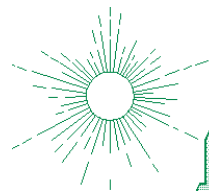


ADAW

4529 W. Park Place
Glendale, AZ 85306-1512



ADAW

Arizona Desert Aire Waves

Vol 45, No 3

March 2020

CLUB MEETING SCHEDULE

SARC

Mar 4th
Scottsdale Senior Center
7:00 PM

AARC

Mar 12
Red Cross Bldg. - Phx
7:00 PM

OPRC

Mar 11th
Big Heart Coffee - Tucson
1:30PM

TBARC

Mar 19th
N Phx Campus of NAU
7:00 PM

CADXA

Mar 5th
Granite Reef Senior Center
7:00 PM

ARA

Mar 26th
Denny's Restaurant - Tempe
7:30 PM

ARCCC

TBD
American Red Cross Bldg
Phoenix
9:00 AM

WVARC

Mar 2nd
Shepherd of the Desert
Lutheran Church
7:00 PM

SuperstitionARC

Mar 17th
Charles K Luster Building
7:00 PM

YARC

Mar 5th
Prescott Rodeo Grounds
7:00 PM

MARCA

Mar 17th
Denny's Restaurant - Tempe
6:30 PM

MARA

Mar 7th
Maricopa PD Community Rm
9:00 AM

ANSR

Mar 19th
via GoToMeeting
7:30 PM

KARC

Mar 10th
Solterra at White Mountains
6:30 PM

OVARC

Mar 20th
Ascension Lutheran Church
7:00 PM

CHRC

Mar 14th
Barrow's Pizza - Chandler
9:00 AM

ATN (VOAR)

Mar 15th
Denny's Restaurant - Tempe
6:00 PM

QCWA-AZ Chapter

Mar 18th/Mar 10th/TBD
Phoenix/Prescott/Tucson
9:30AM/10:30AM/TBA

ADAW Member Clubs

ARIZONA AMATEUR RADIO CLUB

The Arizona Amateur Radio Club meets on the **SECOND THURSDAY** of each month at 7:00 p.m. at the American Red Cross Building at 4747 N 22nd St. in Phoenix. Visit web site at www.W7IO.org for map. Visitors are welcome.

President	Gary Hamman	K7GH	602.996.8148
Vice President	Steve Tolnai	W7WSV	480.390.4446
Secretary	Open		
Treasurer	Bob Hodges	K7JJT	602.375.9982
Activities Mgr	Lori Cripps	WA7EDI	602.955.7517
Membership	Bob Hodges	K7JJT	602.375.9982

AARC c/o Bob Hodges, K7JJT, 15214 N 7th Place, Phoenix, AZ 85022. 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 7:00 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) in Scottsdale. The club also holds a net every Tuesday night at 7:00 p.m. on the 147.78/.18 repeater.

President	James Wasson	N7ELL	480.456.1154
Vice President	David Yee	N7AJR	
Secretary			
Treasurer	Ed Nickerson	WU7S	480.949.5162
Past President	Paul Finell	W7EFQ	602.741.6563
Board Members	Irv Hembeck	K00TZ	
At-Large	David Yee	N7AJR	
	Bill Kouchis	N9EIV	
	Ray Vasquez	K4RMV	(ARCA Rep)
	Bruce Harmsen	KA9EYX	
	Chris Tabor	K7TAB	

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

ARIZONA NEAR SPACE RESEARCH

The Arizona Near Space Research group meets the **THIRD THURSDAY** of the month at 7:30 p.m. via GoToMeeting. Technical meetings are held the first Monday of the month at 7:30 p.m. on GoToMeeting. Please contact an officer about joining our meetings.

President	Stephen Thomas	KE7TLS	iamgadget1@yahoo.com
Vice President	Clayton Jacobs	KJ6QJS	
Secretary	Steve Miller	W6SDM	
Treasurer	Bill McLean	K7WWM	bmcleanl@gmail.com

ANSR, PO Box 31003, Mesa, AZ 85275-1003. DUES: \$10.00/YR. Web Site: www.ansr.org

THUNDERBIRD AMATEUR RADIO CLUB

The Thunderbird Amateur Radio Club meets the **THIRD THURSDAY** of each month at 7:00 p.m. at North Phoenix Campus of Northern Arizona University located at 15451 N. 28th Avenue (near I-17 and West Greenway Road). The meeting is held in room 147. See the website (<http://w7tbc.org>) for a map and more details.

President	Charles Loftus	KG7KRN	president@w7tbc.org
Vice President	Mike Baker	K7DD	vicepresident@w7tbc.org
Secretary	Andrew Cornwall	KF7CCC	secretary@w7tbc.org
Treasurer	Walt Reinert	NJ8G	treasurer@w7tbc.org
Directors	Clair Wyant	KG7MAJ	kg7maj@w7tbc.org
	Rick Tejera	K7TEJ	k7tej@w7tbc.org
	Kenneth Charleton	K4FZH	k4fzh@w7tbc.org
	Nic Holladay	K7CLI	k7cli@w7tbc.org
Past President	Brian McCarthy	AK7F	ak7f@w7tbc.org

For further information about the ThunderBird Amateur Radio Club, visit our website at <http://w7tbc.org>, send an e-mail to: info@w7tbc.org or call 602.938.8219. The Thunderbird Amateur Radio Club is a 501(c)(3) non-profit organization. Mailing address: PO Box 32544, Phoenix, AZ 85064-2544.

OLD PUEBLO RADIO CLUB

The Old Pueblo Radio Club meets the **SECOND WEDNESDAY** of March, June, September and December at 1:30 p.m. at Big Heart Coffee, 4802 E 22nd Street in Tucson. Visitors are welcome.

President	Ron Kalish	N7SPW	520.207.3852
Vice President & Treasurer	George Devich	N9IUK	520.760.0125
Board of Directors:	Jim Ulmer	KC7THU	
	Lin Donnelly	KF7CNR	
WebMaster			

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

AZ RED CROSS COMMUNICATIONS CLUB

The Arizona Red Cross Communications Club meets at the Red Cross Building located at 4747 N 22nd Street in Phoenix. The group meets at emergency drills and at the call of the officers.

President	Peter Petrotta	KD7OIW
Vice President	Charlie Zurenko	N2TFS
Secretary	Rob Rodriguez	KI7PDR
Treasurer	Mark Steele	KI7RB
Past President	Frank Engstrom	KB7IQ

Arizona Red Cross Communications Club - K7ARC, 4747 N 22nd Street, Phoenix, AZ 85016.



ADAW Member Clubs

BARRY M GOLDWATER, ARIZONA CHAPTER QUARTER CENTURY WIRELESS ASSOCIATION

The Barry M Goldwater Arizona Chapter of the QCWA includes amateurs from all over Arizona. Monthly meetings are held in various parts of Arizona. The schedule is as follows:

Phoenix - Third Wednesday of each month. Contact John Marshall at wa7bsr@gmail.com

Prescott - Second Tuesday of each month at 10:30 a.m. at Golden Corral, 1901 EAZ-69 in Prescott. 982.776.1664. Contact Don Broadston.

Tucson - Seeking volunteer to set up monthly meetings in Tucson.

The AZ Chapter meets on the air every Sunday morning at 0700 MST (0730 during December and January) on 3890 +/- QRM. During December and January, the net time is moved to 0730 MST.

President	John Marshall	WA7BSR	623.334.2583
Vice President			
Secretary			
Treasurer	Dave Hanson	W7BJw7bj@outlook.com	
Webmaster	John Marshall	WA7BSR	623.334.2583

Web Site: <http://azqcwa.org> Email: azqcwa@gmail.com.
DUES: \$7.00/year and current national QCWA membership.

MINGUS MOUNTAIN REPEATER GROUP

Meetings are held twice a year, an annual board meeting in Phoenix and a picnic meeting in Chino Valley. Dates, times, and locations are announced in the newsletter.

President	Bob Sitterley	K7POF	928.636.2146
Vice President	Ray Tyrrell	N6MY n6my73@gmail.com	
Treasurer	Bob Sitterley	K7POF	928.636.2146
Secretary	Lori Cripps	WA7EDI	602.955.7517
Board Members:	Phil Hazlett	WA7UID	
	Sonja Hazlett	WB7CWW	
	Peggy Williams	KD7AWU	
	Jerry Roberts	KB7CN	
	Gary Hamman	K7GH	
	Ken Rasback	KK7KEN	

Web Site: <http://www.k7mrg.org>. DUES: \$20.00 per year, due prior to July 1. MEMBERSHIP YEAR - July 1 - June 30.

KACHINA AMATEUR RADIO CLUB

The Kachina Amateur Radio Club meets the **SECOND TUESDAY** of each month at 6:30 p.m. at the Solterra at White Mountains, 5408 W White Mountain Blvd in Show Low.

President	Randy Beecroft	W7RJB	
Vice President	Jim Mortensen	W7AZY	
Secretary	Marie Mortensen	N7SKS	
Treasurer	Dennis Wilkes	W7DRW	928.739.4700

Mailing Address: Kachina Amateur Radio Club, P O Box 2996, Show Low, AZ 85902. Email: info@kachinaarc.org Dues are \$15/yr for individual; \$25/yr for family. Membership is January 1 - December 31. Website: www.kachinaarc.org

ARIZONA REPEATER ASSOCIATION, INC

The Arizona Repeater Association general meeting is held the **FOURTH THURSDAY** of each month at 7:30 p.m. There are no meetings in July and December. The November meeting is held the Monday before Thanksgiving. Meetings are held at Denny's Restaurant, 825 S 48th Street in Tempe, near SR143 and University Drive. Visitors are welcome. Come early for food and social time before the meeting starts. For further information about the ARA, including repeaters, site status, and the tech/board meeting, please visit our web site at www.w7ara.org.

President	Brian McCarthy, AK7F	ak7f@w7ara.net
Vice-President	Erv Heimbeck, K0OTZ	k0otz@w7ara.net
Treasurer	Cole Cunningham, AA7RD	aa7rd@w7ara.net
Secretary	Jim Hoff, N7XXX	n7xxx@w7ara.net

Board Members:

Lance Halle, KW7LH	kw7lh@w7ara.net
Dennis Bietry, KE7EJF	ke7ejf@w7ara.net
Doug Pelley, WB7TUJ	wb7tuj@w7ara.net
Joe Godfrey, AE7JG	ae7jg@w7ara.net
Dennis Campbell, AE7WU	ae7wu@w7ara.net
Miike Montalvo, KF7MBK	kf7mbk@w7ara.net
Marty Dusenberry, KE7DGP	ke7dgp@w7ara.net
James Wasson, N7ELL	n7ell@w7ara.net

For Membership Information, contact (Joe Godfrey, AE7JG membership@w7ara.net) Arizona Repeater Association, Inc, P. O. Box 35758, Phoenix, Arizona 85069-5758. To join or renew, please visit <http://w7ara.org/mbr/Membership.aspx>. DUES: \$18.00/yr. (Jan. 1 through Dec. 31) with a one-time initiation fee of \$10.00. Life and family memberships are available.

SUPERSTITION AMATEUR RADIO CLUB

The Superstition Amateur Radio Club meets the **THIRD TUESDAY** of every month (except December) at 7:00 p.m. at the Charles K Luster Building, 640 N. Mesa Drive (near N. Mesa Drive & E University Dr.) in central Mesa. Visitors are Encouraged. The Officers and Board of Directors meet the second Tuesday of every month (except December) at 6:30 p.m. at Black Bear Diner, 1809 E. Baseline Road (near Gilbert Rd & E. Baseline Rd.) in Gilbert.

President	Andy Keels	KD4ABB	480.622.4000
Vice President	Ed Taggard	K7EDT	480.813.7440
Secretary	Brent Butler	W7FK	480.332.1141
Treasurer	Bryan Hubbard	KF7DPC	480.205.8122
Board Members:	Jeff Harris	K2DFE	602.617.6930
	Jeff Heinze	N7CCW	480.720.7908
	Bob Thomas	N8ANV	239.253.8279
	Larry Fort	AB7C	480.861.7066
	Don Rollock	W2EUL w2eul@yahoo.com	
	Fred Atkinson	WB4AEJ	602.464.4406
	Steve Estes	KB7KWK	480.251.0551

Superstition ARC, 5155 E Eagle Dr #21522, Mesa, AZ 85277.
Web Site: SuperstitionARC.org and SuperstitionSuperFest.org.
The Superstition Amateur Radio Club is a 501(c)(3) non-profit organization. For more information, contact: communications@superstitionarc.org.



ADAW Member Clubs

MARCA, Inc. / W7MOT

MARCA is an Arizona 501(c)(3) Non-Profit organization. The club call sign in W7MOT. Membership is open to all amateur radio enthusiasts. Meetings are held the **THIRD TUESDAY** of each month at 6:30 p.m. at Denny's Restaurant located at 825 S 48th Street in Tempe (SE corner of University & 48th Street). Monthly presentations cover a broad spectrum of interesting subjects. Visitors are welcome to attend. Come early for dinner and socializing. Repeater Problem Reports are encouraged. A Repeater Problem or Comment Reporting is available at <http://www.w7mot.org/index.php/repeaters/report-a-repeater-problem>. Site Managers and officers will take reports for any W7MOT repeater. Contacts are found on website. Club activities include providing voice, aprs, packet, DStar, and Fusion repeaters Central Arizona; ARRL Field Day, special interest groups in SDR, APRS, antennas, digital modes, and SBC applications.

President	Dave Hall	N7ZPY	
Vice President	Norm Johnson	AA7OO	480.278.2886
Treasurer	Don Aldridge	WA7RLL	
Board Member	David Yee	N7AJR	
Secretary	Open		
Trustee:	Norm Johnson	AA7OO	480.278.2886
Webmaster:	Norm Johnson	AA7OO	480.278.2886

MARCA, Inc., c/o Norm Johnson, 5756 S Wildrose, PO Box 85140, Mesa, Arizona 85212. Membership dues \$25 annually. See our website (<http://w7mot.org>) for more information about meeting schedules, membership, repeaters, library, and club activities.

CENTRAL ARIZONA DX ASSOCIATION

The Central Arizona DX Association meets the **FIRST THURSDAY** each month at 7:00 p.m. (except for January Awards Banquet) at the Granite Reef Senior Center, 1700 N Granite Reef Road in Scottsdale. The May meeting is an outdoor barbecue at 6:00 p.m. at the PERA Club. Visitors always welcome. See www.cadxa.org/meetings.html for a map.

President	Larry Loen	WO7R	lwloen@gmail.com
Vice President	Mike Fulcher	KC7V	kc7vmike@q.com
Secretary	Bob Davies	K7BHM	k7bhm@cox.net
Treasurer	Mike Wright	N7MW	n7mw@aol.com
Past President	Lee Finkel	KY7M	ars.ky7m@gmail.com
Board Members	Fred Hoffert, III	NA2U	cwman1@aol.com
At-Large	John Jolly	WA7NWL	wa7nw1@gmail.com

CADXA, P.O. Box 24616, Tempe, AZ 85285-4646. Email: cadxa@cox.net. Dues are \$25 per year (\$12.50 per additional family member). For more information, DXing resources, and a membership application, visit our website: www.cadxa.org.



YAVAPAI AMATEUR RADIO CLUB

The Yavapai Amateur Radio Club meets the **FIRST THURSDAY** of every month at 7:00 PM in the Freeman Building at the Prescott Rodeo Grounds located at 840 Rodeo Drive in Prescott (visit web site at www.w7yrc.org for directions and map). YARC is an ARRL Special Service Club dedicated to public service and emergency preparedness. The club serves the quad cities area of Prescott, Prescott Valley, Chino Valley/Paulden, and Dewey/Humboldt.

President	Bill Noe	WG7W	president@w7yrc.org
Vice-President	John Snedden	KT7P	vice_president@w7yrc.org
Secretary	Tim Norton	K7PVY	secretary@w7yrc.org
Treasurer	Sam Prather	K7SCP	treasurer@w7yrc.org
Board Members	Kathy Laing	KJ6KMK	kj6kmk.yarc@gmail.com
	Sandy Meadowcroft	KF4JHC	sandymeado2@yahoo.com
	Dave Erlach	W7VXS	rocketdog@dslextre.com
	Mike Reid	N7IEP	mdr126@gmail.com
	John Laing	K7PRS	

Yavapai Amateur Radio Club, P O Box 11994, Prescott, AZ 86304-1994. DUES: \$20.00/yr. Visit the website at www.w7yrc.org

ORO VALLEY AMATEUR RADIO CLUB

The Oro Valley Amateur Radio Club meets the **THIRD FRIDAY** of each month at 7:00 p.m. at Ascension Lutheran Church located at 1220 W Magee Road in Tucson. (December is annual Christmas Party). Visitors are VERY welcome. Board Meetings are held at 9:00 a.m. at the Ascension Lutheran Church located at 1220 W Magee Road in Tucson. Check the web site at www.tucsonhamradio.org for dates.

President	Steve Wood, W1SR	W1SR@arrl.net
Vice-President	Mike Peterson K7VTT	azmacguru@gmail.com
Secretary	Carl Foster KB7AZ	carlfoster@cactuscomm.net
Treasurer	Hanna Eckert, KG7TPD	haneck@aol.com
Board Members	Fred Bresani W2HZ	
	Ross Eckert K4WBR	
	Gary Pierce AE7GP	
	Marnee Dearman KG7SIO	
	Tom Ambler W7TRA	

DUES: \$25.00/year (Household members living at same address \$15.00 each additional). To join or for additional information, visit website at <http://www.tucsonhamradio.org/>.

MARICOPA AMATEUR RADIO ASSOCIATION

The Maricopa Amateur Radio Association (MARA) meets the **FIRST SATURDAY** of each month at 9:00 a.m. at Maricopa PD Community Room, 17985 N Greythorn Dr. in Maricopa.

President	Curt Steger	NA7CS	president@copahams.org
Vice President	Wayne Kropp	KI7SPW	vicepresident@copahams.org
Secretary	Bob Proctor	N6YPE	secretary@copahams.org
Treasurer	George Hogan	K7TGH	treasurer@copahams.org
PIO:	Steve Miller	W6SDM	pio@copahams.org
Webmaster:	David French	N7FAN	david@copahams.org

The Maricopa Amateur Radio Association is a 501(c)(3) non-profit organization. DUES: \$25.00/year individual, \$30.00/year family. Apply on-line at www.copahams.org. Mailing address: P O Box 951, Maricopa, AZ 85139

ADAW Member Clubs

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. Hours of operation are the same as the Arizona Science Center (subject to availability of volunteers.) The station is located on the third floor of the Science Center, in the "My Digital World" gallery. Board meetings are held the last month of each quarter at the AZ Science Center. An annual meeting for all volunteers is held the **THIRD SATURDAY** of January. Watch ADAW for details.

President	Jack Landon	KD7ROB	480.759.5195
Vice President	Jim Felkey	N7BBS	480.966.7084
Sec./Scheduling	Sam Marshall	N7INV	602.291.0992
Treasurer	Karen McConaghy	NO7D	602.799.7338
Station Engineer	Ron Taylor	WA7GIL	602.390.5335
Webmaster	Allyson Lee	KI7LGD	w7asc.webmaster@gmail.com

Board Members:

Jean Jolkovski	W4CIH	ADAW, Publicity
Tom Salt	AD7PM	At Large
John O'Neal	K7JP	Teacher Packets
Bob Burleson	KG7QJ	Trustee/President Emeritus
Robert Faerber	W9AQ	Log Book
Scott Gillins	W2KP	At Large

Direct Phone: 602.716.2082 Web Site: <http://www.w7asc.org>
 For information: Email to carl@w7asc.org or call Jack, KD7ROB at 480.759.5195.

AMATEUR TELEVISION NETWORK

The Amateur Television Network (ATN) is a group of radio amateurs that promote video operation on linked repeaters and mesh networks. We hold business meetings in January and July and social meetings the **THIRD SUNDAY** of each month at 6:00 PM at Denny's Restaurant, 825 S 48th Street in Tempe. Watch our nets on Wednesday and Sunday at 7:00 PM Arizona time and Tuesday at 7:30 PM Pacific time. Our video streams are on www.youtube.com, search for W6ATN Live or W7ATN-Mesa Live. Send your live video to whereby.com/amateurtvnetwork or on amateur radio ATV or FM.

ATV Repeater Inputs: All Sites: 434 MHz AM/DVB-T and 2441.5 MHz FM

ATV Repeater Outputs: Phoenix - 1253.25 and 5910 MHz, Mesa - 421.25 & 1289.25 MHz, Tucson - 1277.25 MHz

FM Repeater Outputs: Phoenix - 448.400 MHz, PL 100.0, Mesa - 445.175 MHz, PL 100.0, Tucson - 445.225 MHz, PL 103.5

President	Ed Olague	K5OLA	602.885.7725
Vice President	Rod Fritz	WB9KMO	480.322.5149
Sec./Treasurer	Lee Weitzel	K0CCU	602.439.4840
Repeater Trustee	Kevin Jacobson	AD7OI	602.694.0851
Webmaster	Roland Hoffman	KC6JPG	562.577.1381

ATN-AZ, 4134 W. Danbury Dr. Glendale, AZ 85308. Membership dues are \$75 annually. Website: www.atn-tv.org. Email: wb9kmo@gmail.com

WEST VALLEY AMATEUR RADIO CLUB

The West Valley Amateur Radio Club, an Arizona 501(c)(3) non-profit corporation, has been providing emergency communications since 1961. Meetings are the **FIRST MONDAY** of each month at 7:00 PM at Shepherd of the Desert Lutheran Church, 11025 N 111th Avenue in Sun City. The board meets on the third Tuesday of the month at 1:00 PM at Lou's Tivoli Gardens, 12535 W Bell Rd in Surprise. A weekly breakfast is held on Thursdays at Lou's Tivoli Gardens, 12535 W Bell Rd at 7:00 AM. Club nets are held on 147.300 (tone 162.2) at 9:00 AM daily and Monday - Thursday at 8:00 PM. Please check our website (below) for other events and information.

President	Danny Hoerr	KM4HFT
Vice-President	Fred Peters	K7WFP
Secretary	April Kramer	KI7GFJ
Treasurer	Doug Totel	K9RZ
Board Member:	Gary Franklin	K8BKB
	Joe Fitzgerald	KV2H
	David "Cee" Putman	W7DCP
	Tom Smith	WA0OFO
Past President	Pat Regan	KD7TFD
Committees:		
Membership	Krissy Larson	KI7GJJ
Technical Advisory	Frosty Oden	NQ1S
Equip. Donations & Sales		
	Ken Jenkins	WB6MMV
	or Jim Seay	WB7RBN

WVARC, P O Box 1573, Sun City, AZ 85372-1573. DUES: \$15.00/YR for family residing at the same address. MEMBERSHIP YEAR - January - December. Web Site: <http://westvalleyarc.com>. Email: suncitywvarc@gmail.com

SUNLIFE AMATEUR RADIO CLUB

The Sunlife Amateur Radio Club meets **EVERY MONDAY** from October through April each year at 10:00 a.m. at the Greenfield Village RV Resort located at 99 South Quinn Circle in Mesa. Meetings are held in a gated community. For access, please contact Jerry Davis, K7AZJ at k7azj@arrl.net.

President	Jerry Davis	K7AZJ	k7azj@arrl.net
Vice President	Sue Rodgers	W7SKH	happyham7777@gmail.com
Secretary	Chuck Rodgers	W7CBR	rogers_charles@hotmail.com
Treasurer	Cliff Bean	AE7VZ	klyffone@gmail.com

Membership dues are \$10.00/year. If you would like to be a member, visit the website at <https://www.sunlifearc.org/>

Please be sure your club has your current email and/or mailing address.

ADAW Member Clubs

CHANDLER HAM RADIO CLUB

The Chandler HAM Radio Club (call sign N7CHN) meets the **SECONDSATURDAY** of each month at 9:00 AM at Barro's Pizza located at 1880 S Alma School Road in Chandler. Visitors are welcome. Check the web site at chandlerhams.org for dates. Weekly net is held every Thursday at 8:00 PM on 443.050+ PL100.

President	Gary Laatsch	KI7PBR	president@chandlerhams.org
Vice President	Norm Fasoletos	K7NWF	vicepresident@chandlerhams.org
Secretary	Open		secretary@chandlerhams.org
Treasurer	Byon Garrabrant	N6BG	treasurer@chandlerhams.org
Web Master	Open		webmaster@chandlerhams.org

Web Page: <http://chandlerhams.org>. DUES: \$25/year primary member; \$10/year family member.



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 ADAW. ALL RIGHTS RESERVED. **Deadline is 10th of the month**



ADAW Staff

PUBLISHER / MANAGING EDITOR

Christine Kesauer N7PVL 602.843.0960

AARCEDITOR

Lori Cripps WA7EDI 602.955.7517

ANSREEDITOR

Steve Miller W6SDM 602.290.1603

ARAEEDITOR

T D Kennard N7ISR n7isr@w7ara.net

ARCCEDITOR

Charlie Zurenko N2TFS chazur@icloud.com

ATNEEDITOR

Ed Olague K5OLA 602.885.7725

CADXAEDITOR

Lee Finkel KY7M ars.ky7m@cox.net

CARLEEDITOR

Jean Jolkovski W4CIH 480.664.7353

CHRCEDITOR

Gary Laatsch KI7PBR ki7pbr@cox.net

KARCEEDITOR

Lydiann McFadden lydiann@gmail.com

MARAEEDITOR

Curt Steger NA7CS csteger515@gmail.com

MARCAEDITOR

Norm Johnson AA7OO 480.278.2886

MMRGEDITOR

Lori Cripps WA7EDI 602.955.7517

OPRCEDITOR

Ron Kalish N7SPW 520.207.3852

OVARCEEDITOR

Steve Wood W1SR nauset2222@yahoo.com

QCWAEDITOR

George Cooley NG7A george@ng7a.com

SARCEEDITOR

John Marshall WA7BSR 623.334.2583

SARCEEDITOR

Paul Finell W7EFQ 602.741.6563

SunlifeEDITOR

Bill Farina KE0WPF 608.301.5544

SuperstitionARCEEDITOR

Larry Kuck WB7C Ellsworth@us60.us

TBARCEEDITOR

Andrew Cornwall KF7CCC kf7ccc@arrl.net

WVARCEEDITOR

David Putman W7DCP 253.307.0544

YARCEEDITOR

Don Bauer WB7TPH dbauer2250@aol.com

ADAWEMAIL

adawaz@arca-az.org or adaw@adaw.org

ADAWWEBSITE



Cars by Kencars & Friends

Save Money & Time On Your Next Vehicle & Become My Friends!



Buying a car hasn't been this easy since your 1st one !!!
Remember ?

Ken Nichols
Auto Consultant
25 Years Experience

Any Make or Model
Easy No Hassel Pricing

602-935-5206
kencars@gmail.com
www.kencars.com
Amateur Radio WA7HXZ



Greetings from the Terraces, a rehabilitation facility in Phoenix where I am recovering from knee surgery. Here I am with my leg propped up and in a brace so it won't bend.

The January MMRG board meeting was held January 11, 2020. All officers remain the same with the exception that long time board member Peggy Williams, KD7AWU, resigned due to not being able to drive to the meetings. We will miss Peggy at the meetings. The new board member replacing Peggy is Mike Raczynski, N7MMC, of Dewey. Mike will also be on the Technical Committee.

The date we picked for the May MMRG membership picnic during the January board meeting was in conflict with the Prescott (YARC) Hamfest. However, we just found out the Prescott Hamfest has been canceled for this year, so we will go with the date that we picked: May 9, 2020, the Saturday before Mother's Day Sunday. A reminder will be sent out to all members two weeks before the picnic.

73. Lori, WA7EDI

Using New and Old Modes:

Sometimes I feel like I am constantly on FT8, but that's because I do MOST of my FT8 by remote from my cell phone, which goes everywhere I go. FT8 is kind of the "last resort" mode of choice for me . . . Don't read that wrong, I really enjoy FT8 and I'm very glad to have it, particularly during these periods of minimal solar activity! ... BUT . . .

When radio conditions get good, I quickly abandon FT8. I much prefer the "conversational modes." I'm a rag-chewer, AND I'm a DXer, a country-counter, but I count FT4/8 Countries (and contacts) separately. For good ole "rag-chews," CW is my first choice, PSK is usually second. My station microphone is usually in a desk drawer. I typically only break it out for major SSB DX Contests, or when 6 meters is open. And, of course, for our Thursday Night CHRC Net! :-)

My FT817 is now 19 years old . . . I enjoy the challenges and rewards of running the FT-817 at it's lowest (1/2W) power level. (Sometimes, 5W is just too easy!)

In 2019, I made about 3400 HF QSOs with the FT-817 running 1/2W, and only about 100 QSOs running "high" power, 2W or 5W. ALL just because, one day, I wondered: What could I work if I cranked the FT-817 down to 1/2W.?

I've been finding out the answer to that question ever since.

-73- John N6HI

73 de KI7PBR, Gary



ADAW

ADAW

Real Estate

*Are you or someone you know looking for a Ham Home?
I can help you find a home with a tower or one where a tower can be added. Call or email me to get started.*

Richard Haworth W7MDQ
Coldwell Banker Residential Brokerage
602-370-1450 Cell, rahaworth@cox.net



4747 N 22nd St. - Suite 100 - Phoenix, AZ 85016
 VHF – 146.84 MHz – PL 162.2 / UHF – 446.900 MHz – PL 131.8
 Echolink Node #731289 – K7ARC-R

Planning for Spring!

Hamfests

If the groundhog is correct, we're on track for an early spring. For us, that means plenty of hamfests on the horizon. Several of our members made the trek to Yuma for one of the best hamfests of the season. Don't fret if you didn't make it. There are three more in March and don't forget our club hamfest at DeVry in April which we co-host with our friends at the Arizona Amateur Radio Club. We always have a good time and we hope you will be able to help at DeVry this year. We will post an event to our K7ARC website for members to sign up and lend a hand with set up on Friday evening and for two shifts at the hamfest on Saturday, April 11th.

Here's a quick rundown of upcoming hamfests. For more information about each, see the hamfest calendar listing on the Amateur Radio Council of Arizona (ARCA) website.

- * Yuma Hamfest - Feb. 14-15 - Hosted by the Yuma Amateur Radio Hamfest Organization
- * Surprise Hamfest - March 14th - Hosted by the Amateur Television Network
- * Springfest - March 21st - Hosted by the Scottsdale Amateur Radio Club
- * RST Spring Hamfest - March 28th - Hosted by the Radio Society of Tucson
- * Hamfest at DeVry - April 11th - Hosted by the Arizona Amateur Radio Club and the Arizona Red Cross Communications Club

Palo Verde Nuclear Generating Station Drill

On Thursday, March 12th, we will be participating in the multi-agency Palo Verde Nuclear Generating Station mock disaster exercise. As part of that exercise we will be establishing a mock shelter in Buckeye, AZ which will be receiving mock disaster clients. There is no better preparation for an actual shelter operation than this exercise. In addition to working with Red Cross shelter teams, we will be coordinating communications with ARES radio operators assisting other agencies including the Maricopa County Office of Emergency Management. We will need radio operators to assist our shelter team, the Reception and Care Center and on the

Continued Next Column



Greetings from the Terraces, a rehabilitation facility in Phoenix where I am recovering from knee surgery. Here I am with my leg propped up and in a brace so it won't bend. For that reason, I unfortunately missed what was undoubtedly a VERY interesting AARC meeting on February 13, which included a discussion about CW – history, keys, learning the code, and operating using CW. Luckily I have seen and enjoyed the short video that was shown at the meeting. It was a video from a few years ago of the CW versus texting competition on The Tonight Show. Thanks, Gary, for showing that and thanks to the Geisslers who brought refreshments to the meeting. I'll be at the next meeting, March 12, so join us there and also on our weekly nets, Thursdays at 7:00 PM on 147.060 MHz.

I'm especially sorry to have missed the Yuma Hamfest, its fantastic barbecue, and the special pickles we always enjoy in Yuma.

Gary tries to include in his meeting reminder emails those that were at recent license test sessions or club meetings. Hopefully these newcomers will join our Thursday nets and attend our club meetings.

73,
 Lori, WA7EDI



ARCCC Continued from Previous Column

Command Post in Buckeye as well as staffing the radio room at the chapter in Phoenix. We will be using a mix of modes and technologies including ARC low-band radios, VHF/UHF simplex and repeaters and maybe even some HF if conditions require. We will also be exchanging Winlink messages among the various participating offices. A briefing will be held before the event for participants to review assignments and refresh skills needed to make this a successful drill. An event will be posted on the K7ARC website with more details and for members to sign up for this annual exercise.

Charles Zurenko, N2TFS - Disaster Services Technology
 Arizona - New Mexico - El Paso
 4747 N. 22nd Street
 Phoenix, AZ 85016
 (602) 336-6669 (p) - (607) 435-3461 (c)
Charles.Zurenko@redcross.org





CARL Continued from Previous Column

contacted by email at jeanjol@hotmail.com or by phone at 480-664-7353.

As Hams, we strive to be accurate in our use of the airwaves and equipment. At some risk of being run out of town, this author wishes to point out that Hams are misusing a technical term, and have continued to make this error in most on-air conversations.

There are three communication modes: Full Duplex, Half Duplex and Simplex. Regardless of the medium, these terms apply. Full Duplex describes a channel where traffic flows both ways simultaneously. If you are having a face-to-face conversation and both parties are talking at the same time, that is Full Duplex. When traffic flows through a channel only one way at a time, that is defined as Half Duplex.

Simplex, on the other hand, a Simplex link is one way only, incapable of being reversed. When watching TV, for example, the listener cannot send a message to the TV station on the received frequency.

By this definition, when a Ham is using a repeater, the operator may either talk or listen. And the repeater switches between transmit and receive (unless someone is sitting on a mic). By the accepted definition, repeater use is Half Duplex. Just thought that you would like to know. Simplex is one-way only.

The Volunteers at W7ASC thank you for responding when we ask for a response, on one of the local repeaters, when that Volunteer has the opportunity to demonstrate Ham radio to one more visitor. On Half Duplex!

73 until the next issue of the W7ASC Newsletter – if W4CIH is still permitted to do the writing.



Jim at the TBARC Hamfest

AMATEUR RADIO SERVICE DEMONSTRATION STATION

W7ASC is a Demonstration Station for the Amateur Radio (public) Service. The Volunteers who operate the station are members of the Center for Amateur Radio Learning (C.A.R.L.), a 501(c)(3) organization. W7ASC is open to all visitors to the Arizona Science Center during those hours when the Arizona Science Center is open. The station is located on the third floor of the Science Center, in the “My Digital World” gallery. Direct phone number is 602-716-2082

As mentioned in the February ADAW, the Telegraph was the first application where electricity had a practical application, and Morse code was used on that system. When Morse code is demonstrated at the W7ASC Station in the Arizona Science Center, it opens the door to a conversation about the earliest days of communication that utilizes electricity. The telegraph preceded telephone and radio. That simple demonstration of Morse code when the visitor is invited to send their name in Morse code is truly the first step into the world of the Science that has given us cell phones, TV and communication via satellite. Even the Internet is based on the Science that started with Telegraph and Morse code. The volunteer on duty at the station will, if time permits, explain this progression to the visitor. Teachers who visit the shack can take this story back to the classroom. Ham radio fits neatly into this narrative, don't you think? Once you have that teacher's attention, they will understand why they are offered a packet of information that may be used in their classroom. Yes – the information covers Ham-radio related topics, but it is all part of Science learning. And this is why the Ham Shack can be found in a science center!

So – if you are interested in explaining all of this to visitors, consider volunteering at W7ASC. Application is painless and no specific commitment is required. For a further understanding of what goes on at the Shack, take the time to visit the W7ASC station that can be found on the third floor of the Arizona Science Center. When you are visiting in order to explore the volunteer duties and requirements, which are truly not onerous, you will not be charged an entry fee! Merely stop at the Info desk, show your license and mention the reason for your visit. It would be a good idea to phone first, using the number that is provided in the preamble to this Newsletter. Comments, complaints, criticisms or contributions future Newsletters are always welcome. This author may be

Continued Next Column

ADAW



**CHAPTER 16
BARRY M. GOLDWATER ARIZONA CHAPTER**

The Kachina Amateur Radio Club is sponsoring a two-day review class to assist those planning to test for their Technician License on 4 April 2020.

The first half of the review will be held on Saturday, 28 March 2020 from 8:00 a.m. to noon. The second half will be on Sunday, 29 March 2020 from noon to 5:00 p.m. The review sessions will be conducted at the Solterra Senior Center, 5408 Hwy. 260 (White Mountain Blvd), Lakeside, AZ.

The Laurel VE Team, WM-VET, will be conducting license testing on Saturday, 4 April 2020, at 9:00 AM at that same location. Walk-Ins are welcomed, however, pre-registration is preferred. You can email the team at VEtesting@cablone.net to preregister. Please include your name (the exact name used to create your FRN, if you have an FRN), license call (if you have one), and which license exam you wish to take. An acknowledgment will be emailed back to you.

At the test session, the following will be required: A government issued photo ID, your FCC Registration Number (FRN) if you have one OR your Social Security number, the original and a copy of any passed exam element credit (CSCE), and a copy of your current license if upgrading. The test session begins at 9:00 AM.

73 Vince, KA7JOI
vetesting@cablone.net

Amateurs in Arizona with twenty five years of experience are invited to join the QCWA. There are monthly meetings in various parts of Arizona

Phoenix, AZ

Third Wednesday of each month at 9:30 AM
Contact: John L Marshall
WA7BSR@gmail.com

Prescott, AZ

Second Tuesday of the month at 10.30 AM
Golden Corral
1901 E AZ-69
Prescott, AZ 86302
928-776-1664
Contact: Don Broadston

Tucson, AZ

We need a volunteer to set up monthly meetings in Tucson.

Officers are:
(All officer positions are open for volunteers.)
President: John Marshall WA7BSR 623-334-2583
Vice President: Open
Secretary: Open
Treasurer: Dave Hanson W7BJw7bj@outlook.com
Webmaster: John Marshall WA7BSR WA7BSR@gmail.com

Web Site: <http://azqcwa.org> Email: azqcwa@gmail.com.
DUES: \$7.00/year and current national QCWA membership.





For Sale / Wanted



LOOK!
Great Deals!

For Sale

The Yavapai ARC welcomes visitors, both licensed and those interested in ham radio. Come join us for one of our regular club meetings. We meet on the first Thursday of every (almost) month, in the Freeman Building, 840 Rodeo Drive, on the Prescott Rodeo grounds. Meeting times are 7:00 PM with people showing up to visit and chat about 6:00 PM. For directions, visit our website www.w7yrc.org.

YARC is one of the largest and most active amateur radio clubs in the southwest. Our home is in beautiful Prescott, Arizona, at an elevation of 5400 ft. We are an ARRL Special Service club. The designation reflects our active public and community service efforts. YARC currently provides support communications for 13 community events in the greater Prescott area. Our 2020 calendar begins with the Whiskey Basin Trail Run, April 18, 2020. Additionally, many of our members are active in the Yavapai Co. Ares/Races.

The Prescott Hamfest 2020 has been cancelled. Final resolution for our planned venue collapsed at the end of January, and the hamfest committee deemed it too late to find another location and prepare by our planned May dates. While committee members and the club are very disappointed, we are moving ahead toward 2021. Sometimes it "just don't happen."

In June, YARC will participate in Field Day and host our annual picnic June 27-28 in Prescott Valley at the Little Dealer RV facility campus. It should be great fun with a minimum of hardship, as it is both a remote (field) location and in town. Access to both events will be easy.

YARC hosts license test sessions on a bimonthly basis. New members and those wishing to upgrade their licenses can take the test on March 14th. Check the club website www.w7yrc.org for other upcoming dates. And, please make note of our new location for testing;

The Church of Jesus Christ of Latter Day Saints
7073 Pronghorn Ranch Parkway
Prescott Valley, Arizona 86315

We offer periodic classes for anyone interested in becoming a ham and getting licensed. The next Tech class is Feb 22 and 29. Look for the class schedule on the website.

So, come on up, down or over to Prescott, and pop in for a visit or join us. We are a fun club with lots of activities. The Yavapai Amateur Radio Club is here to serve.

Stacked 70CM KLM Yagis - Two, 16-element stacked side-by-side for vertical polarization. Gain 14.0 dBd each, 17dBd for the stack. Broadbanded 420-450 MHz. I used it for ATV. Boom length 10 ft. 3in. \$160 including manual. Contact Erik Basilier K7TV at ebasilier@cox.net

Steppir 3-Element Antenna with optional 40M - 30M Dipole (Trombone) Kit. Also with 6M passive element, SDA 100 with D25 splice, and plug in connector junction box (pipe-bomb upgrade). Excellent Condition - \$2,000.00

Contact Bob Drake AF7EL at 623.385.6531 or email af7el@yahoo.com

11.0/13.5 KW 120/240 V Predator Generator

Looks and runs like new. Electric start with 12V battery and charger. Purchased 8/3/16, has 37 hours total run time. Comes with Manual, complete maintenance log, 90' 50-A cable, and dual 6' loading ramps. \$1800.00 Contact: Dave West K9JKN at WestDL@aol.com or 480.641.1480.

The **West Valley Amateur Radio Club** has radios and ALL kinds of supplies available for sale through the club. We get some old equipment that won't sell that will be added to the items for free. Contact: Ken Jenkins, WB6MMV at kjenkins5623@gmail.com or Jim Seay, WB7RBN at wb7rbn@arrl.com.



Hamfest Calendar

14 March 2020 - **ATN Surprise Hamfest** - hosted by the Amateur Television Network will be held at 12983 W Grand Avenue in Surprise. Hours are 7:30 AM until 12:00 Noon. General Admission: \$1 per person. Tailgaters, Vendors & Club Booths are \$10 per space with set up beginning at 6:30 AM. Early Arrival and Camping May Be Available. Contact Bob Minnick, W8ARZ at povertyflataz@yahoo.com for space and booth reservations. Talk-In on 448.400 MHz FM PL 100.0. Direct questions to Rod Fritz, WB9KMO at wb9kmo@gmail.com.

21 March 2020 - **SpringFest** - hosted by the Scottsdale Amateur Radio Club will be held at 17705 N Pacesetter Way in Scottsdale. Gates open to the public at 7:00 AM. Vendor set up at 6:00 AM. General Admission - \$5.00 per person. Vendor/Tailgate - \$20 for 2 parking spaces. Raffle prizes and hourly drawings. Refreshments and snacks will be available. For questions, contact Bill Kouchis, N7EIV at n9eiv@arrl.net or Ray Vasquez, K4RMZ at k4rmv@arrl.net.

28 March 2020 - **RST Spring Hamfest** - hosted by the Radio Society of Tucson will be held at the Target Store, 9615 E Old Spanish Trail in Tucson. Hours - 6:00 AM - 11:00 AM. Free Admission and Buyer Parking. Tailgate Spaces \$10 per Parking Space. Free VE Testing at 9:00 AM - GOTA Station - QSL Card Checking - Prizes. Snacks & Beverages Available for Purchase. No Alcohol, Drugs, or Firearms. Talk-In Frequency 146.800 FM Tone 156.7. For Information & Map, visit <http://www.k7rst.org>

11 April 2020 - **April Hamfest at DeVry** - hosted by the Arizona Amateur Radio Club and the Arizona Red Cross Communications Club will be held at DeVry University, 2149 W Dunlap Avenue in Phoenix. Date is Tentative. Watch for Details.

5 May 2020 - **Cochise Hamfest and 7th Region Communications Exercise** - hosted by the Cochise Amateur Radio Association will be held at the club site, 2756 South Moson Road in Sierra Vista. Gates open at 7:00 AM. Free Admission and Parking. Tailgating - \$5. Inside Table - \$10. VE Testing from 9:00 until 11:30 AM. Coffee, Pastry, and Drinks Available. Hourly Prizes with Main Prize drawing at 12:00 Noon. Talk-In on 146.76(-) PL 162.2 Hz. Watch for more details.

26 September 2020 - **Tucson Fall Hamfest** - hosted by the Radio Society of Tucson will be held at the Target Store, 9615 E Old Spanish Trail in Tucson. Hours - 6:00 AM - 11:00 AM. Free Admission and Buyer Parking. Tailgate Spaces \$10 per Parking Space. Free VE Testing at 9:00 AM - GOTA Station - QSL Card Checking - Prizes. Snacks & Beverages Available for Purchase. No Alcohol, Drugs, or Firearms. Talk-In Frequency 146.800 FM Tone 156.7. For Information & Map, visit <http://www.k7rst.org>

24 October 2020 - **Copafest** - hosted by the Maricopa Amateur Radio Club will be held at The Ultrastar at Ak-Chin Circle, 16000 N Maricopa Rd in Maricopa. Hours are 7:00 AM until 1:00 PM. Admission Donation is \$5.00 per person. Spaces are \$10.00 for two parking spaces. Setup begins at 5:00 AM. Balloon Launch, VE Testing, Card Checking, Vendor Exhibits, Seminars, Prizes and more. Many activities available in the Multitainment Center including laser tag, bowling, movies, games, dining and more. Dining and Hotel also available. For information, email fest@copafest.org or visit the website at www.copafest.org.

14 November 2020 - **Oro Valley Hamfest** - hosted by the Oro Valley Amateur Radio Club will be held at Marana Middle School, 11285 West Grier Rd in Marana. Gates open at 7:00 AM, closes at 1:00 PM. Admission is \$5.00 which includes a bottle of water. Children under 12 with a paid adult and students with any Arizona school ID are free. Sellers spaces are \$10.00 per space and includes seller's admission. Indoor VE Session with pre-registration preferred, but not required. Send an email to pre-register (email licensing@tucsonhamradio.org). Interesting Seminars - ARRL Card Checking and LOTW Assistance at ARRL Booth - Food Truck for Breakfast and Lunch. Contact hamfest@tucsonhamradio.org for more information. Visit the website at www.tucsonhamradio.org.

21 November 2020 - **HARKfest** - hosted by the Hassayampa Amateur Radio Klub will be held at North Ranch Escapees RV Park, 30625 S Hwy 89 in Congress. ARRL Card Checking, Free Admission, Free Tailgate Sites (Pre-Registration is Required. Email: bridges.slt@gmail.com) Overnight Camping (Full Hook-Up or Dry) is Available (Pre-Registration is required for camping northranch@escapees.com) Tailgating permitted at campsite. Free VE Testing via LARC VE testing - Must Pre-register via email to cecarter39@yahoo.com - Prizes - Arts & Crafts Show at the Activity Center 9:00 AM - 2:00 PM. Lunch will be served at the Activity Center. Talk-In 146.620 (pl 162.2) or 146.580 (simplex) Visit the web site at harkaz.org for up-to-date information. Questions? Email Duane Grooms, KD0KYK at djgrooms@yahoo.com

ADAW





TBARC Continued from Previous Column

We'd love to have you join us, and guests are welcome. Our meetings are held on the third Thursday of the month at the North Phoenix Campus of Northern Arizona University. It's near Greenway and I-17, starting at around 7:00 p.m. See the club website at w7tbc.org for directions. March's presentation has yet to be announced, but we're looking forward to another evening of interesting technical information. Join us and find out what it will be!

Andrew Cornwall, KF7CCC
kf7ccc@arrl.net

Hamfest Prizes

Thanks to everyone who took part in the hamfest raffle. The grand prize went to Paul Finell W7EFQ, second-place prize to Earl Woody KD7ZXU, and third-place prize to James Speck W5AI. Thank you to everyone who entered!

A drawing was held at the January general meeting for the three hamfest volunteer prizes. Winners were Greg Clement KG7JQK (not present), Andy Durbin K3WYC (presented at the meeting), Mike Altman KJ7EQC (not present). Without our volunteers, this hamfest wouldn't have been the success it was. Thanks to everyone who played a role!

Membership Drive Winners

Also at the January general meeting, we did the penultimate drawing - for members who had signed up before January 1. The winner of the Alinco DJ-MD5 was K7RQN Robert Fairfield. I understand there's still one more drawing in April, so if you haven't joined yet, there's still a chance to toss your name in the hat!

Northwest Christian Technician Class

TBARC has been working with the Northwest Christian Academy to start the Northwest Christian Academy Radio Club (NCARC). In particular, Paul Siken KI7LW, Ken Chambers K4FZH, and Brian McCarthy AK7F have worked with the school officials to secure an ARRL grant for a school station. Plans are already in motion to hold a technician class to help the students get to the point where they can actually use their equipment.

TBARC Repeaters Used for EMCOMM Training

On Monday, February 17 at around 9:30 p.m., you might have noticed some unusual traffic on the TBARC White Tank repeaters. The Arizona Emergency Net - Maricopa asked to use our repeaters as part of a training exercise. We continue to provide our repeater system to the Sun City Grand Hams group as well, who also use it for emergency communications training on their regular Monday 10:00 a.m. net. We are happy to provide this resource to the emergency communications community.

March General Meeting

Have you been to a TBARC meeting yet? Why not stop by?

Continued Next Column



Andy, K3WYC Hamfest Volunteer Winner



Gordon, NW7D discusses RTTY



Dan, K2LH & Gary, K8BKB talk about the West Valley Ham Shack-KJ7LNF

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, locations, fees may change. Arrive promptly at time listed. Fees may vary and exact change or check is required at most sessions. Call test session contact to confirm information. Walk-ins are permitted unless otherwise specified.

March Test Sessions

Mar 1st - Hassayampa AR Klub -- 2:00 PM

Home, 30645 S Wandering Way, Escapees North Ranch, Congress

Contact - Charles Carter 316.651.7710

No Walk-Ins - Call Ahead for Test and Location Info

Mar 2nd - West Valley ARC -- 6:00 PM

Shepherd of the Desert Lutheran Church, 11025 N 111th Ave,
Walton Hall, Sun City

Contact - David Morrill 623.680.5011

No Walk-Ins / Call Ahead

Mar 4th - PV Ham Study Group -- 7:30 PM

Trinity Lutheran Church, 3950 N Valorie Dr, Prescott Valley

Contact - J. M. Scherfling 928.632.2050

No Walk-Ins / Call Ahead to Pre-Register

Mar 4th - Scottsdale ARC -- 5:00 PM

Scottsdale Granite Reef Senior Center,
1700 N Granite Reef Rd, Scottsdale

Contact - Ray Vasquez 602.363.4207

Bring FRN number from FCC

Mar 5th - CARBA -- 7:00 PM

Lighthouse YMCA, 2900 N Columbus Blvd, Tucson

Contact - Matthew Grossman 520.462.0448

Pre-Reg by email preferred - veregistration@ac7il.org

Mar 7th, 14th, 21st & 28th - NOMADS -- 9:00 AM

Venture Out RV Resort, 5001 E Main St, Mesa

Contact - Robert Bingham 480.404.1408

No Walk-Ins / Call Ahead

Mar 7th - Unsponsored -- 9:00 AM

DeVry University Library, 2149 W Dunlap Ave, Phoenix

Contact - David Morrill n7tw@arrl.net

Mar 7th - Oro Valley ARC -- 10:30 AM

Ascension Lutheran Church, 1220 Magee Rd, Tucson

Contact - Quinton Gleason licensing@tucsonhamradio.org

Mar 9th - East Valley VE Team -- 6:00 PM

City of Mesa Utilities, 640 N Mesa Dr, By Flag Pole, Mesa

Contact - Fred Bolinger 480.242.8606

Mar 9th - Radio Society of Tucson -- 7:00 PM

Hardesty Mid-Town Police Bldg, 1100 S Alvernon, Tucson

Contact - Diane Zimmerman 520.664.5070

Mar 10th - WARC -- 7:30 PM

Senior Circle Building, 2728 Silver Creek Rd, Bullhead City

Contact - Carolyn Krick 928.897.7439

Mar 10th - Oro Valley ARC -- 7:00 PM

Town of Marana Community Room, 5100 W Ina Rd, Tucson

Contact - David Beauchesne 520.639.8626

Mar 11th - Chandler VE Team -- 5:00 PM

Gangplank, 250 S Arizona Ave, Chandler

Contact - Ray Vasquez 602.363.4207

No Walk-Ins / Call Ahead

Mar 14th - Yavapai ARC -- 9:00 AM

The Church of Jesus Christ of Latter Day Saints,

7073 Pronghorn Ranch Pkwy, Prescott Valley

Contact - Donald Bauer 928.775.4690

Pre-Register online at www.w7yrc.org (Click on License Tests)

Mar 14th - Yuma ARC -- 9:00 AM

Yuma County Sheriff's Office, 141 S 3rd Ave, Yuma

Contact - John Ham 970.927.3273

No Walk-Ins / Call Ahead / Appointment Only

Mar 17th - Boy Scout Troop 127 -- 8:00 PM

St Francis Xavier School Library, 4715 N Central Ave, Phoenix

Contact - John Kelly 602.264.6854

Mar 17th - Motorola ARC of Arizona -- 5:00 PM

Denny's Restaurant, 825 S 48th St, Tempe,

Contact - Edward Olague 602.885.7725

No Walk-Ins / Call Ahead

Mar 18th - Thunderbird ARC -- 6:00 PM

Honor Health Medical Office Bldg, 19841 N 27th Ave, Phoenix

Contact - Brian McCarthy 623.486.0507

Mar 21st - Hualapai ARC -- 10:00 AM

Kingman Fire Station, 2600 Northern, Kingman

Contact - Daniel Miller 928.897.3883

Mar 29th - Arizona ARC -- 7:00 PM

American Red Cross, 4747 N 22nd St, Phoenix

Contact - Gary Hamman 602.996.8148

No Walk-Ins - Pre-Register by Saturday Before





View From the Top of the Tower

Andy Keels, KD4ABB

The view from the top of the tower this month is absolutely beautiful. The sky is clear, the sun is out, the temperatures are perfect for getting outdoors, and the valley is full of visitors who have flocked to the valley of the sun' to enjoy our weather. This is the best time of the year for us as hams to get out and experiment with our antennas. This is also the time of year when we are most likely to interact with our neighbors as many of them are out working in their yards, playing with their kids, or just enjoying the temperate weather. That also makes this the perfect time of year for us to get to know our neighbors better.

It should come as no surprise to many of you that not everyone shares in our belief that amateur radio operators are valuable members of the community who should be allowed to practice their hobby, so they can be prepared to respond to a crisis situation. In fact many people look upon our hobby with such disdain that they have fought to enact rules to keep us out of their neighborhoods. This breaks my heart. I ask myself how many irresponsible hams it took to create such widespread disdain. Then, I ask myself what it would take to change people's minds.

What could I do for my neighbors for them to believe that their house was more valuable because they live next door to me?

Many of you I assume are of an age to remember watching the Andy Griffith Show. Sheriff Andy Taylor was the sheriff who maintained law and order in a small NC town without ever carrying a gun. He did it by gaining respect from the town's folk by being a friend to everyone. There was almost nothing Sheriff Taylor wouldn't do for his neighbors. Do you think his neighbors would value their homes more or less valuable because they lived next door to someone who might leave his house in the middle of the night with lights and sirens blaring? Most likely not, in fact they would probably say you could not have a better neighbor than Andy Taylor. He is friendly and would help you with anything if he could.

One comment I have heard from residents who live in HOA controlled neighborhoods, is that the HOA rules are there to protect the value of homeowners' homes. Well, there is a whole lot that goes into the value of a home (pun intended). Having a neighbor who is friendly and says hello even when they might not feel like being social, or offers to help you with your yard work, or checks on you when you're sick, or puts out your trash cans when you forget, or offers to drive you to the

Superstition Continued from Previous Column

store when your car is broke, are all things that add value significant to where you call home. I think part of the problem of disdain for hams many people have is that we have for too long ignored the skill of being exemplary great neighbors to those who live around us.

What kind of neighbor would you have to be for your neighbor to say, "Sure, I'd be happy to let you use one of the trees in my yard to hang your wire antenna?"

Or perhaps let me ask the question another way, what kind of neighbor would your next door neighbor have to be for you to say, "Sure, I don't mind if you park your RV in front of my house for a week while your relatives are in town?" Here is a really good one: "Sure, I don't mind if your child's rock band practices in your garage for an hour three days a week."

What kind of neighbor would they have to be to you, for you to say to yourself, "I value having them as a neighbor so much, that I don't mind this minor thing?"

I think another aspect of having our neighbors value us as hams is to know and appreciate our ability to help in crisis situations. Now, we can regurgitate all the talking points we read about in our ham radio literature, but for most people seeing is believing. Have your neighbors ever seen you participating in a public service drill or event? Do your neighbors really believe that you could get a message out to the authorities or their family if the electric grid and internet ever went down? I mean, if you believed your next door neighbor had some really valuable skill or ability, you might be willing to overlook a couple of their shortcomings too.

It is important for us not only to be ready to respond in a crisis, but for our neighbors to see us serving others when there aren't any crises present.

This month as I share my view from up here, I ask you to ask yourself the questions above, and then go be THAT NEIGHBOR to your neighborhood and see how it advances our amateur radio hobby.

Best Wishes,
Andy Keels, KD4ABB
President Superstition Amateur Radio Club

Tuesday, March 17, 6:00-6:45 PM SuperFest Committee Meets

Just ahead of every Club meeting and in the room next door, the 2020 SuperFest planning meeting takes place starting at 6:00 PM. If you would like to help us with the December 5, 2020 event, feel free to come early for the club meeting and drop in. You can reach Chairman John, KG7NSP at Chairman@SuperstitionSuperfest.org with any questions.

Tuesday, March 17, 7:00 PM Club Meeting, Presentation

Continued Next Column

Continued on Page 16



We are now at our new monthly meeting place, the Granite Reef Senior Center, 1700 N. Granite Reef Rd., Scottsdale. The next meeting will be on Thursday night, March 5th, starting at 7:00 p.m. Our social hour starts at 6:30 p.m..

The March meeting will feature a presentation by Kelly Jones, N0VD. He will come by and tell us all about his activation of Cape Verde (“D4” in DX lingo). Activating a place like D4 off the west coast of Africa takes special perseverance, but N0VD has been to many ports of call in his DXing career including putting a “new one” on the air when PJ4 became a “new” DXCC entity in 2010. Kelly can often be found operating from the Caribbean, especially during the contest season, with stops at VP5X, VP5D, J3A, PJ2T, PJ4E, PJ4X, PJ4D, TO4K and PZ5K. So, when it comes to activating DX away from home, he knows the score. Come hear what this Honor Roller has to say about it.

Members should note that dues are now due. You can mail a check to our treasurer, Mike Wright, N7MW (good on QRZ.com), or email him at n7mw [at] aol.com to arrange payment via PayPal. Dues remain the same at \$25 per person, plus \$12.50 more for each additional family member residing at the same address.

See you at the Granite Reef Senior Center in Scottsdale!

73,
Larry Loen, WO7R
CADXA President

Public Service Calendar

Maricopa County Emergency Communications Group Events

EVENT	LOCATION	DATE
Mesquite Canyon	Waddell	03/07/20
Xterra Black Canyon Trail Run		03/08/20
	Black Canyon City	
ADA Tour De Cure	North Valley	03/14/20
Crown King	Lake Pleasant-Crown King	03/28/20
March of Dimes March for Babies		04/11/20
	Downtown Phoenix - Wesley Bolin Plaza	
Pat's Run	Sun Devil Stadium/ and Tempe Town Lake	04/18/20
Zane Grey 50 (Highline Trail Run)		04/25/20
	Payson Mogollan Rim	
AZ Emergency Net - Maricopa Picnic		05/16/20
	Payson, Houston Mesa Campground	
Mogollan Monster 100	Pine	09/12/20
Barnburner Mountain Bike Race		09/19/20
	Kendrick Peak (NW of Flagstaff)	
El Tour de Mesa	Mesa	04/17/21
Auxcomm Interest	TBD	12/31/21

To sign up for an MCECG Public Service Event: www.mcecg.net

For information, contact Dennis Bietry - KE7EJF at 602.274.3732 - email, ke7ejf@cox.net, or contact the Event Coordinator for the event.

ADAW

ADAW



Old Pueblo Radio Club INTERMOD

RACES Repeaters

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



Emergency Communications Since 1961

SHORT SKIP

WVARC Auction Follow Up

The West Valley Amateur Radio Club hosted our annual Everything-Ham-Related auction. Thank you to everyone that participated. Without all the volunteers, buyers, and sellers, the auction would not have been successful! This year there were 104 lots sold by 20 different sellers. There were vintage radios, never-used /seldom-used equipment, and of course, the well-used equipment. There was something for everyone including field day hats and mugs in addition to the fun radio gear. Save the date next year (First Monday in February) and join in the fun!

Krissy, KI7GJJ

Tech Committee Report

As the club may have noticed, the tech-committee has hit the ground running under Danny's presidency. The WVARC unanimously adopted the proposal by the committee to purchase the new Yaesu DR-2X digital repeater to replace the problematic UHF box on Boswell Hospital. The 449.800 unit will operate solely in the "digital" mode when operational. It is scheduled to arrive by end of the first week in February! Jim, N7YTI will oversee the installation after it is programmed. We will gage the interest and evaluate any next steps into System Fusion our club should wish to take as the year rolls on. We'll keep you posted. The Boswell 440 should be up and running Sunday Feb 9th.

We are working on a vast range of projects that I'd love to share with you in the coming months, so stay tuned!

Frosty, NQ1S

Winter Field Day

West Valley Style!

Hats off to the brave triad of resourceful pioneers who worked Winter Field Day this year. Jay, W7CJH along with Jimmy, K6RRS and Ray "Pops," W0IVB faced the impending challenge of the airwaves! Tired from the arduous 20-minute journey from Sun City West onto Kettler's Field, and like the true-Phoenicians before them, Kamp-Run-a-Mucca grew

WVARC Continued from Previous Column

from the ashes! Out of shiny SUVs came pop-ups, sleeping bags, and the all-important ... porta-potty! Next the artillery... radios, coax, and tangled pieces of wire. Solar panels and generators rounded out the cacophony of "men & radio at work" as their dogs laid down to watch the festivities!

W7CJH was "on the air!" Jay worked 80, 40, and 20 meters while Jimmy worked digital. "Pops" was not to be out done and worked the VHF/UHF station. Poor band conditions and a freezing night never stopped these brave contesters from snagging more than 140 unanswered contacts from the ethereal sky! "We'll call if we get any good news" I could hear one say.

At noon on Sunday, the contest was over! As Ray sat on his walker and pointed at things to be packed away, I noted a slight smirk as Jay and Jimmy loaded the vehicles. "Another fine outing for ham radio, indeed" he muttered!

Frosty, NQ1S



ADAW

Continued Next Column



As we enter 2020, the ARA is working to solidify Amateur Radio in Arizona. We are at most major Hamfests and would like to hear from you. Please stop by and say hello.

Now is a good time to renew your membership. This can be done quickly through the website, or in person at meetings or hamfests.

MCECG is in full swing supporting various events. Look at the events. These events could always use some help. If you are new to Public Service, they will help you learn what you need. New or experienced, please take time to pick some events to help on.

Did you know the new design for the ARA sites was out in service in the early 90s? This was based on the Linkcomm RLC-3 which has not been manufactured for at least five years. We have collected as many parts as we could find, but it is time to look for an alternative. The technology has changed so much over the years that we have a committee researching options. If you would like to assist, please email me.

As always, the ARA has three meetings a month. The Tech meeting meets at 6:30 PM on the first Thursday, with the board meeting starting at 7:30. The Tech committee is planning their spring site visits and help is always welcome. The General meeting is the Fourth Thursday of the month starting at 7:30 PM.

Hope to see you at one of the meetings.

73,
Brian McCarthy, AK7F

ADAW



Over the past month the OVARC website has been completely rebuilt. It has a new look and feel and is jammed-packed with all kinds of information. Thanks to the combined efforts of Mike-K7VTT and Marnee KG7SIO, the new site is considerably easier to maintain. Several comments from members suggest it is a big improvement.

Brian-W4ES is now coordinating 2 Sunday evening nets. The first begins at 7:30 and is our traditional analog net. When the analog net is over the OVARC repeater system is switched over to Fusion and the Fusion net launches at 8PM. If you're reading this, please consider joining us on Sunday evening either through a local repeater or your hotspot. Check with website for details (www.tucsonhamradio.org)

We're already thinking about the November hamfest. Donations are always a big part of the event. We have already had a number of donations and we hope the trend continues. If you have items that are amateur radio related, consider donating them for our hamfest. Since we are a qualified nonprofit, we can get you a receipt for your donation too.

Congratulations to the 2020 Board of Directors. After many years of serving on the board, Carl-KB7AZ and Ross-K4WBR, have retired as Directors. My thanks to both Carl and Ross for their dedicated and hopefully continued service to OVARC. Taking their places are Hal-N7BAZ and Logan-KE7AZ. A big welcome to Hal and Logan and thank you for volunteering your time and talent.

Our sympathies to the family of John-KG7DMD. John's passing was unexpected and he will be missed. John was a regular to many club activities and was always there to do the heavy lifting at many of our hamfests over the years.

The January outing was held at Madera Canyon. Despite the cool morning there was a good turnout. The outings for the balance of the year are posted on the club calendar which can be found on the website at www.tucsonhamradio.org.

73, Steve - W1SR

ADAW

ATN

The Amateur Television Network

ATN-AZ Winter 2020 Activities

By Mike Collis WA6SVT and Rod Fritz WB9KMO

Our ATN-AZ Winter Meeting was hosted by Kevin Jacobson AD7OI and Tammy Jacobson KI7GVT on January 11th at their ICS facility in Phoenix. The ATN-AZ meeting was at noon, following a fine Thunderbird ARC Hamfest nearby, as we do every year.

This year, Rod Fritz WB9KMO gave a Video on Amateur Radio (VOAR) presentation at the Hamfest featuring ATV, Mesh Video, Balloon Video, Drone Video, and Video in Space.



Ron AE6QU and Kevin AD7OI, Our Host

Thank you to Tammy and Kevin for providing a first-class lunch and a great place for the meeting. The turnout was excellent this year and we were honored to add two new members, Frank Kelly WA6CWN and Emil Switzer W1GGM. Welcome to ATN!

Several hams from the microwave weak signal community attended and it was very interesting to hear about their rather exotic activities. These guys are operating 74 GHz and above!



Roland Hoffman KC6JPG sets up streaming so we're "On the Air to Everywhere!" while Gary W6KVC, Bob W8ARZ, Ron AE6QU and Kevin AD7OI look on

Continued Next Column

ATN-AZ Continued from Previous Column

After our lunch, Ed Olague K5OLA, our President, opened the meeting and Lee Weitzel K0CCU gave the financial report. Rod Fritz WB9KMO and Bob Minnick W8ARZ talked about organizing our first ATN-AZ Hamfest in Surprise, set for March 14th.

Roland Hoffman KC6JPG gave a report on IP video, which has skyrocketed in popularity on ATV nets all over the country. Check out www.whereby.com/amateurtvnetwork. Roland also described the progress he has made on the new ATN website, www.amateurtelevisionnetwork.org.



Bob W8ARZ and Roland KC6JPG

Mike Collis WA6SVT reported on the two FCC dockets that are changing the 3.3 and 5.9 GHz microwave ham bands. These band changes look like they may negatively affect our ATV links and FM repeater output on White Tank. We're planning to respond to the dockets, 3 GHz by February 21st and 5.9 GHz by mid-March.

Mike gave us a status report on the ATV repeaters in the southwest area ATN chapters. Activity is better than ever and we're continuing to upgrade equipment for better performance and reliability.

Elections were next. The existing officers were nominated and reelected unanimously for another term in 2020. Ed Olague K5OLA is President, Rod Fritz WB9KMO is Vice President and Promotion Coordinator and Lee Weitzel K0CCU is the Secretary Treasurer.

Then we closed the meeting, ate some more, and tinkered with ATV and streaming equipment until we ran out of energy. A good time was had by all. Special thanks to the guys who came to the meeting from California. It's great to have their support.

ADAW

Continued on Page 21



That's Me, Rod WB9KMO, Operating ATV

On the Third Sunday of the month, January 19th in this case, we have a monthly social Meetup called Video on Amateur Radio. We had a very nice turnout at Denny's Restaurant in Tempe. This month, we talked about progress we hope to make in 2020, an extension of things we started in 2019.

We want to bring more people into this VOAR Meetup group to cover the many facets of Video on Amateur Radio, especially ATV and Mesh Video. During the meeting, we actually check into the Sunday Night ATN-AZ ATV Net so newcomers see how it works. Besides several of us locally checking in, Roland KC6JPG checked in from southern California using a program called whereby.com. We showed mesh users how to get on ATV and watch each other using the Internet. They were surprised how easy it was and how well it worked. During the year, we'll do more with video creation and editing, ATV, Mesh Video and Drone Video. In the last few years, we've made leaps in technology so VOAR is easy to operate and a lot of fun. We spent some time socializing too. More next month, I promise (sometimes we get too involved in the technical side). We love it when you bring video that we can show on Amateur Radio during the Meetup.

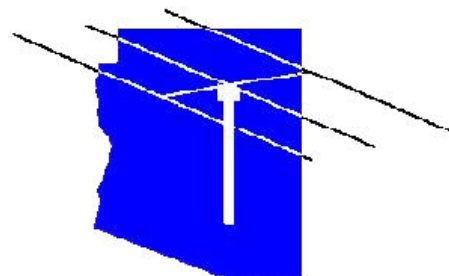
Our next Meetup event is 6pm Sunday February 16 at Denny's, 825 S 48th St, Tempe. For more info, go to Meetup.com and search for Video on Amateur Radio (VOAR). We hope to see you there.

73,
Mike WA6SVT and Rod WB9KMO

ADAW



No Reports Received



MARCA INC.



SARC CONSTANTS:

SARC is a 501 (c)(3) club. That means all donations are fully tax deductible. Contact Paul Finell W7EFQ at 602.741.6563 for information on estate donations and equipment pick-up.

For membership information, call Ed Nickerson, WU7S at 480.949.5162. Please send address change requests to Judy no later than the 7th of the month in which you would like the change to occur.



HAM RADIO OUTLET

WWW.HAMRADIO.COM

NOBODY BEATS AN HRO DEAL!



FTDX5000MP Limited | 200W HF + 6M Xcvr

- Internal Power Supply • Two Totally Independent Receivers
- Super Sharp "Roofing" Filters • High Performance Yaesu Custom- designed 32-bit Floating Point DSP • True Analog Meter Precision



FTDX3000 | 100W HF + 6M Transceiver

- 100 Watt HF/6 Meters • Large and wide color LCD display • High Speed Spectrum Scope built-in • 32 bit high speed DSP /Down Conversion 1st IF



FT-991A | HF/VHF/UHF All Mode Transceiver

- Real-time Spectrum Scope with Automatic Scope Control • Multi-color waterfall display • State of the art 32-bit Digital Signal Processing System • 3kHz Roofing Filter for enhanced performance • 3.5 Inch Full Color TFT USB Capable • Internal Automatic Antenna Tuner • High Accuracy TCXO



FTDX101D | HF + 6M Transceiver

- Narrow Band SDR & Direct Sampling SDR • Crystal Roofing Filters Phenomenal Multi-Signal Receiving Characteristics
- Unparalleled - 70dB Maximum Attenuation VC-Tune • 15 Separate (HAM 10 + GEN 5) Powerful Band Pass Filters • New Generation Scope Displays 3-Dimensional Spectrum Stream



FT-891 | HF+50 MHz All Mode Mobile Transceiver

- Rugged Construction in an Ultra Compact Body • Stable 100 Watt Output with Efficient Dual Internal Fans • 32-Bit IF DSP Provides Effective and Optimized QRM Rejection • Large Dot Matrix LCD Display with Quick Spectrum Scope • USB Port Allows Connection to a PC with a Single Cable • CAT Control, PTT/RTTY Control



FT-857D | Ultra Compact HF/VHF/UHF

- 100w HF/6M, 50W 2M, 20W UHF • DSP included • 32 color display • 200 mems • Detachable front panel (YSK-857 required)



FT-2980R | Heavy-Duty 80W 2M FM Transceiver

- Massive heatsink guarantees 80 watts of solid RF power • Loud 3 watts of audio output for noisy environments • Large 6 digit backlit LCD display for excellent visibility • 200 memory channels for serious users



FTM-100DR | C4FM FDMA/FM 144/430 MHz Xcvr

- Power Packed System Fusion Transceiver • High Audio Output Power • Rugged Powerful Transmitter • Integrated 66ch High Sensitivity GPS • 1200/9600 APRS Data Communications



FTM-400XD | 2M/440 Mobile

- Color display-green, blue, orange, purple, gray • GPS/APRS
- Packet 1200/9600 bd ready • Spectrum scope • Bluetooth • MicroSD slot • 500 memory per band



FT-70DR C4FM/FM 144/430MHz Xcvr

- System Fusion Compatible • Large Front Speaker delivers 700 mW of Loud Audio Output
- Automatic Mode Select detects C4FM or Fm Analog and Switches Accordingly • Huge 1,105 Channel Memory Capacity • External DC Jack for DC Supply and Battery Charging



FT-2DR C4FM/FM 144/430 MHz Xcvr

- Analog/C4FM Dual Monitor (V+VU+UV+U) • System Fusion compatible • 1200/9600 APRS Data Communications • Integrated 66ch High Sensitivity GPS • Wide Band Receiver • Snapshot Picture Taking Capability With Optional MH-85A11U



FT-65R | 144/430 MHz Transceiver

- Compact Commercial Grade Rugged Design • Large Front Speaker Delivers 1W of Powerful Clear Audio • 5 Watts of Reliable RF Power Within a compact Body • 3.5-Hour Rapid Charger Included • Large White LED Flashlight, Alarm and Quick Home Channel Access



FT-60R | 2M/440 5W HT

- Wide receiver coverage • AM air band receive
- 1000 memory channels w/alpha labels • Huge LCD display • Rugged die-cast, water resistant case • NOAA severe weather alert with alert scan



- RETAIL LOCATIONS – Store hours 10:00AM - 5:30PM - Closed Sunday
- PHONE – Toll-free phone hours 9:30AM - 5:30PM
- ONLINE – WWW.HAMRADIO.COM
- FAX – All store locations
- MAIL – All store locations

YAESU
The radio

We had a Great Time at the Yuma Hamfest. Thanks to everyone that stopped by to see us at the HRO booth. Remember to check our website weekly to see all the deals we have to offer at Ham Radio Outlet Phoenix.

Now serving you at our Phoenix store: Manager Ron AJ7T, Steve W7QY, Mike K7DD, Jim K7EOG, Jim KE7EEU, Richard KIRAB, and Bob W8RH.