

VALLEY HAM NEWS

October 2015

Y-S ARC Web Page: <http://www.ysarc.org>
Y-S ARES Web Page: <http://www.ysares.org>

P.O. Box 1169
Yuba City, California 95992

October 2015

Editors: Curtis R. Sylvester-José, KF6VFP
Marsha L. Sylvester-José, KI6CSN
Telephone: 530-743-3003
E-Mail: Curtis at kf6vfp@arrl.net
Marsha at ki6csn@arrl.net

Webmaster: Ted Herman, KN6TED
Chris Price, KD6CP

CLUB OFFICERS

Pres.: Dave Gipson, KC9EI
Vice Pres.: Ted Herman, KN6TED
Secretary: Jo Anne Murdock, N6YLO
Treasurer: June McJunkin, N6JEY

BOARD OF DIRECTORS

Don Elder, KC6PPX
Kathy Burns, N7WVW
Chris Price, KD6CP
Mike Sangria, AG6IP
Bob McClard, N6BOB
Herb Pucket, W6HBU

REPEATER TRUSTEE

Dave Gartner, WD6AXM

LIAISONS

ARES: Steve Sweetman, K6TAZ
ARRL SM: Dr Carol Milazzo, KP4MD
VE Liaison: LeRoy Smith, KJ6DKM

UPCOMING EVENTS

03 Nov – 7:00 P.M. Club Meeting at the Yuba County Library. Election of board members and officers.

17 Nov – 6:00 P.M. Board Meeting
07 Nov – 9:00 A.M., VE Test, 715 King Ave. Yuba City

15 Dec – 6:00 P.M. Board Meeting

Monday nights at 7:00 P.M. – weekly net (146.085+) PL 127.3 with swap shop and help sessions.

Monday nights at 8:00 P.M. – Butte County ARES net, 145.280 MHz – offset, PL 110.9

Tuesday nights at 8:00 P.M. – GEARS Club net, 146.850 MHz – offset, PL 110.9

Thursday nights at 7:00 P.M. – weekly ARES net.

Third Thursday of each month at 7:30 P.M. – the ARRL Sacramento Valley Section (VHF) Net, on club repeater followed by an HF Net on 3987 KHz LSB.

Other nets (From the GEARS Radiator Newsletter)

Sac Valley Net, 7:00 P.M., 2nd Wed of the month 146.850 MHz – offset, PL

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110.9

440 Wed. Night Net, 8:00 P.M. each Wednesday, 440.650 MHz.

Golden Bear Net, 7:00 P.M. daily 3975 kHz.

Willie net, 8:00 P.M. Mondays, 1930 kHz.

CA Traffic Net, 3906 kHz nightly at 6:00 P.M. for traffic listing and 6:30 P.M. for roll call.

Club repeater: 146.085 MHz out, 146.685 MHz in, PL 127.3

CLUB STORE

The club has the following items available for purchase at cost.

1. Marine grade white RG8X coax, 13 feet. Cost is \$0.41/foot.
2. RG8X Black coax, 320 foot reel. Cost is \$0.41/foot.
3. PL295 coax connectors, 57 each. Cost is \$1.99 each.
4. RG8X reducers, 40 each. Cost is \$0.69 each.
5. Power Pole connectors, 119 red/black pairs. Cost is \$1.00 per pair.
6. 12 guage red/black wire for power connections, 25 feet. Cost is \$1.00/foot.
7. Coax wrap, 2 rolls. Cost is \$4.00 per roll.
8. LMR 400 coax, 40 feet. Cost is \$0.90/foot.
9. RG8X strain relief boots, 14 each. Cost is \$0.50 each.

If you are interested in purchasing any of these items contact the club store

manager, Curtis (KF6VFP) at (530) 743-3003 or on the air.

ELECTION OF BOARD MEMBERS AND OFFICERS

Elections will be held on Tuesday, November 3, 2015 at the Yuba County Library at 7:00 p.m. Volunteers are needed for board and officer positions during the upcoming 2016 year.

So far we have volunteers for:

Board Member, Chris Price, KD6CP and Kathy Burns, N7WVW.

To have a full roster we need 5 board members, President, Vice President, Secretary and Treasurer or a Secretary/Treasurer.

If you are willing to serve please let Chris Price or Kathy Burns know.

Remember, this is your club. It does not exist nor run without you. You are the sparkplugs that make this a great club. Please volunteer and bring your great ideas.

VE TEST SESSION

The Next VE Test session will be on November 7th at 715 King Ave. Yuba City at 9:00 A.M. VE's are needed to administer the exam. The elements for Technician, General and Extra class will be offered. If you are planning on taking an exam you will need two forms of ID, at least one of them must be a picture ID. A fee of \$15.00 is required. A calculator may also be used as long as it has had all of its memories cleared and

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there are no built in or preprogrammed formulas.

If you are upgrading to a higher class you need to bring your license and a photocopy of the license.

If you take an exam and pass, you can take the next higher class exam for no additional cost. If you do not pass and wish to try again an additional fee will be required.

Good luck to all who are taking exams.

EQUIPMENT TEST RESULTS FROM PACIFICON

While at Pacificon I had two of my handheld radios tested at the ARRL booth. Below are the results of the tests and attached is a copy of the spectrum analyser display for one of the radios.

The first test is the power output with the radio on high power. This establishes how many dBm (dB milliwatts) any harmonic emissions must be below the primary frequency to meet FCC requirements. Then a radio is attached to a spectrum analyser to see what the harmonics or spurious emissions actually are.

First radio is my Yaesu VX-7.

Radio on 2 m band.

Power out: 5W

Maximum allowable spurious emission: -53 dBm

2nd harmonic: -64 dBm

3rd harmonic: -61 dBm

4th harmonic: < -70 dBm

Highest spurious emission: -61 dBm.

On 70 cm (440 MHz) band.

Power out 4W

Maximum allowable spurious emission: -52 dBm

2nd harmonic: -54 dBm

3rd harmonic: < -70 dBm

4th harmonic: < -70 dBm

Highest spurious emission: -54 dBm.

This radio passed the FCC requirements with flying colors.

The second radio is my Baofeng UV-82.

Radio on 2 m band.

Power out: 6W

Maximum allowable spurious emission: -53.8 dBm

2nd harmonic: -52 dBm

3rd harmonic: -54 dBm

4th harmonic: -67 dBm

5th harmonic: -39 dBm

Highest spurious emission: -39 dBm.

This radio failed the FCC requirements. Therefore, in order for me to use this radio it needs to be repaired or I need to use filters on the output to reduce the spurious emissions on the 1st, 2nd and 5th harmonics. A scan of the spectrum analyzer is attached.

I scanned the test results and put them in my station records.

Curtis (KF6VFP)

Note: The Nov. QST has an article on the *ARRL Laboratory Handheld Transceiver Testing* starting on page 74 that is interesting.

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NOVEMBER GENERAL MEETING

We need at least 36 members present for the next general membership meeting in order to have a quorum to elect officers and the board of directors. Approval of the 2016 budget will also be done at this time.

The proposed 2016 budget is:

Petty Cash:	\$150
General Fund:	\$1500
Club Meeting Prizes	\$325
Club Store	\$250
Office Supplies	\$700
Christmas Drawing	\$250
Repeater Fund	\$500
Special Events	\$500
Memorial Fund	\$150
Total	\$4325

Note: the club current balance as of Oct 20th is \$5498.59. This budget is not the same as the 2015 budget.

ARES NEWS

Members of the local ARES group help provide communications support during the Yuba-Sutter Domestic Animal Disaster Assistance sheltering drill on 18 Oct. at the south end of Beckwourth Riverfront Park in Marysville, CA.

Communications needs within and without the shelter were provided by the ARES volunteers.

Participating where ARES Coordinator Steve Sweetman (K6TAZ), ARES and

YSDADA members Eleanor Knox (KI6CSO), Shari Go-orth Eby (K6AVW), and Ginny Paschke (KI6COL) (President of YSDADA).



Scan of the Appeal Democrat photo of YSDAD and ARES volunteers.

Steve (K6TAZ) is on the right, Shari (K6AVW) is next to Steve, Eleanor (KI6CSO) is the 4th from the right and Ginny (KI6COL) is to left and behind Eleanor.

Steve Sweetman (K6TAZ)

TECHNICIAN CLASS

The club will again be sponsoring a technician class. Classes will be held at the American Red Cross Center, 2125 East Onstott Frontage Road, Yuba City, Classroom 1. It will be taught from 6:30 to 8:30 Monday and Wednesday evenings from Jan 4th thru Feb 29th.

There is no cost for the classes, however you will need an up-to-date manual. You can obtain a Kindle version from Amazon or order one thru the instructor.

The instructors will be Curtis (KF6VFP) and Ron (W6KJ).

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Please get the word out to family, friends and anyone you know who is interested in getting their license.

More information can be obtained from Curtis at (530)743-3003 or KF6VFP@arrl.net (preferred method of contact).

Curtis (KF6VFP)

MEMBERSHIP RENEWAL

It is getting to be that time of year again when we remind everyone to renew their membership for 2016. The application form for renewal is available on the club website at:

(<http://ysarc.org/index.php/join-now>).

TECHNICIAN, GENERAL AND EXTRA CLASS QUESTION POOL REVIEW

From the Technician Class question pool:

T1B02 Why are the frequency assignments for some U.S. Territories different from those in the 50 U.S. States?

A. Some U. S. Territories are located in ITU regions other than region 2

B. Territorial governments are allowed to select their own frequency allocations

C. Territorial frequency allocations must also include those of adjacent

countries

D. Any territory that was in existence before the ratification of the Communications Act of 1934 is exempt from FCC frequency regulations

The correct answer is A. The ITU has divided the world into three regions. Most of the United States including Alaska and Hawaii are in region 2. Some US territories are located in region 3. FCC Part 97.301 list the frequency bands for US Amateurs in ITU regions 1,2 and 3.

From the General Class question pool:

G1C04 Which of the following limitations apply to transmitter power on every amateur band?

A. Only the minimum power necessary to carry out the desired communications should be used

B. Power must be limited to 200 watts when transmitting between 14.100 MHz and 14.150 MHz

C. Power should be limited as necessary to avoid interference to another radio service on the frequency

D. Effective radiated power cannot exceed 1500 watts

The correct answer is A. Always use minimum power needed to communicate. Using higher power prevents others from using the spectrum. Using too little power prevents you from communicating. For example: if your radio can broadcast with 25 watts

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of power in 5 watt increments (5, 10, 15, 20 and 25 watt settings) you probably don't need 25 W to communicate over a distance of 5-10 miles (i.e. Marysville Yuba City area), instead use 5W – the minimum your radio can transmit if the desired communications results. However, you may need 25 W to communicate say from Redding to Yuba City.

From the Extra Class question pool:

E1B11 What is the permitted mean power of any spurious emission relative to the mean power of the fundamental emission from a station transmitter or external RF amplifier installed after January 1, 2003, and transmitting on a frequency below 30 MHz?

- A. At least 43 dB below
- B. At least 53 dB below
- C. At least 63 dB below
- D. At least 73 dB below

The correct answer is A. According to FCC Part 97.307(d) says "For transmitters installed after January 1, 2003, the mean power of any spurious emission from a station transmitter or external RF power amplifier transmitting on a frequency below 30 MHz must be at least 43 dB below the mean power of the fundamental emission." Hence, if the maximum power of your transmitter is 6 W for your harmonics to be 43 dB below the fundamental frequency (1st harmonic) it must be approximately - 53.8 dBm lower.

Curtis (KF6VFP)

PACIFICON

Pacificon, an ARRL Convention, was held October 16-18, 2015 at the San Ramon Marriott 2600 Bishop Drive, San Ramon, CA. The Talk-In frequency was on the Mount Diablo Repeater at 147.060 with a PL 100 Hz, call sign W6P.

Pacificon gave three great days of activities, presentations, fun and a swap meet on Sunday.



Vendors



Special Events Station W1AW/6
Four HF stations, 1 VHF station.

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USS Hornet Amateur Radio Club,
Alameda, CA. NB6GC

USS Hornet Museum Website:
<http://hornet-arc.us/index.html>

JUST FOR LAUGHS





ARRL TEST REPORT: Spurious Emission

Callsign: KF6VFP Date: Oct 17, 15

Manufacturer: Yaesu Model: VX7

Power Output: (Band 1), 5W (Band 2) 4W

Maximum Allowable Spurious Emission: -53 / -52 dBm (Band 1/2)

Band 1 144 Bands 2: 440

2nd Harmonic Level: -64 dBm -54 dBm

3rd Harmonic Level: -61 dBm -70 dBm

4th Harmonic Level: -70 dBm -70 dBm

Highest Spur Level: -61 dBm -54 dBm

Passed FCC Standards X Failed FCC Standards

ARRL Test Engineer(s): Matthias AJ4BB



* FCC Part 97.307(e) The mean power of any spurious emission from a station transmitter or external RF power amplifier transmitting on a frequency between 30–225 MHz must be at least 60 dB below the mean power of the fundamental. For a transmitter having a mean power of 25 W or less, the mean power of any spurious emission supplied to the antenna transmission line must not exceed 25 μW and must be at least 40 dB below the mean power of the fundamental emission, but need not be reduced below the power of 10 μW. A transmitter built before April 15, 1977, or first marketed before January 1, 1978, is exempt from this requirement.

Minimum Suppression Needed:

6W=53.8 dB, 5W=53 dB, 4W=52 dB, 3W=50.8 dB, 2W=49 dB, 1W=46 dB, 100mW=36 dB.



ARRL TEST REPORT: Spurious Emission

Call sign: KF6VFP Date: Oct 17, 15

Manufacturer: BaoFeng Model: UV-82

Power Output: (Band 1), 6W (Band 2) _____

Maximum Allowable Spurious Emission: -53.8 dBm (Band 1/2)

Band 1 144 Bands 2: _____

2nd Harmonic Level: -52 dBm _____ dBm *6.2W*

3rd Harmonic Level: -54 dBm _____ dBm *2.0*

4th Harmonic Level: -67 dBm _____ dBm *2.0*

Highest Spur Level: _____ dBm *high harmonic at 723.742 → -39 dBm 1.3W*

Passed FCC Standards _____ Failed FCC Standards X

ARRL Test Engineer(s): Matthias AJ4BB

** FCC Part 97.307(e) The mean power of any spurious emission from a station transmitter or external RF power amplifier transmitting on a frequency between 30-225 MHz must be at least 60 dB below the mean power of the fundamental. For a transmitter having a mean power of 25 W or less, the mean power of any spurious emission supplied to the antenna transmission line must not exceed 25 μW and must be at least 40 dB below the mean power of the fundamental emission, but need not be reduced below the power of 10 μW. A transmitter built before April 15, 1977, or first marketed before January 1, 1978, is exempt from this requirement.*

Minimum Suppression Needed:

6W=53.8 dB, 5W=53 dB, 4W=52 dB, 3W=50.8 dB, 2W=49 dB, 1W=46 dB, 100mW=36 dB.

$$46 + 10 \log(T \times P_{out})$$

RIGOL

UNCAL

16:37:09 2015-10-17



Local

Print Setup

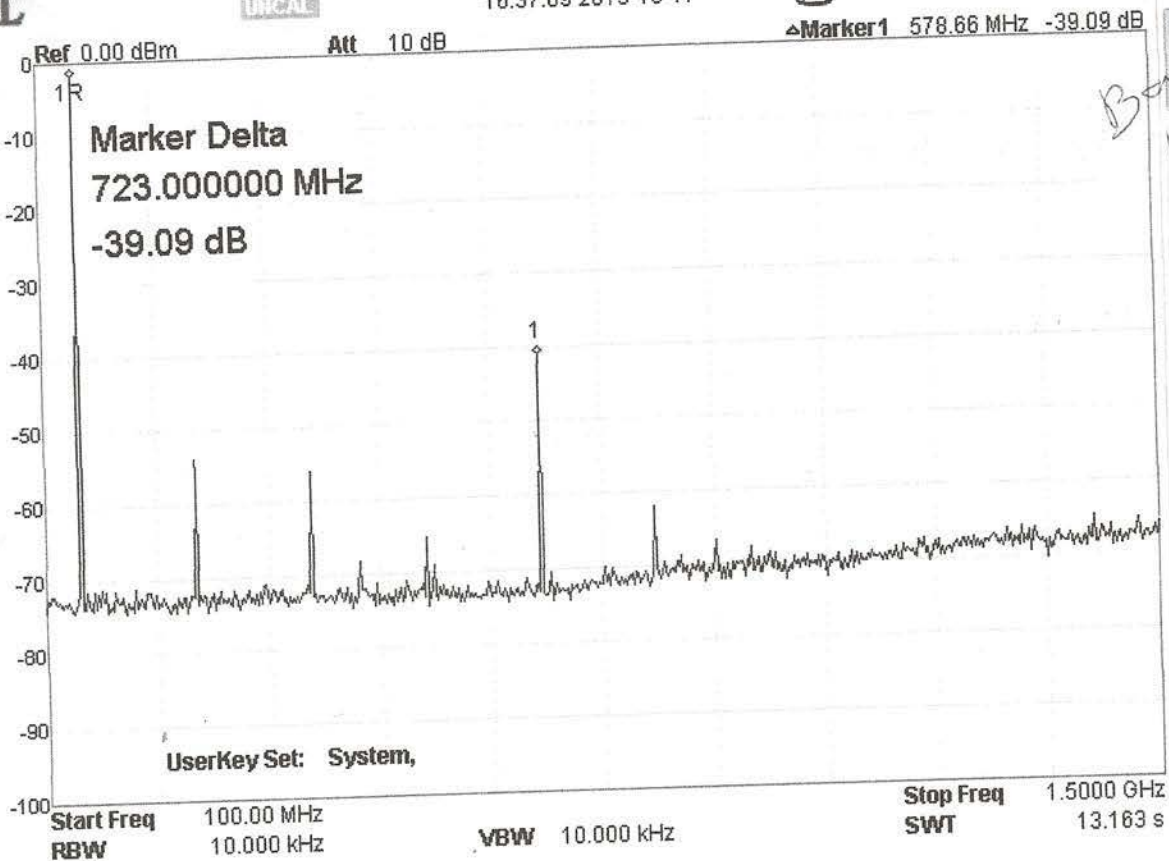
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