



The Ventura Amateur Radio Club, K6MEP, will hold its January club meeting at 7:30 PM on Friday, January 10th, 2020, at The Dudley House 197 N. Ashwood Ave Ventura CA 93003 at the corner of Loma Vista and Ashwood 34d16m13.67s N 119d 14m 43.24s W. Grid square DM04jg (see map pg. 20) Board Meeting precedes the General Meeting. Marty N6VI will discuss Field Days Tactics.



Ventura County Amateur Radio Club 2020 Officers and Chairs

President	Denney Pistole	N6HV
Vice-President	Clem Alberts	KM6OKZ
Secretary	Phil Cohen	WA6BUZ
Treasurer	John Gartman	W6JPG
Board Member	Stewart Stone	KG6BOV
Board Member	Robert Shank	KM6RSS
Board Member	Richard Abbey	WB6AEW
Photographer	Denney Pistole	N6HV
Facilities Mgr.	Richard Abbey	WB6AEW
Keyer Editor	Robert Shank	KM6RSS
PR chairman	Open	
Programs Chair	Open	
Webmaster	Robert Shank	KM6RSS
Domain Mgr.	Phil Cohen	WA6BUZ
New Members	Bob Brodie	KJ6AAE
License Trustee	Stewart Stone	KG6BOV
QSL Manager	Ben Holmes	K6QV
Safety Officer	Bob Brodie	KJ6AAE

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The **KEYER** is published monthly by K6MEP, the Ventura County Amateur Radio Club, Inc. as a means of providing club members the minutes from K6MEP's monthly general membership meetings, the monthly board of directors' meetings, a calendar of events and articles of interest on amateur radio. Layout and logos are the property of The Ventura County Amateur Radio Club, K6MEP. The stories printed in this journal remain the property of the writers, without whom we would not have a publication. Permission to reprint articles should be obtained from the authors. Articles from the ARRL are reproduced with permission. Material submitted for inclusion is encouraged. Submit material by e-mail to KM6RSS@gmail.com. Our club mailing address is **K6MEP, PO Box 2103 Oxnard, CA 93034-2103**

K6MEP holds general membership meetings at 7:30 PM on the 2nd Friday of each month (except December). Dues are \$20 per year.

Message from the President

The Prez Sez,

Hello, and as your newly installed club president may I welcome you to join us on January 10th, 2020 for the first meeting of the year. It's hard to realize how many changes that have happen over the last year. This time last year we were looking for a new place to meet.

For you operators that are looking for DX or long range contacts, on 12/19 there was a region on the sun that briefly became a cycle 25 sunspot. This ended a 40 day streak of no sunspots. Sunspots improve the chances of making long distance contacts, and there should soon be more sunspots.

During the week of 15 December I helped a friend put up a two meter Earth-Moon-Earth (M00n bounce) antenna array. Four; 12 elements antennas designed by K1FO. My friend built a polarization changing mast rotator for the array so the antennas can go from horizontal to vertical polarization or any place in between.

Like last year I expect many changes to come our way this year. You can have input to these changes, let me and your board of directors know what is on your mind. We are also in search of volunteers. Don't be afraid to step up, no matter how long you have been a member.

I would also like to thank all of you that stepped forward to become officers of the club, whether newly elected or returning officers.

So come join us at 7:30 at the Dudley house on the 10th. 73 N6HV.

Secretary's Column and Meeting Minutes
No formal meeting was held; below is a
summary of our DecemberFest dinner

Dinner Meeting Date: 12/13/19

Meeting Time: 18:30

MEETING ADDRESS: La Dolce Vita Heritage
Square, 740 South B. Street | Oxnard, CA
93030

ATTENDANCE: Thirty-five members and
their guests attended.

Official Informal Meeting Notes:

The outgoing President Robert KM6RSS:
Thanked everyone for coming and wished
everyone a Merry Christmas, Happy New
Year 2020.

He then announced the results of the
November election and named the new
officers and at-large board members. After
that he presented Certificates of
Appreciation to the outgoing at-large board
members (Steve Noll WA6EJO and Rod
Austin KA6GUE) and presented, to Dana
Wentling KG6WXE, a certificate for his for
15 years of service as the club's PR
chairman.

In additional business he presented to Rod
Austin a Certificate of Achievement and \$50
prize for winning the K6MEP Monday Night
Net contest with 38 check-ins.

Then Robert acknowledged the continued
service from Phil WA6BUZ as secretary and
John W6JPG as treasurer, and Stewart
KG6BOV as a continuing at-large board
member.

He then inducted Richard Abbey WB6AEW
as new at-large board member and thanked
Richard for his service as VP and asked him
to induct/transfer the vice presidency to
Clem KM6OKZ.

Robert said a few brief words about his
time as President and asked Denney to
come up to the podium. Denney was

installed as President and the meeting was
turned over to him.

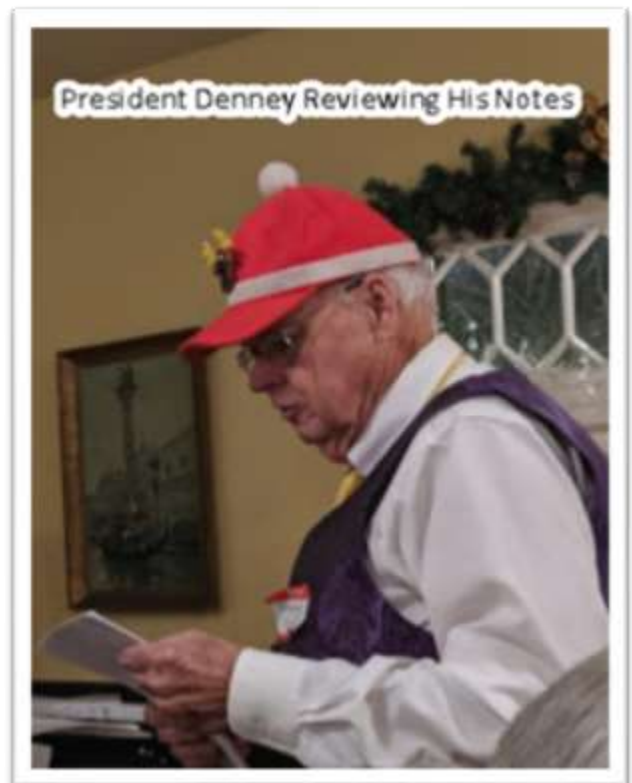
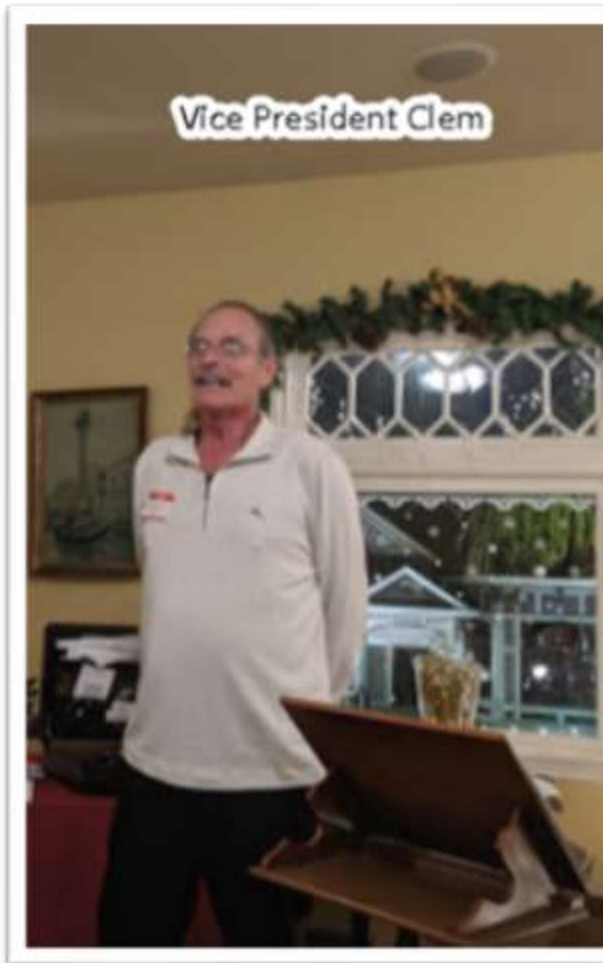
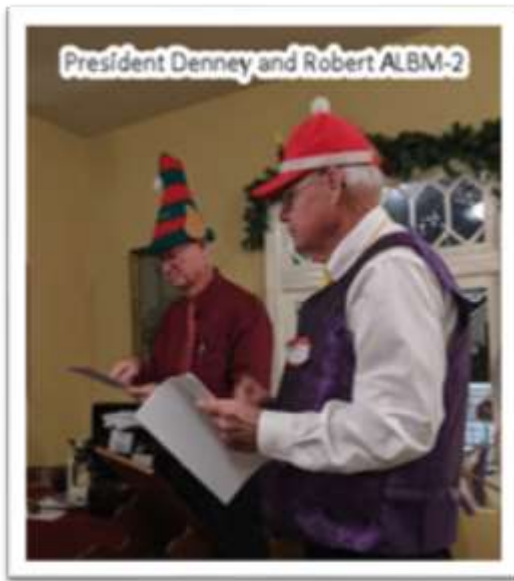
Denney made a few comments and asked
Robert to come up and assist with the
festivities.

DecemberFest Festivities:

After the official part of the dinner meeting
was over, our newly-minted President
Denney began his "seasonal" (he did this at
Carrow's last year) multiple choice and T/F
questions which were great "stumpers".
After some time and many missed
questions, Denney decided to award the
remaining presents via Robert (in the Elf
hat) and then Clem (our new VP) to the
lucky attendees (many who hadn't correctly
guessed anything). Denney reminded
everyone about our January 10th meeting
at The Dudley House and thanked everyone
for attending.

At our Jan 10th meeting, our guest speaker
will be Martin Woll N6VI and his topic will
be Field Day Tactics. Do you view ARRL's
Field Day as a contest, a public-relations
event, a training opportunity, a disaster
communications drill, or some of each? This
presentation addresses the factors that
drive a variety of planning decisions for
those participating in this always-popular
event. It identifies tactical opportunities to
get more out of your Field Day efforts and
ways to tackle such problems as cross-band
interference and incorporation of a Get-On-
The-Air (GOTA) station into a group's
primary operation.





Selected January Contests & Special Events

The following contests and special events caught your editor's eye. This is by no means a complete listing. Please see QST or the ARRL website (www.arrl.org) for any details and QSL information.

January 1st Straight Key Night

Straight Key Night is held every January 1 from 0000 UTC through 2359 UTC

Objective: This 24-hour event is not a contest; rather it is a day dedicated to celebrating our CW heritage. Participants are encouraged to get on the air and simply make enjoyable, conversational CW QSOs. The use of straight keys or bugs to send CW is preferred. There are no points scored and all who participate are winners.

January 5th Kids Day

Twice a year, ARRL offers an event designed to promote Amateur Radio to our youth. Share the excitement with your kids or grandkids, a Scout troop, a church or the general public! Kids Day is designed to give on-the-air experience to young people and hopefully foster interest in getting a license of their own. It is also intended to give older hams a chance to share their station and love for Amateur Radio with their children.

Dates and Times-

Generally the first Saturday in January, and the third Saturday in June; see the ARRL Contest Calendar for current Kids Day event dates at <http://www.arrl.org/contest-calendar>

Kids Day always runs from 1800 UTC through 2359 UTC. Operate as much or as little as you like.

January 5-6th RTTY Roundup

Objective: Amateurs worldwide contact and exchange QSO information with other amateurs using digital modes (Baudot RTTY, PSK, FT8/FT4, ASCII, AMTOR, and Packet—attended operation only) on 80, 40, 20, 15, and 10 meter bands. Any station may work any other station. Stations may be worked once per band, regardless of mode. **To see**

January 2019 QST -- using 'FT8 in the ARRL RTTY Roundup'

Online Log Submission - logs must be uploaded via an online web service at contest-log-submission.arrl.org.

Tell us how you did! Send us feedback and photos! Tell us what fun you had, and how you did, what challenges you faced, via our contest **Soapbox** page.

And send photos! Please, send us your high-resolution photos – especially Youth! Kids (and us adults wanting to regain our youth) love to see activity photos – Kids and adults having fun, operating, setting up antennas! For higher resolution, please send your photos as 500kb to 3mb in size. ARRL is always looking for youth activity photos for Write-Ups, Strays and Upfront in QST! *** [Please be sure to send a **Photo Release** for each person shown when submitting Youth photos - found

at www.arrl.org/files/file/Model%20Release%20/ModelReleaseForm.pdf] ***

19-21 January VHF

Objective: For amateurs in the US and Canada (and their possessions) to work as many amateur stations in as many different 2 degrees x 1 degree Maidenhead grid squares as possible using authorized frequencies above 50 MHz. Stations outside the US & Canada (and their possessions) may only work stations in the US (and its possessions) and Canada.

All legal modes are permitted (while CW and SSB/Phone are most common, MSK144, FT8 and FM-Only are gaining popularity - other popular modes include PSK31, FSK441 and JT65). For Cabrillo file mode definitions, Digital modes should be represented as "DG" (for all things digital) or "PH" or "RY" can also be used as digital modes are transmitted via Phone audio.

01/08/2020 | 9th Annual Balloon Festival

Jan 8-Jan 12, 0000Z-2359Z, K7B, Lake Havasu City, AZ. London Bridge Amateur Radio Association. 18.145 14,263 7.195 3.905. Certificate. Garry F. Fisher K9WZB, 1850 Rainbow Ave S, Lake Havasu City, AZ 86403. www.lbara.club (cont. on page 6)

Special Events (cont. from page 5)

**01/11/2020 | USS Midway Museum Ship
Special Event; Desert Storm Kickoff**

Jan 11, 1700Z-2359Z, NI6IW, San Diego, CA. USS Midway (CV-41) Museum Ship. 14.320 7.250 PSK31 14.070 DSTAR REF001C. QSL. USS Midway Museum Ship COMEDTRA, 910 N Harbor Drive, San Diego, CA 92101.

**01/18/2020 | Maderas Canyon - Birding
Capital of Arizona**

Jan 18, 1600Z-2100Z, K7T, Tucson, AZ. Oro Valley Amateur Radio Club. 7.200 LSB 14.040 CW 14.250 USB 18.100 FT-8. Certificate. Email, qsl@tucsonhamradio.org, for certificate.. No paper QSLs please. www.TucsonHamRadio.org

**01/18/2020 | Tonto National Monument
- cancelled due to fire, see new event
for K7T**

Jan 18, 1600Z-2100Z, K7T, Tucson, AZ. Oro Valley Amateur Radio Club. 7.040 CW 14.040 CW 14.250 USB 18.100 FT8. Certificate. Email , www.qsl@TucsonHamRadio.org , for certificate.. Commemorating 100th Anniversary of the Salt River project that supplies water to Phoenix. No paper QSL's please. *event cancelled due to fire -- see new event listed for K7T on this date* www.TucsonHamRadio.org

01/19/2020 | Quartzfest 2020

Jan 19-Jan 25, 0700Z-1800Z, W7Q, Kirkland, AZ. Quartzfest. 7.275 +-10 khz 14.285 +- 10 khz 21.395 +- 10khz 28.415 +- 10khz. QSL. Gloria Luther, 7690 W Derry , Kirkland, AZ 86332.

**01/25/2020 | Discovery of Gold in
California Special Event Station**

Jan 25-Jan 26, 1400Z-2330Z, AG6AU, Coloma, CA. El Dorado County ARC. 21.348 14.248 7.248. QSL. El Dorado County ARC, PO Box 451, Placerville, CA 95667. www.edcarc.net



Available Gear

Yaesu FT-8 and accessories for sale

Please contact Ron K16YAX
vcceart1@gmail.com



From the WT6JS Donation

Yaesu VX 3R, HT Dual Band 2m/440 whip antenna
w/2 chargers, manual
3 HT Dual Band 'Rubber Duck' antennas
4" external speaker w/mag mount
Mag mount system for large mobile HF antenna
Arrow Handheld Yagi Dual Band Antenna

Please contact Stewart KG6BOV
Kg6bov@arrl.net

Looking for Antenna Instructions and manuals

Looking for antenna instruction and manuals for pre-1995 VHF and UHF antennas.
Hy-gain, Cushcraft, KLM are the big manufacturers, but there were dozen of little ones (K1FO, K2RIW, Tronna). Would like to start a repository of antenna manuals.
Manuals will be copied and originals will be returned. The copies will be posted on the web for use by everyone. Have needed the manuals for two 2 meter antennas recently and cannot find them.

Denney N6HV /
denney@denneypistole.com

Equipment Tech and Operator Manuals

I have a large collection of radio tech manuals and operator manuals from Alinco / Icom / Kenwood / Yeasu and others. All are PDF format.

Stewart
KG6BOV@arrl.net

Robert KM6RSS will be bringing selected items from Joe K6NE (sk) and other's equipment for donations in January 2020 and beyond:



Upcoming FCC Exam Session Preparations
ON EXAM DAY BRING THE FOLLOWING ITEMS:

1. A legal photo ID (driver's license, passport).
2. When no photo ID is available, two forms of identification must be presented: a. non-photo ID/driver's license (some states still have them) b. birth certificate (must have the appropriate seal) c. social security card d. library card e. utility bill, bank statement or other business correspondence that specifically names the person; or a postmarked envelope addressed to the person at his or her current mailing address as it appears on the Form 605.
3. Students may bring any of the above items and/or a school ID, minor's work permit, report card, or a legal guardian may present a photo ID.
4. Bring your Social Security Number (SSN) or your FCC issued Federal Registration Number (FRN). VEC's are required by FCC to submit either your SSN or your FRN number with your license application form. If you prefer not to give your SSN, then you may use
5. Your FCC issued FRN, if you have one. For instructions on how to register your SSN with the FCC and receive a FRN, visit the FCC's FAQ page and the FCC's registration instructions page.
6. If applicable, bring the original and a photocopy of your current Amateur Radio license and any Certificates of Successful Completion of Examination (CSCE) you may hold from previous exam sessions. The photocopy(s) will not be returned.
7. Two number two pencils with erasers and a pen.
8. 7. A calculator with the memory erased and formulas cleared is allowed. You may not bring any written notes or calculations into the exam session. Slide rules and logarithmic tables are acceptable, as long as they're free of notes and formulas. Cell phone must be silenced or turned off during the exam session. The phones' calculator function may not be used.
9. Bring a check, a money order or cash to cover the exam session fee(s). Check the ARRL VEC's current exam fee. The fee is normally \$15.00 for ARRL-sponsored tests.



License Preparation and Sample Test Sites

Agoura Hills CA 91301

LICENSING CLASS

01/19/2020

Start/End Dates: 01/19/2020 - 01/19/2020

Times: 9am to 3pm

of Sessions: 1

Class level: Technician

Morse code offered: No

Pre register required: Yes

Fee: \$100

Pre Study required: Yes

Class Type: Weekend/One Day

Exam offered: Yes

Agoura Hills, CA 91301

Additional Information: Obtain an FCC

Registration Number (FRN) and complete Form 605, downloaded from <http://glaarg.org/glaarg-forms>, printed and signed *before* the class.

Bring the form with you to the class, along with a driver's license or passport for identification. You may take the Technician, General and Extra at the exam session at 3pm (you must pass them in order). If you don't pass, there will be test sessions on the following two Sunday mornings at 8am. **Email:** hamclass@goodkin.net

Location: Agoura Hills/Calabasas Community Center

27040 Malibu Hills Road

Class Room

Instructor: K6YXH

Contact: Norm Goodkin K6YXH

Phone: (818) 613-2257

Ham Sponsoring Club/Organization: Goodkin Radio Classes

Upcoming FCC Exam Sessions Santa Monica CA 90405-6130

EXAM SESSION

01/11/2020

Sponsor: PAPA Repeater System

Date: Jan 11 2020

Time: 7:00 AM (No Walk-ins / Call ahead)

Contact: Norm Goodkin

(818) 222-7013

Email: hamclass@goodkin.net

VEC: [Greater LA VEC](#)

Location: Spitfire Grill

3300 Airport Ave

Meeting Room

Santa Monica CA 90405-6130

Valencia CA 91355-2008

EXAM SESSION

01/18/2020

Sponsor: Santa Clarita Amt Radio Club

Date: Jan 18 2020

Time: 8:00 AM (No Walk-ins / Call ahead)

Contact:

(661) 259-0948

VEC: [Greater LA VEC](#)

Location: United Methodist Church of Valencia

25718 McBean Pkwy

Rm B

Valencia CA 91355-2008

Thousand Oaks CA 91360-6861

EXAM SESSION

02/09/2020

Sponsor: Conejo Valley ARC

Date: Feb 09 2020

Time: 8:30 AM (Walk-ins allowed)

Contact: Jeffrey M. Reinhardt

(818) 706-3853

Email: jmreinhardt@sbcglobal.net

VEC: [ARRL/VEC](#)

Location: Ventura Cty Sheriff's E County Station

2101 E Olsen Rd

Between 23 Hwy & Reagan Library

Community Room

Thousand Oaks CA 91360-6861

Trivia for January 2020

DID YOU KNOW???

1. The United States is #8 when it comes to receiving robo calls.
2. December 2, 1942. The first man made nuclear reaction was produced.
3. Holiday nutcrackers date back to 1481.

Happy New Year to all.

de

Dana.

kg6wxw us

K6MEP Calendar

January 2020

6: K6MEP Monday Night Net and ACS/ARES District Meeting, Camarillo Police Station

7: ACS/ARES Tuesday Night Net

10: Regular Monthly Club Meeting at 7:30pm. K6MEP Board meeting precedes the club meeting at 7:00pm.

13: K6MEP Monday Night Net

14: ACS/ARES Tuesday Night Net

20: K6MEP Monday Night Net

21: ACS/ARES Tuesday Night Net

27: K6MEP Monday Night Net

28: ACS/ARES Tuesday Night Net



K6MEP Net Script

QST- QST- QST. This is <Name> <Callsign>, with the Ventura County Amateur Radio Club Net.

If there is there any station with EMERGENCY or PRIORITY Traffic that needs the immediate use of this frequency, please come now.

Hearing none, the following is a QST. This is <Name> <Callsign>, tonight's net control station for the Ventura County Amateur Radio Club Net. If, at any time during tonight's net, anyone needs this frequency for emergency or priority traffic, please call net control, and we will respond appropriately.

This is a directed, open net for all amateur radio operators, sponsored by K6MEP, the call sign for VCARC. This net begins each Monday evening at 20:00 local time on the WD6EBY linked repeater system. The primary frequency of this net is 145.200 MHz with a minus offset and a PL of 127.3 Hz. If the repeater should fail for any reason, we can use South Mtn. 146.385 plus offset and a PL of 127.3 as backup. All amateurs are welcome to check in after these announcements. A roundtable will follow the open check-in. A rag chew session may follow the formal net.

K6MEP, the Ventura County Amateur Radio Club, meets at 19:30 hours on the second Friday of each month at The Dudley House, 197 N Ashwood Ave, Ventura, CA 93003. The next meeting date is <say next meeting date from calendar>. We urge any non-members interested in VCARC to contact our Secretary, Phil Cohen, WA6BUZ email at K6MEP@qsl.net.

As we continue with the check-in process, please give your call sign, name and if you are a VCARC member. If you are not a member of the VCARC, please include your QTH or location.

(Check-ins completed): We will now begin with our Roundtable ***** Any last comments? ***** Any late, missed, or visitor check-ins? Please check-in now.

(Closing): This concludes the VCARC weekly net at _____ hours. Thank you for your interest and participation. Also thanks to Paul Strauss, WD6EBY, for the use of the repeater for our K6MEP net.

73, this is <Name> <Callsign>, tonight's VCARC net control, signing off.

Upcoming Hamfests and Conventions

Thunderbird Hamfest

HAMFEST/CONVENTION

01/11/2020

Start Date: **01/11/2020**

End Date: **01/11/2020**

Location: **Glendale Nazarene Church**

5902 W. Cactus Road

Phoenix, AZ 85001

Website: <http://tbirdfest.org>

Sponsor: **Thunderbird Amateur Radio Club**

Type: **ARRL Hamfest**

Talk-In: **147.040 (PL 162.2)**

Public Contact: **Darrell Bradshaw , KE7T**

2426 E Mercer Lane Phoenix, AZ 85028

Phone: **1-480-286-7542**

Email: miscbs@gmail.com

Quartzfest

HAMFEST/CONVENTION

01/19/2020

Start Date: 01/19/2020

End Date: 01/25/2020 (cont. on page 11)

Location: Roadrunner BLM Short Term Camping Area

53rd Street North, US Hwy 95

Quartzsite, AZ 85346 Phone: 520-730-1806

Website: <http://quartzfest.org>

Sponsor: Quartzfest Planning Committee

Type: ARRL Convention

Talk-In: 146.55 simplex

Public Contact: Kristyn Weed , KR1SS

1519 North Camino Emiliano Tucson, AZ 85745

Yuma Hamfest, ARRL 2020 Southwestern Division Convention

HAMFEST/CONVENTION

02/14/2020

Start Date: 02/14/2020

End Date: 02/15/2020

Location: Yuma County Fairgrounds

2520 E. 32nd Street

Yuma, AZ 85364

Website: <http://www.yumahamfest.org>

(cont. on page 12)

Upcoming Hamfests and Conventions (cont. from page 11)

Sponsor: Yuma Amateur Radio Hamfest Organization

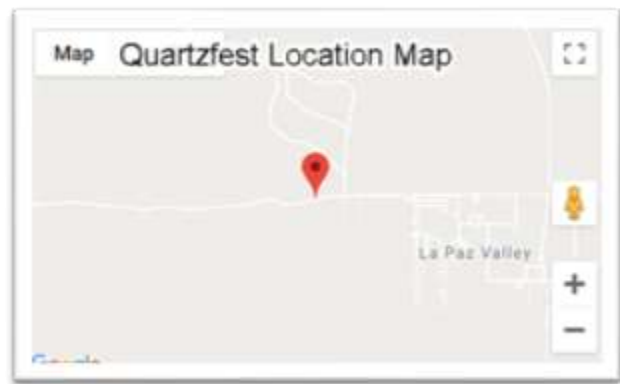
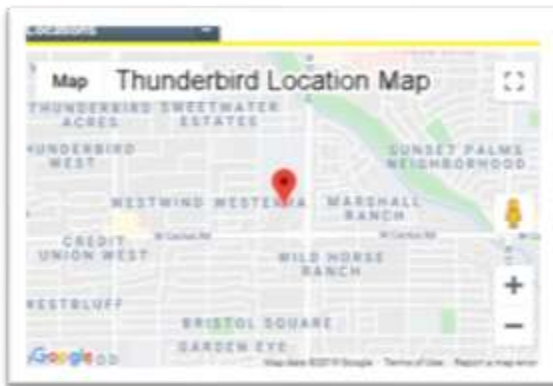
Type: ARRL Convention

Talk-In: 146.840 - (PL 88.5)

Public Contact: Jeff Weeks , W7JLW
YARHO P.O. Box 1843 Yuma, AZ 85366

Phone: 928-941-0131

Email: info@yumahamfest.org



Emergency and Volunteer Training

Some excellent emergency and volunteer training is available through the American Red Cross of Ventura County, FEMA and the American Radio Relay League.

Red Cross Courses

The following is a list of locally available Red Cross courses and a current schedule of classes over the next two months. Enroll by calling the Red Cross Chapter House at 805-987-1514 Ext 320 leaving your name, course code and telephone number. If you are interested in a class not currently scheduled call to be placed on a waiting list for the next scheduled date.

Note: The classes **Fulfilling Our Mission** and **Introduction to Disaster Services** are required for all Red Cross classes if you are not currently registered as a Red Cross Volunteer.

For training class registration, call: 805-987-1514 Ext 320.

Course schedule and descriptions:

<http://www.arcventura.org/DSCourseDescriptions.html>

http://www.arcventura.org/contact_us.html

COLLABORATING TO ENSURE EFFECTIVE SERVICE DELIVERY(ARC3089-4)
COMMUNITY SERVICES OVERVIEW (ARC 3068-1)
DISASTER ASSESSMENT (ARC 3067-1)
DISASTER HEALTH SERVICES: OVERVIEW (3076-1F)
DISASTER HEALTH SERVICES SIMULATION (ARC 3076-2F)
DISASTER MENTAL HEALTH SERVICES (ARC 3077-1F)
DISASTER MENTAL HEALTH: AN OVERVIEW (ARC 3077-2)
DISASTER WELFARE INQ.:CONNECTING YOUR COMMUNITY(ARC 3085-1)
DISASTER WELFARE INQUIRY SIMULATION (ARC 3085-2)
EMERGENCY OPS CENTER/INCIDENT COMMAND LIAISON (ARC 3089-5)
ERV's: READY, SET, ROLL (ARC 3068-4)
FAMILY SERVICES: PROVIDING EMERGENCY ASSISTANCE (ARC 3072-1)
FINANCIAL STATISTICAL INFORMATION MANAGEMENT (ARC 3078-2)
HUMAN RESOURCES IN DISASTER (ARC 3087-3F)
LOGISTICS: AN OVERVIEW (ARC 3087-1)
LOGISTICS SIMULATION (ARC 3071-2)
MANAGING TOTAL DIVERSITY
MASS CASUALTY DISASTER (ARC 3079 1F)
PUBLIC AFFAIRS IN DISASTER 1 (ARC 3080 1F)
SAFE FOOD HANDLING WORKSHOP
SHELTER OPERATIONS (ARC 3068-11)
SHELTER SIMULATIONS (ARC 3068-12)
WORKING WITH TOTAL DIVERSITY

Scheduled Red Cross Classes

For training class registration, call: 805-987-1514

Please try to register for classes a week before the class is being offered



The following free **FEMA Independent Study Courses** are recommended. There are several other FEMA courses available; see the other courses at <http://training.fema.gov/is>

- IS-5.a [An Introduction to Hazardous Materials](#) - (10/31/2013)
- IS-10.a [Animals in Disasters: Awareness and Preparedness](#) - (10/2/2015)
- IS-11.a [Animals in Disasters: Community Planning](#) - (10/2/2015)
- IS-15.b [Special Events Contingency Planning for Public Safety Agencies](#) - (10/31/2013)
- IS-20.19 [Diversity Awareness Course 2019](#) - (1/30/2019)
- IS-21.17 [Civil Rights and FEMA Disaster Assistance](#) - (1/25/2017)
- IS-26 [Guide to Points of Distribution](#) - (8/11/2010)
- IS-27 [Orientation to FEMA Logistics](#) - (10/31/2013)
- IS-29 [Public Information Officer Awareness](#) - (10/31/2013)
- IS-33.19 [FEMA Initial Ethics Orientation 2019](#) - (1/30/2019)
- IS-35.19 [FEMA Safety Orientation 2019](#) - (1/30/2019)
- IS-36 [Multi-hazard Planning for Childcare](#) - (10/31/2013)
- IS-42 [Social Media in Emergency Management](#) - (10/31/2013)
- IS-75 [Military Resources in Emergency Management](#) - (2/25/2011)
- IS-100.b [Introduction to Incident Command System, ICS-100](#) - (10/31/2013)
- IS-111.a [Livestock in Disasters](#) - (10/31/2013)
- IS-144 [Telecommunicators Emergency Response Taskforce \(TERT\) Basic Course](#) - (10/31/2013)
- IS-162 [Hazard Mitigation Floodplain Management in Disaster Operations](#) - (11/16/2016)
- IS-200.b [ICS for Single Resources and Initial Action Incidents](#) - (10/31/2013)
- IS-230.d [Fundamentals of Emergency Management](#) - (12/16/2013)
- IS-235.c [Emergency Planning](#) - (12/15/2015)
- IS-240.b [Leadership and Influence](#) - (6/16/2014)
- IS-241.b [Decision Making and Problem Solving](#) - (3/31/2014)
- IS-242.b [Effective Communication](#) - (3/31/2014)
- IS-244.b [Developing and Managing Volunteers](#) - (3/29/2013)
- IS-250.a [Emergency Support Function 15 \(ESF15\) External Affairs: A New Approach to Emergency Communication and Information Distribution](#) - (5/7/2012)
- IS-271.a [Anticipating Hazardous Weather & Community Risk, 2nd Edition](#) - (10/31/2013)
- IS-288.a [The Role of Voluntary Organizations in Emergency Management](#) - (2/12/2015)
- IS-315 [CERT Supplemental Training: The Incident Command System](#) - (8/13/2013)
- IS-317 [Introduction to Community Emergency Response Teams](#) - (6/26/2014)
- IS-320 [Wildfire Mitigation Basics for Mitigation Staff](#) - (10/31/2013)
- IS-322 [Flood Mitigation Basics for Mitigation Staff](#) - (10/31/2013)
- IS-323 [Earthquake Mitigation Basics for Mitigation Staff](#) - (10/31/2013)
- IS-325 [Earthquake Basics: Science, Risk, and Mitigation](#) - (10/31/2013)
- IS-326 [Community Tsunami Preparedness](#) - (10/31/2013)

- IS-366.a [Planning for the Needs of Children in Disasters](#) - (12/9/2015)
- IS-368 [Including People With Disabilities & Others With Access & Functional Needs in Disaster Operations](#) - (2/20/2014)
- IS-393.a [Introduction to Hazard Mitigation](#) - (10/31/2013)
- IS-405 [Overview of Mass Care/Emergency Assistance](#) - (12/10/2013)
- IS-454 [Fundamentals of Risk Management](#) - (10/31/2013)
- IS-546.a [Continuity of Operations Awareness Course](#) - (10/31/2013)
- IS-547.a [Introduction to Continuity of Operations](#) - (10/31/2013)
- IS-559 [Local Damage Assessment](#) - (10/31/2013)
- IS-700.b [An Introduction to the National Incident Management System](#) - (6/25/2018)
- IS-775 [EOC Management and Operations](#) - (8/6/2008)
- IS-800.b [National Response Framework, An Introduction](#) - (1/20/2017)
- IS-815 [ABCs of Temporary Emergency Power](#) - (12/27/2016)
- IS-906 [Workplace Security Awareness](#) - (10/31/2013)
- IS-907 [Active Shooter: What You Can Do](#) - (12/28/2015)
- IS-909 [Community Preparedness: Implementing Simple Activities for Everyone](#) - (10/31/2013)
- IS-910.a [Emergency Management Preparedness Fundamentals](#) - (10/19/2012)
- IS-915 [Protecting Critical Infrastructure Against Insider Threats](#) - (7/10/2013)
- IS-916 [Critical Infrastructure Security: Theft and Diversion – What You Can Do](#) - (10/31/2013)
- IS-922 [Applications of GIS for Emergency Management](#) - (10/31/2013)
- IS-951 [DHS Radio Interoperability](#) - (9/22/2016)
- IS-2200: [Basic Emergency Operations Center Functions](#) - (5/17/2019)
- IS-2500 [National Prevention Framework, an Introduction](#) - (3/27/2018)
- IS-2600 [National Protection Framework, An Introduction](#) - (3/27/2018)
- IS-2700 [National Mitigation Framework, an Introduction](#) - (3/27/2018)
- IS-2900.a [National Disaster Recovery Framework \(NDRF\) Overview](#) - (7/11/2018)

The ARRL offers several on-line courses. The courses listed here are recommended for those involved in disaster and emergency service. See these and other courses at the ARRL web site.

Introduction to Emergency Communication EC-001
HF Digital Communications EC-005
PR-101: ARRL Public Relations (EC-015)
Public Service and Emergency Communications Management for Radio Amateurs- EC-016

There are some costs with the ARRL courses but discounts and occasional scholarships are available to ARRL members. See www.ARRL.org for details and enrollment.

ARES-ACS Frequency Updates

The Tuesday night Ventura County ARES/ACS Net is held on the WD6EBY Sulphur Mt. Repeater. Local nets are 7:00 to 7:30 PM; County Net starts at 7:30 on WD6EBY Sulphur Mt. Repeater 145.200 (-) PL 127.3 / 445.560 Mhz(-) PL 141.3

Good Frequencies to have pre-programmed into your radios...

Area 1 Simi Valley – K6ERN 146.805 Mhz (-) PL 100.0	Area 6 Ventura City – WA6ZSN 146.385 Mhz (+) PL 127.3
Area 2 Conejo Valley, T. Oaks, Newbury Park – N6JMI 147.885 Mhz (-) PL 127.3 BOZO	Area 7 Santa Paula, Fillmore, Piru – WA6ZSN 146.385 Mhz (+) PL 127.3
Area 3 Camarillo, Somis – K6ERN 147.915 Mhz (-) PL 127.3	Area 8 Moorpark, Santa Rosa Valley – K6ERN 145.460 Mhz (-) PL 127.3
Area 4 Oxnard, Port Hueneme, NBVC – WB6YQN 146.970 Mhz (-) PL 127.3	County-Wide – WD6EBY 145.200 (-) PL 127.3
Area 5 Ojai Valley – N6FL 145.400 Mhz (-) PL 114.8	ACS Portable – VCACS/p 144.930/147.585 Mhz PL 127.3

Other Good Area Frequencies ...

AA6DP 147.090 Mhz (+) No PL Catalina	N6EVC 146.850 Mhz (-) PL 94.8 Rasnow
K0AKS 147.150 Mhz(-) PL 127.3 TOaks	N6FDR 145.260 Mhz (-) PL 100.0 Malibu
K6CPT DCS 145.300 Mhz (-) PL 100.0 LA DCS	W6AAX 147.180 Mhz (+) PL 186.2 Verdugo Peak
K6CPT DCS 147.270 Mhz (-) PL 100.0 LA DCS	W6GRG 146.940 Mhz (-) PL 127.3 Simi DSW Repeater
K6DCS DCS22 147.225 Mhz (+) PL 94.8 LA DCS	W6YJO 145.180 Mhz (-) PL 131.8 Sta Ynez
K6ERN 146.880 Mhz (-) PL 127.3 SMRA Red Mt.	WA6FGK 146.640 Mhz (-) PL 127.3 Simi Valley
K6ERN 147.765 Mhz (-) PL 127.3 Olivias Park / SMRA	WA6PPS 147.300 Mhz (-) PL 110.9 L.A. City ACS
K6TZ 146.790 Mhz (-) PL 131.8 SBARC	WB6OBB 147.000 Mhz (+) PL 131.8 Sta Barbara
KB6C 147.735 Mhz (-) PL 100.0 Oat Mt / MMRA	WD6EBY 145.240 Mhz (-) PL 127.3 Chatsworth Pk

Due to assignment and coordination of several D-Star Repeaters, TASMA, the southern California Two meter amateur frequency coordination body, has had to re-align several frequencies. Among these changes are the channelization (15 KHz spacing) of the 145.5 - 145.6 simplex allocation and reassignment of several frequencies from simplex to other uses.

None of the local Ventura County repeaters are directly affected; however several previous simplex frequencies are now in use either as repeater inputs or outputs. **New County ARES Packet frequency is 145.050 Mhz;**

Ventura County ARES-ACS simplex frequencies have been re-assigned as follows:

Area 1 Simi Valley – 145.510 Mhz (S)	Area 6 Ventura City – 147.510Mhz (S)
Area 2 Conejo Valley, T.O., Newbury Pk – 146.445 Mhz (S)	Area 7 Santa Paula, Fillmore, Piru – 145.540 Mhz (S)
Area 3 Camarillo, Somis – 146.550Mhz (S)	Area 8 Moorpark – 146.535Mhz (S)
Area 4 Oxnard, Port Hueneme, NBVC – 146.595Mhz (S)	County ARES Simplex – 145.615 Mhz (S)
Area 5 Ojai Valley – 145.555Mhz (S)	National Simplex – 146.520Mhz(S)

Ventura County ARES / ACS Emergency Coordinators

ACS RO/ARES DEC: Rob Hansen, W6RH, Email: w6rh@arrl.net
Assist ACS RO/Deputy DEC: Rick Tate, KQ6NO Email: kq6no@arrl.net

Area 1 Simi Valley EC: Steve King, KE6WEZ Email: ke6wez@gmail.com
Area 2 TO, Conejo Valley EC: Zack Cohen, N6PK, Email: n6pk@arrl.net
Area 3 Camarillo, Somis EC: Avi Carmi, K6AVI Email: avi@carmi.us
Area 4 Oxnard, Hueneme, Mugu EC: Hovan Salibian, K6BQL Email: ki6bql@arrl.net
Area 5 Ojai EC: Wayne Francis, W6OEU Email: w6oeu@arrl.net
Area 6 City of Ventura EC (acting): Grant Mohr, KG6SFW, E-mail gmohr12@hotmail.com
Area 7 Santa Paula, Fillmore, Piru EC: Grant Mohr, KG6SFW, E-mail gmohr12@hotmail.com
Area 8 Moorpark, Santa Rosa Valley EC: Marc Hanley KM6B, Email: km6b@arrl.net

ARRL offers online training for hams who want to participate in the Amateur Radio Emergency Service.

The time for training is before a disaster...not during one.

The former Amateur Radio Emergency Communications (AREC) series of three training courses has been reconfigured into two courses: An introductory course and a course for leaders and managers.

Introduction to Emergency Communication (#EC-001)

Revised in 2018, this is an update of the former Level 1 course. It is designed to provide basic knowledge and tools for hams who want to serve as a Public Service volunteer. It provides an opportunity for non-hams who rely on communications in emergency situations to learn about Amateur Radio and its unique role in emergencies.

For start dates, registration deadlines and more visit www.arrl.org/online-course-catalog

Public Service and Emergency Communications Management for Radio Amateurs (#EC-016)

Launched in 2010, this course is designed for Amateur Radio operators who will be in leadership and managerial roles, organizing other volunteers to support public service activities and communications emergencies. Participants will learn how radio amateurs prepare to support local community events and, when working in coordination with governmental and emergency response organizations, how to deploy their services. This is a self-study course. For more information and to register visit www.arrl.org/online-course-catalog.

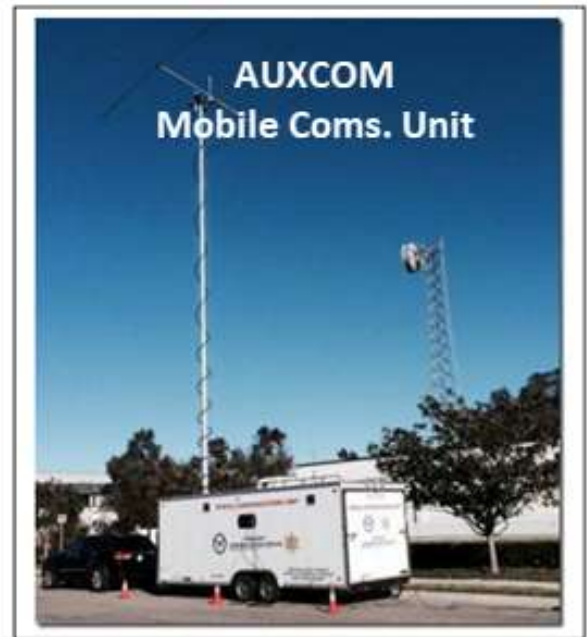
PR-101: ARRL Public Relations (EC-015)

This is a basic training course for PIOs and anyone interacting with the media and promoting Amateur Radio.

This course is designed to give hams a quick overview in public relations activities. It uses the skills of experts in various aspects of public relations to provide volunteer Public Information Officers with the basic skills and expectations that a PIO needs to know to be effective in their home region.

PR-101 covers everything from the basic news release to Web sites and video work.

This course is available--free! -- on-line, or can be purchased in CD format from the ARRL store.



Local Area Radio Nets Weekly Nets

Monday

Cuckoo Net 146.790 Mhz (-) / 131.8 Hz PL and 145.180 Mhz (-) / 131.8 Hz PL every weekday morning from 8:00 AM to about 8:20 AM

California Rescue ARES Net 7.25 Mhz MTWThF 8:30 AM

Santa Barbara South County ARES net 7:30 p.m. on **146.79 Mhz (-) PL 131.8.**

LA DCS-22 Net – 1930 Hrs. - **K6DCS - 147.225 MHz (+)** then on **7.235± MHz LSB**

K6MEP / VCARC Club Net – **145.200 Mhz (-) / 127.3 PL (WD6EBY linked system)** 8:00 PM

Southern California ACS NET MONDAY AT 2000 HOURS LOCAL TIME ON **3992, 3960 KHz LSB**

LA Section ARES Net - HF Every Monday following the VHF/UHF net (~2130 hrs) 1st, 3rd and 4th Monday - **75 meters 3.995 MHz (± 45 kHz) / 2nd Monday - 10 meters 28.495 MHz**

Tuesday

Cuckoo Net 146.790 Mhz (-) / 131.8 Hz PL and 145.180 Mhz (-) / 131.8 Hz PL every weekday morning from 8:00 AM to about 8:20 AM

California Rescue ARES Net 7.250 Mhz MTWThF 8:30 AM

Ventura County ARES-ACS 6 Meter Net – between 6:45 PM to 7:00 PM **K6SMR 52.980 Mhz (-) PL 82.5** SMRA Red Mt

Ventura County ARES-ACS Simplex Net – 6:30pm on 147.510 Simplex

Ventura County ARES-ACS HF Net – between 6:30 PM to 7:00 PM 40M on **7.235 Mhz LSB +/-** ;

Ventura County ARES/ACS Nets between 7:00 and 8:00 PM, the Ventura County Amateur Radio Emergency Service / Auxiliary Communications Service holds their local and County-wide nets. Local Nets are by area and normally run from 7:00 to 7:30 PM. The County-wide Net starts at 7:30 PM and normally finishes by 8:00 PM on **WD6EBY 145.200 (-) / 127.3 PL**

SBARC Swap Net 146.790 Mhz (-) / 131.8 Hz PL and 145.180 Mhz (-) / 131.8 Hz PL 7:30-8:00 PM

West SB ARES HF Net (1st Tuesday, Monthly) **3822 Khz LSB** 2030 / 8:30 PM

6-Meter Roundtable - 50.125 Mhz USB First Tuesday of each month 2000 / 8:00 PM

2030 **ATV Net 146.790 Mhz (-) / 131.8 Hz PL K6TZ** repeater

SBARC Digital Communications Net 146.790 Mhz (-) / 131.8 Hz PL and 145.180 Mhz (-) / 131.8 Hz PL 8:00 – 10:00 PM

Wednesday –

Cuckoo Net 146.790 Mhz (-) / 131.8 Hz PL and 145.180 Mhz (-) / 131.8 Hz PL every weekday morning from 8:00 AM to about 8:20 AM

California Rescue ARES Net 7.25 Mhz MTWThF 8:30 AM

Southern California ACS NET 1000 Hours, 40 Meter Net **7230 KHz**

SMRA Tech Net 146.880 Mhz (-) / 127.3 PL (SMRA Red Mt) 8:00 PM

SBARC Swap Net 146.790 Mhz (-) / 131.8 Hz PL K6TZ 2000

Thursday

Cuckoo Net 146.790 Mhz (-) / 131.8 Hz PL and 145.180 Mhz (-) / 131.8 Hz PL every weekday morning from 8:00 AM to about 8:20 AM

California Rescue ARES Net 7.25 Mhz MTWThF 8:30 AM

So Cal 6 meter net, 51.940 Mhz – pl 82.5. 1900-2000 local Thursdays.

Southern Calif 6M SSB Technical Roundtable Net Thursday night at 8:00 PM on **50.2 MHz USB SSB**

SBARC / K6TZ Technical Mentoring Net -- Thursday nights 8:00-9:00 PM **146.790 Mhz (-) / 131.8 Hz PL and 224.08 Mhz (-) 131.8 PL (linked)**

Friday

Cuckoo Net 146.790 Mhz (-) / 131.8 Hz PL and 145.180 Mhz (-) / 131.8 Hz PL every weekday morning from 8:00 AM to about 8:20 AM

California Rescue ARES Net 7.250 Mhz MTWThF 8:30 AM

Saturday

Military Radio Collector Net 1800 / 6:00PM 3985 Kc +/- AM
www.mrcgwest.org/mrcg-radio-nets/

Sunday

ARRL Southwestern Division Net 0800 / 8:00 AM 3965 MHz.

Newbie Net 7:00-7:30 pm Sundays; Bozo Repeater **147.885 Mhz (-) / PL127.3**

Rabbit Net 7:00- ??? pm Sundays Linked Rabbit repeaters

News from PVARC

ARRL Issues a call to action in defense of Part 97 Allocations in the 3 and 5 GHz Bands

FCC WT Docket 19-348, issued on December 16th, says:

“This NPRM proposes to remove the existing non-federal secondary radiolocation and amateur allocations in the 3.3-3.55 GHz band and to relocate incumbent non-federal operations out of the band and seeks comment on appropriate transition mechanisms.”

If adopted, this NPRM will severely curtail growth of one of the newest and most effective means for Amateurs to support emergency communications, that is ham, radio networking.

Existing installations will be severely curtailed or, with no reasonable alternatives, be forced to cease operations. Thousands of hams have built or are in the process of constructing high-speed data networks using, in part the 3 GHz ham microwave allocations.

You are urged to file your comment in opposition to this NPRM. A simple comment opposing the NPRM can be filed at

https://www.fcc.gov/ecfs/search/filings?proceedings_name=19-348&sort=date_disseminated,DESC

Detailed instructions on how to submit an effective comment can be found at <https://www.arednmesh.org/content/templates-submit-comments-3-ghz-fcc-docket-19-348>

- Because the 3 GHz amateur allocation is not shared with any other service, it's become a very effective method of implementing high performance “backbone” links on the ham radio network. I urge all hams, whether on the ham mesh network or not, to submit a comment opposing this NPRM.

There are instructions at the URL mentioned above detailing how an agency can file a comment in opposition to this NPRM. If as part of your ham radio support for emergency services you work closely with such an agency, please encourage them to file a comment.

(cont. on page 19)

News from PVARC (continued from page 18)

To make matters worse, the FCC has opened WT Docket 19-138, which states:

52 Channels, 14 Non-Shared, on 5.8 GHz

5.8 GHz	Channel	133	134	135	136	137	138	139	140	141	142	143	144	145
Status		Ham Band shared with U-NII-2C/wifi/unlicensed												
Freq		5.665	5.670	5.675	5.680	5.685	5.690	5.695	5.700	5.705	5.710	5.715	5.720	5.725
		146	147	148	149	150	151	152	153	154	155	156	157	158
		Ham Band shared with U-NII-3/wifi/unlicensed												
		5.730	5.735	5.740	5.745	5.750	5.755	5.760	5.765	5.770	5.775	5.780	5.785	5.790
		159	160	161	162	163	164	165	166	167	168	169	170	171
		Ham Band shared with U-NII-3/wifi/unlicensed												
		5.795	5.800	5.805	5.810	5.815	5.820	5.825	5.830	5.835	5.840	5.845	5.850	5.855
		172	173	174	175	176	177	178	179	180	181	182	183	184
		Ham Band												
		5.860	5.865	5.870	5.875	5.880	5.885	5.890	5.895	5.900	5.905	5.910	5.915	5.920

Refer to your local band plan for coordination; ★ 5825 to 5850 Shared under Part 15.247 with a limited number of WISP operators and may be encountered at tower sites

“The FCC adopted a NPRM that takes a fresh and comprehensive look at the rules for the 5.9 GHz band and proposes, among other things, to make the band's lower 45 MHz available for unlicensed operations and to permit C-V2X in the upper 20 MHz”

If you look at the ham radio allocation in the 5 GHz band, you can see that the FCC’s intention to convert that chunk of bandwidth to unlicensed operation directly impacts the prime spot for ham radio networking, for both user access and backbone links.

Please consider submitting comments in opposition to these NPRMs. If they both are implemented our ability to implement a high-performance ham radio network (and our ability to supplement our emergency services with it) will be severely curtailed.

The last day to submit comments is February 15th, so please don’t delay!

73,

Orv



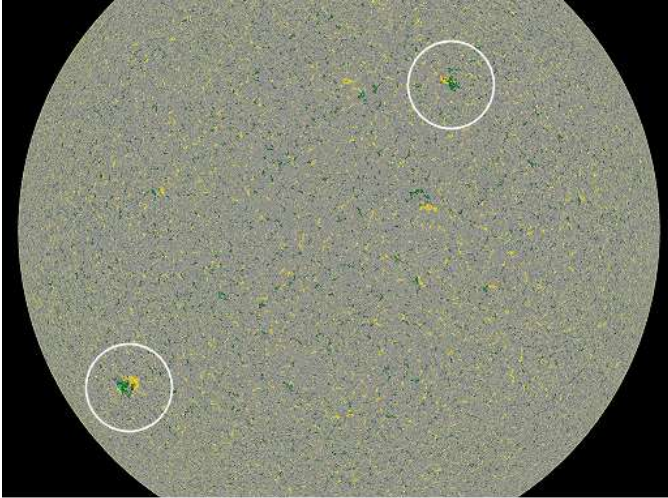
W6BI

Meeting Location Maps



ARRL News (all photos and icons from ARRL.org)

Two Solar Cycle 25 Sunspots Appear



Two sunspots believed to belong to Solar Cycle 25 appeared on December 24.

New Solar Cycle 25 is on the way, but just when the transition from Cycle 24 to Cycle 25 will take place is not entirely clear. On December 24, two new sunspots — one in each hemisphere — emerged on the face of the sun that exhibit the reversed magnetic polarity marking them as belonging to Solar Cycle 25. According to Hale's Law, sunspot polarities flip-flop from one solar cycle to the next,

the National Center for Atmospheric Research explains.

“The sun is currently in solar minimum — the nadir of the 11-year sunspot cycle,” Tony Phillips said in his article, “Reversed Polarity Sunspots Appear on the Sun” on the Spaceweather.com website. “It’s a deep minimum, century-class according to sunspot counts.” The remarkable sunspot scarcity has prompted discussion of a possible “extended minimum” akin to the Maunder Minimum in the 17th century, when no sunspots appeared for decades, Phillips said. “Such an event could have implications for terrestrial climate.”

“Today’s new-cycle sunspots (along with isolated new-cycle spots earlier this year) suggest that the solar cycle is, in fact, unfolding normally,” Phillips wrote, adding that a new Maunder Minimum does not appear to be in the offing.

Earlier this month, the NOAA/NASA-co-chaired international Solar Cycle Prediction Panel released its latest forecast for Solar Cycle 25. The panel’s consensus calls for a peak in July 2025 (± 8 months), with a smoothed sunspot number of 115 and the solar minimum between Cycles 24 and 25 occurring in April 2020 (± 6 months). If this solar minimum prediction is correct, it would make Solar Cycle 24 the seventh longest on record at 11.4 years. (cont. on page 23)

ARRL News (cont. from page 22)

Climate scientist David Archibald speculates that the Solar Cycle 24/25 minimum could occur as late as March 2021, and that Cycle 25 maximum might not happen until 2027.

“We are well into the Solar Cycle 24/25 minimum but [Cycle] 24 may not have ended yet,” Archibald said in a December 22 update on the Watts Up With That? website. “A solar cycle isn’t over until the heliospheric current sheet has flattened. And that could be as late as March 2021. Solar cycle amplitude does matter with respect to climate and the amplitude of Solar Cycle 25, from projecting trends from the last three cycles, looks like being about 80 in 2027.”

The Solar Cycle Prediction Panel agreed that Cycle 25 will be of average intensity and similar to Cycle 24.

In an article posted on NOAA’s Space Weather Prediction Center site, Scott McIntosh, the Director of the High Altitude Observatory at National Center for Atmospheric Research (NCAR), stresses that Solar Cycle 25 will happen, “but a sunspot cycle could be small.”

Predictability comes with some physical understanding of the underlying process, McIntosh asserts. “The sunspot cycle is erratic,” he said in his presentation, “provocative of a chaotic, turbulent solar interior where sunspot progressions with time and latitude are the only tracers...”

AMSAT CW Day is January 1



AMSAT CW Activity Day 2020 will take place on January 1, 2020 (UTC), sponsored by AMSAT. All radio amateurs are invited to participate in the annual event — in 2020 being held in memory of Larry Brown, W7LB, and Keith Pugh, W5IU. Participation is easy: Operate on CW through any Amateur Radio satellite on New Year’s Day. Straight keys or bugs are encouraged but not required. If you use AO-7, observe the QRP rules currently in effect for the 45-year-old satellite. — *thanks to AMSAT Senior Advisor Ray Soifer, W2RS*

(Cont. on page 24)

ARRL News (cont. from page 23)



Commemorative ARISS Slow-Scan TV Transmissions Set

Amateur Radio on the International Space Station (**ARISS**) will support slow-scan television (SSTV) transmissions worldwide in memory of cosmonauts Alexei Leonov, Valery Bykovsky, and Sigmund Jaehn. Transmissions are scheduled to start at 1100 UTC on December 28 and continuing until 1820 on January 1. Transmissions will take place on 145.800 MHz and in the PD 120 format, using the call sign RSOISS. The Polish ARISS Team has prepared an **award** for participants in the SSTV experiment. — *Thanks to Gaston Bertels, ON4WF*



OPS-SAT — First-of-its-Kind Space Laboratory — Launched on December 18

The European Space Agency (ESA) reports that the **OPS-SAT** “flying laboratory” satellite lifted off from Europe’s Spaceport in Kourou, French Guiana, aboard a *Soyuz-Fregat* rocket on December 18. According to ESA, the small, low-cost, test satellite was specifically designed for operational experimentation in space and includes the most powerful flight computer on board any current ESA spacecraft.

“Consumer electronics have gone through a revolution over the last 30 years, with computers becoming ever faster, smaller, and better,” ESA

said. “But when it comes to million- or even billion-euro satellites, their on board hardware and software have not seen this revolution due to the risk of testing new technology in flight. As spacecraft managers dare to fly only tried-and-tested hardware and software in the harsh conditions of space, innovation on the operational side of satellites is a very slow-moving process.” (cont. on page 25)

OPS-SAT — First-of-its-Kind Space Laboratory — Launched on December 18 (cont. from page 24)

ESA said this is where OPS-SAT steps in, lowering the barriers to spacecraft operation and providing an opportunity to safely test new mission control techniques.



CAMSAT CAS-6 Amateur Radio Satellite Launched Successfully

CAMSAT has announced that the CAMSAT CAS-6 amateur radio payload launched successfully on December 20, piggybacked on a TIANQIN-1 technology test satellite.

“The satellite is currently in orbital testing,” CAMSAT’s Alan Kung, BA1DU, told ARRL on December 20. “The amateur radio payload is expected to be operational in about 3 days.”

The microsatellite will be known as CAS-6/TIANQIN-1, and the call sign is BJ1SO. The primary launch payload is the China-Brazil Earth Resources Satellite, CBERS-4A. CAS-6 is in a sun-synchronous orbit with an apogee of 390 miles. It carries a U/V linear transponder, with a downlink of 145.925, 20 kHz passband (inverted) and an uplink of 435.28 MHz. The CW telemetry beacon is on 145.910 MHz, while 4k9 baud GMSK telemetry will be transmitted on 145.890 MHz. CAMSAT has provided [CAS-6 Satellite Digital Telemetry Description](#) and [CW Telemetry Beacon Encoding Format](#) documents. — Thanks to Alan Kung, BA1DU

Volunteer Monitor Program Coordinator Looking Forward to a Positive 2020



In a holiday season message to ARRL leadership and to members of the new ARRL Volunteer Monitor program, its coordinator, Riley Hollingsworth, K4ZDH, expressed his gratitude to all involved for their contributions to getting the program off to a solid start in January.

“It will be a good year,” Hollingsworth said. “We will have fun, you will enjoy it more than you probably think, and — thanks to the talent and generosity of one of our VMs — a computer program will make your reporting *much* easier (there will be no need for bi-monthly reports!),” he wrote. “This is our opportunity to help amateur radio last another hundred years and to pay forward this wonderful avocation that joyfully occupies our lives. This could be our legacy if we do it with all the energy and devotion that characterized the Official Observer (OO) program for decades.”

Hollingsworth said the success of the OO program convinced the FCC to trust ARRL with the responsibilities now to be taken up by the Volunteer Monitor program. (cont. on page 26).

Volunteer Monitor Program Coordinator Looking Forward to a Positive 2020 (cont. from page 25)

“Those of you who are former OOs have an extra reason to be proud, and amateur radio is grateful to you more than you will ever know,” Hollingsworth concluded. “Thank you. It will be a privilege to work with you this new year.”



CWops to Celebrate 10th Anniversary with January QSO Party

In January, CWops will celebrate its 10th anniversary with a month-long QSO party that will include CW activity on HF contest bands. The event is open to all radio amateurs, and certificates and awards will be available based on contact totals. CWops non-members may only contact CWops members, while members may work any station. According to the announcement, many special club and one-off celebratory call signs will be active, and these will count toward award credit. [Complete information](#) is on the CWops website.



Roanoke Division Director Interviews Oldest US Radio Amateur

Roanoke Division Director Bud Hippisley, W2RU, **interviewed** 108-year-old Cliff Kayhart, W4KKP, of White Rock, South Carolina — the oldest known radio amateur in the US — about his experiences in the US Army Signal Corps during World War II.

An articulate and animated Kayhart recounted his deployment to the Pacific Theater — specifically Iwo Jima — where he'd been tasked with setting up a radio station for the airmen and soldiers there to keep better informed about what was happening back home.

At the close of their conversation, Hippisley, who presented Kayhart with his ARRL Centurion Award plaque in November, called Kayhart “part of America’s greatest generation.” The Centurion Award recognizes hams 100 years old or older. The interview runs about 15 minutes.

