YR, (\$10.00/Add'l Family Member).

## CENTER FOR AMATEUR RADIO LEARNING

The Center for Amateur Radio Learning is a hands-on amateur radio station, W7ASC, located within the Arizona Science Center at 600 E. Washington, Phoenix. Board meetings are held the last month of each quarter at the AZ Science Center. Annual meeting for all volunteers is held the **third Saturday** of January. Watch ADAAW for details.

President	Bob Burleson *	KG7QJ	480.961.1109
Vice President	Rick Checketts**	KA0KZB	480.898.9158
Secretary	John O'Neal	KC7KML	480.345.7800
Treasurer	Larry Foster	KC0JON	480.767.0593
Board Members	George Stickney	W7BXW	480.964.3870
	Ray Waddoups	KE7FUM	480.654.9883
	David Zinder	W7MD	602.358.7826
	Skip Moretti	K7OAH	602.952.2649

\* Scheuling and Membership

\*\* Technical Committee Chair

Web Master - Roger Buel, W9NCQ - 602.493.7242

For information: Email to [carl@w7asc.org](mailto:carl@w7asc.org) or call Bob Burleson, KG7QJ at 480.961.1109. Web Site: <http://www.w7asc.org>

## OLD PUEBLO RADIO CLUB

The Old Pueblo Radio Club meets the **SECOND WEDNESDAY** of each month (except June, July and August) at 7:15 p.m. in the Arizona Building at Tucson Medical Center. Visitors are welcome.

President	Ron Kalish	N7SPW	520.889.2998
Vice President	Alan Drexler	WB9TSU	520.885.9910
Treasurer	George Devich	N9IUK	520.760.0125
Board of Directors:			
	Art Mills	KD7HZZ	520.883.5480
	Cliff Schnider	KD7TMX	
	Bill Price	N7GUO	520.298.3114
WebMaster	Ted Willis	AA7HX	520.790.3828
	(www.neighborhoodlink.com/)		
Trustees: (all repeaters operating under the K7TRA call)			
Primary	Cliff Hauser	KD6XH	
	146.660, 146.820, 147.220-		
	Paul VanBeverhoudt	KA7LFX	224.06+
Secondary	Ted Willis	AA7HX	146.66-
	Ralph Turk	W7HSG	146.82-
	Paul VanBeverhoudt	KA7LFX	224.06+

Mailing address: OPRC, P.O. Box 42601, Tucson, AZ 85733-2601. DUES: Individual - \$20.00/YR, Family - \$30.00/YR.



## ADAW STAFF

### PUBLISHER/EDITOR

Christine Kesauer N7PVL 602.843.0960

### AARC EDITOR

Dick Baum NS7A 602.870.1135

### SARC EDITOR

Ralph Craner KVOR 480.837.2183

### CARLEditor

Bob Burleson KJ7QJ 480.961.1109

### OPRCEDITOR

Ron Kalish N7SPW 520.889.2998

### DISTRIBUTION

Mark Kesauer N7KKQ 602.769.3000

### PRODUCTION

Melinda Kesauer KC7FWR  
adawaz@arca-az.org

### ADAW EMAIL

### ADAW WEB SITE

[www.adaw.org](http://www.adaw.org)

The *Arizona Desert Aire Waves* is published monthly and is the official news media of the sponsoring clubs. All news items, articles and inquiries should be submitted to each club's editor. Any information and opinions printed herein are those of the contributors and are not necessarily those of the sponsoring clubs. Full permission is granted to quote from this publication providing credit is given to the individual contributor and the ADAAW. ALL RIGHTS RESERVED. **Deadline is 10th of the month**

## *From the Editor's Desk*

Hello all,

Hopefully this issue of ADAW will reach everyone in a timely manner. Family matters have me on the road again and I'm finishing this edition remotely. Please accept my apologies if you receive your copy late.

By the time you read this, the 2008 Williams Hamfest will be in the history books. What I can tell you is the "Hamfest" car on the Grand Canyon Railroad was filled. If you were one of those who made the trip, we would love to include comments about your experience in the next issue of ADAW. Just email your comments to the ADAW email address ([adawaz@arca-az.org](mailto:adawaz@arca-az.org)) and we'll include them next month.

The ARRL Southwestern Division Convention is quickly approaching. Final touches are being completed on the plans and programs are being confirmed. If you haven't gotten your reservation for the convention, time's a wasting. There's a link to the convention site on the ARCA web site at [www.arca-az.org/arca](http://www.arca-az.org/arca).

In October, the Old Pueblo Radio Club will present their annual event in Tucson at the Kino Sports Park. This half-

day event is growing and is a pleasant way to spend a Saturday morning. Check out the ARCA web site for details or log onto [www.hamsrus.com](http://www.hamsrus.com).

November will be a quiet month on the hamfest front. However, with the advent of cooler temperatures, public service events will gear up. Keep checking the Public Service calendar and consider volunteering some of your time to help. It's worthwhile and fun, too.

Of course, the Center for Amateur Radio Learning is always in search of volunteers to man the radios at the Arizona Science Center. They will also need help with the move that is taking place within the center. Check their column for details or call Bob Burleson (phone number on page two) to find out how you can help.

Hope everyone is enjoying the Arizona monsoon. I've been hearing about torrential rains in the Phoenix area. It's muggy here in Ohio, but nowhere near as hot as it is in Arizona. We still stay in the air-conditioning most of the time.

73 until next month,  
Chris, N7PVL

**ADAW**



Ken Nichols – WA7HXZ

### *Buying a car/truck hasn't been this easy since your first one... Remember?*

---

Save every penny you can on your next vehicle purchase!  
You can't save if you don't call !!!

---

Ken makes sure that you are satisfied with every aspect of your new car, from color to delivery! Whether you lease or buy, he's committed to giving you the absolute best price the first time. In fact he won't sell you a new or pre-owned vehicle until you are totally satisfied that you have the car that is right for you. Find out how Ken does business. Call today and set up an appointment to meet him. We think that you will find buying a vehicle can be fun! '73's



Brown & Brown Chevrolet, An AutoNation Dealership  
256 E. Main Street, Mesa, Arizona 85201

Office: 480-827-3305 Website: [www.kencars.com](http://www.kencars.com)  
Mobile: 602-690-0352

**Executive Commercial Fleet Sales**  
\* Chevrolet \* Chrysler-Jeep-Dodge \*





Hi All:

Well shucks, Field Day is over for another year. Kind of sad eh? I always look forward to its arrival and enjoy talking to other Hams in a language foreign to some of our newly licensed associates. I bet you already knew I was talking about CW. It's alive and well and a lot of fun, especially on Field Day.

Our Field Day was pretty good. We didn't run a whole lot of circuits this year, only two for a 2F category. We did not think about using a GOTA station, but we will next year and that will give more folks a shot at operating. It just blows me away when I get contacts from clubs running up to 20 transmitters! Must be something to be involved in Field Day with such a big group. Must be some Huge clubs around.

The biggie Hamfest of the year is right around the corner. I hope Williams will be a success this year. I hear a lot of people talking about going and I also get a lot of Hams inquiring about the dates, of the event, on the nets that I participate in. So let's hope it turns out really good.

There is a General License class starting up shortly. That reminds me that I have a Sweetheart of a program for anyone who is studying any Question Pool. It was written by one of my programmer friends. It fits on a floppy or any other type of removable media and has the three Question Pools there along with it so you don't have to look for them. One of the best features is this: As you study the questions, almost everyone comes across questions that they know very well. One click of the mouse puts that question in a separate file that won't come up the next time you run the program. Also it remembers where you left off and will start up at that point the next time you study. Let me know should you need a copy and I'll get one to you.

Club activities are sort of slow this time of year. We still have our Meetings every month at the Red Cross at 6135 North Black Canyon Hwy. on the second Thursday at 1930. However, we do not hold our VE testing sessions during June, July and August. Next one will be in September on the usual fourth Saturday at 1900 hrs. If you want to attend any of our club activities at the Red Cross, you'd best call Gary,

## Event Calendar

September 6, 2008 - **Mohave Professional Amateur Radio Group Hamfest** - will be held in Kingman. Free Hamburgers, Hot Dogs, Soda and Water will be provided to all who attend. Watch for updates and location.

September 12 - 14, 2008 - **ARRL Southwestern Division Convention** - will be held at the Mesa Convention Center in Mesa. Contact Rick Aldom - [natecf@gmail.com](mailto:natecf@gmail.com) - or visit the web site at <https://www.azhamcom.org> for more information.

**ADAW**

## PUBLIC SERVICE CALENDAR

EVENT	LOCATION	DATE
Cactus Cha-Cha	White Tanks Mtn Park	10/11/08
YMCA Half Marathon	South Mtn Park	10/25/08
Fiesta Bowl Half Marathon	Scottsdale	12/14/08

To sign up send email to: [mcecg@yahoogroups.com](mailto:mcecg@yahoogroups.com)  
 MCECG on the Web [MCECG.ORG](http://MCECG.ORG) for event sign up  
 For information on events, join - [azhamserve@egroups.com](mailto:azhamserve@egroups.com)

Jim Pierce, N7QVW - 623.551.1204 - [jim@n7qvz.net](mailto:jim@n7qvz.net)  
 Brian McCarthy, N7TUQ - 623.486.0507 - [n7tuq@arrl.net](mailto:n7tuq@arrl.net)

**ADAW**

K7GH at 602-996-8148 at least one day ahead of time. Or, if he is in outer Mongolia or some other far away place you can call me. George, KQ7C, will answer at 602-274-6212 and we will get you on the access list to the club function you wish to attend.

I always have to wish Uncle Dick a nice time lavishing in the cool of the pines at his Summer home, while the rest of us are slaving away down here in the heat writing letters. Hurry back, Dick. I'm sure your fans miss your great letters.

73, George KQ7C





Almost Final Update on the W7ASC Ham Shack move! This is the “official” schedule. The Science center has posted their Calendar Highlights for July thru September. W7ASC is moving up to the third floor in the new “My Digital World” area. “My Digital World” will open for ASC member preview Saturday, August 30 and Sunday, August 31st (10:00AM to 5:00PM). The W7ASC New Shack Grand Opening will be Monday, September 1st. We plan to have capability for almost all of the new digital modes, including digital voice, SSTV, etc. Don’t forget that Morse Code is one of the FIRST and oldest digital modes!

We expect to close the W7ASC Shack from Saturday, August 9th thru to Friday, August 29th for installation, equipment checkout, antenna checkout, and training. Volunteers will be needed to help get the new shack up and running. W7ASC “Summer Hours” will be in effect thru to Friday 8/8.

The General License Class at the Science Center starts July 26th, the weekend after the Williams Hamfest. So far we have 14 students signed up. Give me a call or e-mail if you are interested.

We are still looking for more W7ASC volunteers. We will need Volunteers for two shifts per day (9:00-1:00 and 1:00-5:00) after Labor Day. Spread the word at your Ham Club. Call 480-961-1109 and volunteer now. A Volunteer sign-up page is available at [www.w7asc.org](http://www.w7asc.org). We hope to have an updated presentation available in mid September for the valley Ham clubs and posted on the W7ASC.ORG web page.

—Regards, Bob Burleson KG7QJ  
KG7QJ@COX.NET 480-961-1109

## LICENSE TESTING INFORMATION

When you are ready to take an exam for an Amateur Radio license, there are Volunteer Examiners available to assist you. Each Applicant will need to bring a picture ID (some test sessions require two forms of identification). If you are upgrading your class of license, be sure to bring the original (and a copy) of your license and/or Certificate of Successful Completion of Examination (C.S.C.E.). There may be a fee required.

PLEASE NOTE: Dates, times, or locations may change. Call test session contact to confirm information. Walk-ins are permitted unless otherwise specified.

### AUGUST TEST SESSIONS

**Aug 7th** - Radio Society of Tucson -- 7:00 PM  
Lighthouse YMCA, 2900 N Columbus, Tucson  
Contact - Matthew Grossman 520.750.7189  
Pre-Registration Preferred

**Aug 9th** - Yuma ARC -- 10:00 AM  
Yuma County Sheriff Office, 141 S 3rd Ave, Yuma  
Contact - Robert Sidebottom 928.344.6469  
or Beverly White 928.342.9460  
Must Pre-Register

**Aug 18th** - East Valley VE Team -- 6:00 PM  
Mesa Utilities Main Office, 640 N Mesa Dr, Mesa  
Contact - Steve Gurley 480.804.1469

**Aug 22nd** - Tonto ARA -- 6:00 PM  
Payson Public Library, Meeting Room, 328 McLane Rd, Payson  
Contact - Darde De Roulhac 928.468.1487

**Aug 23rd** - Catalina RC / OPRC -- 9:00 AM  
Jacob's Park YMCA, 1010 Lind St, Tucson  
Contact - Joe Theobald 520.760.0084  
Pre-Registration Preferred

ADAW

ADAW

## SCOTTSDALE AMATEUR RADIO CLUB, INC.



Club Station: WA7APE  
Club Repeaters: 147.78/.18 & 445.00/440.00

Hi Everyone,

Missed the meeting because I was relaxing in the cool pine country above Payson. Beautiful country.

I did get a chance to visit a Field Day site. So I didn't miss out of field day entirely. I visited the Tonto Rim Radio club in a development clubhouse about 6 miles east of Payson. Nice location and as usual the members present were having fun. The Payson Newspaper was there taking pictures and getting the royal treatment as to what Field Day was all about. The young lady was intrigued and used her camera multiple times to record one of the younger members of the club generating electricity to charge a battery to run the station with a stationery bicycle. Only the young could get it going. I would have stayed to operate a little but had the XYL with me and also they had no CW operation. It was fun to see. In all of the years of my wife tolerating my hobby, she had never seen a field day site.

Hope everyone had a chance to catch a Field Day Location no matter where it might have been. I got an e-mail from Bob Johnsen K7TR who indicated that the group above Globe had fun and did well.

Those of you that have been reading the ADAW may have noticed that CARL, W7ASC at the Science Center is moving the shack from the second floor to the third floor. Technology changes are going to be noticeable as the radios will be controlled remotely from flat screen panels and the radios will be available to the public behind glass. Lots of work is going on and when it comes time to do the actual move, extra help will be needed. If you think you have some time in the middle of August, let me know. It could be just a one day shot to help connect and mount radios. Think about it and send me an e-mail or see me at the meeting in August. The projected timeline is: Shutdown on August 9 and be back up and running on the August 30. Big undertaking, but I am excited.

Don't forget meeting on August 6. The program will be Dennis Campbell on the care and feeding of batteries. Should be good.

The Net on Tuesdays, 7:00 PM on 147.18 + 600 and a PL of 162.2, is a must for those of you over on the other side of the hill.

See you at the meeting  
Ralph, KVOR  
ralphc35@earthlink.net

## SARC CONSTANTS:

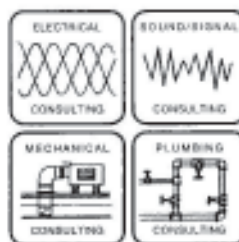
SARC is a 501 (c)-3 club. That means all donations are fully tax deductible. Contact Paul Finnell, W7EFQ at 602.998.7024 for information on estate donations and equipment pick-up.

For membership information, call Terry Cross, NK7T at 480.969.8943. Please send address change requests to Terry no later than the 7th of the month in which you would like the change to occur.

To field check QSL cards for most ARRL awards, call Nick Sues, W7ZMD at 602.992.4133.



## R.J. CARLI ENGINEERING CORP



7311 E. STETSON DRIVE  
SCOTTSDALE, ARIZONA 85251

RAYMOND J. CARLI, P.E.  
ELECTRICAL ENGINEER  
W7GNE

(480) 941-8610 (OFF.)  
(480) 945-7020 (FAX)

**ADAW**

**www.thesignman.com**  
**1-888-426-8241**

**BADGES - CAPS - LICENSE PLATES & FRAMES**

**The SignMan *of Baton Rouge***  
**rick@thesignman.com**

**P O Box 84107**  
**Baton Rouge, LA 70884-4107**

**COLOR BADGES, DESKSTANDS, KEYCHAINS, MUGS**

**Specializing in SKYWARN, EM,  
RACES, ARRL, ARES & CD Items**

**RUBBER STAMPS**

**PATCHES - DECALS**

# Old Pueblo Radio Club

## INTERMOD

### President's Column

After several months of no computer access and of moving, things are getting back to normal. My radios are not installed yet, so I have no idea of what is happening over the airwaves. I trust field day went well.

Things are falling into place for the first club meeting of fall, and for the swap meet, to be held 18 October 2008 at the usual location. More on these things next month.

Enjoy the rest of the summer.

73 de,  
Ron Kalish, N7SPW  
President, OPRC

**ADAW**

#### OPRC Repeaters

146.66	- PL 110.9	autopatch/wide	K7TRA
146.82	- PL 110.9	wide coverage	K7TRA
147.22	- PL 110.9	wide coverage	K7TRA
224.06	- PL 156.7	wide coverage	KA7LFX

#### RACES Repeaters

145.150		packet/wide	N7OEM
146.880	- PL 110.9	wide coverage	N7OEM
147.300	- PL 110.9	wide	N7OEM
448.55	- PL 110.9	wide coverage	N7OEM

#### AUTOPATCH For the 146.66 repeater

1. Listen to insure the frequency is clear.
2. Press the transmit key and enter "\*". Then release key and listen for the code or tone.
3. As soon as you hear the tone, press the transmit key and say:  
"This is K\*7\*\*\* accessing autopatch" and without letting up on the transmit key, enter the local telephone number.

Please:

**NO BUSINESS CALLS!**

**WATCH YOUR LANGUAGE!**

4. When you are finished announce:  
"This is K\*7\*\*\* ending autopatch" then, without releasing the transmit key, press "#" for at least one second and then release the key.

### CQ CQ HAM RADIO OPERATORS

Great homes for sale in our Phoenix market, in great neighborhoods and if you're either looking to buy...OR perhaps need to sell ...feel free to call upon me to handle any and all of your real estate needs.

As YOUR Realtor ® ...we'll work together to sell your home for top dollar or purchase one for the best dollar your money can buy.

Stop by my real estate website for other services: [www.azdezertproperties.biz](http://www.azdezertproperties.biz)

**CityONE**  
Realty Co.

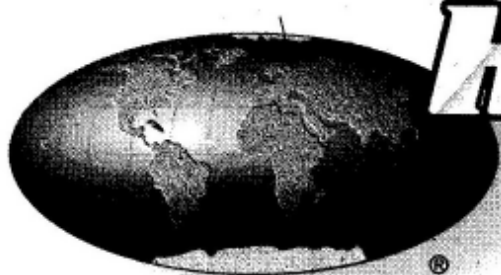


Phone: 602.576.0702 • E-mail: [citynorthrealestate@yahoo.com](mailto:citynorthrealestate@yahoo.com)

Call OR eMail Glenn (WA9TVB/10-10: 73394) for ALL your real estate needs. 73



# 12 STORE BUYING POWER



# HAM RADIO OUTLET

WORLDWIDE DISTRIBUTION

HRO  
Owned and  
operated by  
ACTIVE  
HAM'S

**TOKYO HY-POWER**



**FLASH!**

Now with 12m  
and 10m built-in!  
Complies with  
new FCC rules!

## HL-1.5KFX

- Fully Solid-state 1 KW HF 650W 6m
- Built-in Power supply (110 or 220V)
- 2 Ant ports selectable
- auto band switched w/ most ICOM/Kenwood/Yaesu trans

**CALL FOR ADDITIONAL THP PRODUCTS!**

**KANTRONICS**



## KAM XL

- DSP modem offers great performance on Packet 300/1200, G-Tor, Pactor, AmTOR, PSK-31
- RTTY, Navtex, ASCII, Wefax, CW, GPS NMEA-0183 and more!

**Call Now For Special Pricing!**



## KPC-3 Plus/KPC-9612 Plus

High-performance, low power TNC.  
Great for packet, and APRS compatible.

**Call For Special Low Price!**

**ICOM**

## IC-R20 Wide Band Receiver

- Wide RX 150-3304 mHz\*
- SSB, CW, AM, FM, WFM
- 32mb digital recorder
- 1,000 memories
- VSC = 100 ch/sec. scanning

\$20.

\*good thru 3/31/98



## IC-R5 Wide Band Receiver

- Wide RX 150-3309 mHz\*
- 1250 memories
- Alphanumeric labels
- DMS scan
- AM, FM, WFM

\$10.

\*good thru 3/31/98

## IC-R3 Wide Band Receiver

- 500 kHz - 2.45 GHz\*
- 450 Alphanumeric Memories
- CTCSS w/Tone Scan
- 4 Level Attenuator
- Telescoping Antenna w/BNC Connector
- Lithium Ion Battery
- 2" Color TFT Display
- Audio/Video Output
- Four Way Action Joystick
- PC Programmable w/Optional Cable & Software

\$10.

\*good thru 3/31/98

\*cell bands blocked  
\*816-901.365 MHz blocked, unblocked versions available to FCC approved users. FM video range for the IC-R3 is 900-1300 MHz & 2250-2450 MHz



Detailed illuminated map shows time, time zone, sun position and day of the week at a glance for any place in the world. Continuously moving - areas of day and night change as you watch.

- Mounts easily on wall. Size: 34 1/2" x 22 1/2".

Reg \$1595. **SALE \$1299.95**

## MA-40

40' Tubular Tower

**Call For Latest Pricing!**

## MA-550

55' Tubular Tower

Handles 10 sq. ft.

at 50mph

Plagues neighbors

with tubular

streamlined look

**Call For Latest Pricing!**

## TX-455

55' Freestanding

Crank-Up

Handles 18 sq. ft.

@ 50 mph

No guying required

Extra-strength const.

Can add raising and

motor drive acces.

Towers Rated

to EIA Specifications

Other Models

at Great Prices!

**Call For Latest Pricing!**

Shown with  
Optional  
Rotor Base

Buy  
From HRO,  
World's Largest  
U.S. Tower  
Dealer

All US Towers shipped by truck;  
freight charges additional

**ANAHEIM, CA**  
(Near Disneyland)  
933 N. Euclid St., 92801  
(714) 533-7373  
(800) 854-8046  
Janet, KL7MF, Mgr.  
anaheim@hamradio.com

**BURBANK, CA**  
1525 W. Magnolia Blvd, 91506  
(818) 842-1786  
(800) 854-8046  
Eric, K6EJC, Mgr.  
Magnolia between  
S. Victory & Buena Vista  
burbank@hamradio.com

**OAKLAND, CA**  
2210 Livingston St., 94606  
(510) 534-5757  
(800) 854-8046  
Mark, W17YN, Mgr.  
I-880 at 23rd Ave. ramp  
oakland@hamradio.com

**SAN DIEGO, CA**  
5375 Kearny Villa Rd., 92123  
(858) 560-4900  
(800) 854-8046  
Tom, KM6K, Mgr.  
Hwy. 163 & Claremont Mesa  
sandiago@hamradio.com

**SUNNYVALE, CA**  
510 Lawrence Exp. #102, 94085  
(408) 736-9496  
(800) 854-8046  
Dan, K6DN, Mgr.  
So. from Hwy. 101  
sunnyvale@hamradio.com

**NEW CASTLE, DE**  
(Near Philadelphia)  
1509 N. Dupont Hwy., 19720  
(302) 322-7082  
(800) 844-4476  
Rick, K3TL, Mgr.  
RT. 13 1/4 mi. So. I-295  
newcastle@hamradio.com

**PORTLAND, OR**  
11705 S.W. Pacific Hwy.  
97223  
(503) 598-0555  
(800) 854-8046  
Leon, W7AD, Mgr.  
Tigard-99W exit  
from Hwy. 5 & 217  
portland@hamradio.com

**DENVER, CO**  
8400 E. 14th Ave. #9, 80231  
(303) 745-7373  
(800) 444-9476  
John, N5EHP, Mgr.  
denver@hamradio.com

**PHOENIX, AZ**  
1939 W. Dunlap Ave., 85021  
(602) 242-3515  
(800) 444-9476  
Gary, N7GJ, Mgr.  
1 mi east of I-17  
phoenix@hamradio.com

**ATLANTA, GA**  
6071 Buford Hwy., 30340  
(770) 263-0700  
(800) 444-7927  
Mark, KJ4VO, Mgr.  
Doraville, 1 mi. no. of I-285  
atlanta@hamradio.com

**WOODBRIDGE, VA**  
(Near Washington D.C.)  
14803 Build America Dr. 22191  
(703) 643-1063  
(800) 444-4799  
Steve, W4SHG, Mgr.  
Exit 161, I-95, So. to US 1  
woodbridge@hamradio.com

**SALEM, NH**  
(Near Boston)  
224 N. Broadway, 03079  
(603) 898-3750  
(800) 444-0047  
Chuck, N1UC, Mgr.  
salem@hamradio.com  
Exit 1, I-93  
28 mi. No. of Boston  
salem@hamradio.com

## CALL TOLL FREE

Phone Hours: 9:00 AM - 5:00 PM  
Store Hours: 10:00 AM - 5:00 PM  
Closed Sun.

Call free toll. Nevada, Mexico, Canada, call collect.  
Outside US: add intl. dialing charges. Add \$5  
for the toll-free call to the toll-free number.

West.....800-854-8046  
Mountain.....800-444-8478  
Southeast.....800-444-7927  
Mid-Atlantic.....800-444-4799  
Northeast.....800-644-4478  
New England.....800-444-0047

#1  
in Customer  
Service

Look for the  
HRO Home Page  
on the  
World Wide Web  
http://www.hamradio.com

AZ, CA, CO, GA,  
VA residents add  
sales tax. Prices,  
specifications,  
descriptions,  
subject to change  
without notice.