



RF



ORANGE COUNTY AMATEUR RADIO CLUB

VOL. XXXVIII No.1 P.O. Box3454, Tustin, Ca.92781 January 1997

The Prez Sez:

The "Considerate Operator's Frequency Guide"

The following frequencies are generally recognized for certain modes or activities (all frequencies are in MHz).

Nothing in the rules recognizes a net's, group's or any individual's special privilege to any specific frequency. Section 97.101(b) of the Rules states that "Each station licensee and each control operator must cooperate in selecting transmitting channels and in making the most effective use of the amateur service frequencies. No frequency will be assigned for the exclusive use of any station." No one "owns" a frequency.

It's good practice—and plain old common sense—for any operator, regardless of mode, to check to see if the frequency is in use prior to engaging operation. If you are there first, other operators should make an effort to protect you from interference to the extent possible, given that 100% interference-free operation is an unrealistic expectation in today's congested bands.

- 1.800-1.830 CW, data and other narrowband modes
- 1.810 QRP CW calling frequency
- 1.830-1.840 CW, data and other narrowband modes, intercontinental QSOs only
- 1.840-1.850 CW; SSB, SSTV and other wideband modes, intercontinental QSOs only
- 1.850-2.000 CW; phone, SSTV and other wideband modes
- 3.560 QRP CW calling frequency
- 3.590 RTTY DX

- 3.580-3.620 Data
- 3.620-3.635 Automatically controlled data stations
- 3.710 QRP Novice/Technician CW calling frequency
- 3.790-3.800 DX window
- 3.845 SSTV
- 3.885 AM calling frequency
- 3.985 QRP SSB calling frequency
- 7.040 RTTY DX QRP CW calling frequency
- 7.080-7.100 Data
- 7.100-7.105 Automatically controlled data stations
- 7.110 QRP Novice/Technician CW calling frequency
- 7.171 SSTV
- 7.285 QRP SSB calling frequency
- 7.290 AM calling frequency
- 10.106 QRP CW calling frequency
- 10.130-10.140 Data
- 10.140-10.150 Automatically controlled data stations
- 14.060 QRP CW calling frequency
- 14.070-14.095 Data
- 14.095-14.0995 Automatically controlled data stations
- 14.100 NCDXF/IARU beacons
- 14.1005-14.112 Automatically controlled data stations
- 14.230 SSTV
- 14.285 QRP SSB calling frequency
- 14.286 AM calling frequency

- 18.100-18.105 Data
- 18.105-18.110 Automatically controlled data stations
- 21.060 QRP CW calling frequency
- 21.070-21.100 Data
- 21.090-21.100 Automatically controlled data stations
- 21.340 SSTV
- 21.385 QRP SSB calling frequency
- 24.920-24.925 Data
- 24.925-24.930 Automatically controlled data stations
- 28.060 QRP CW calling frequency
- 28.070-28.120 Data
- 28.120-28.189 Automatically controlled data stations
- 28.190-28.225 Beacons
- 28.385 QRP SSB calling frequency
- 28.680 SSTV
- 29.000-29.200 AM
- 29.300-29.510 Satellite downlinks
- 29.520-29.580 Repeater inputs
- 29.600 FM simplex
- 29.620-29.680 Repeater outputs

Note

ARRL band plans for frequencies above 28.300 MHz are shown in *The ARRL Repeater Directory* and *The FCC Rule Book*. For detailed packet frequencies, see *QST*, September 1987, page 54, and March 1988, page 51.

1997 Board of Directors

President	Frank Smith	WA6VKZ	838-3180
Vice President	Art Sheldon	AD6B	997-3735
Secretary	Jane Breller	KC6TAM	310-866-2077
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Tech Committee	Larry Hoffman	AC6WN	636-4345
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Member at Large	Bob Tegel	KD6XO	531-0926

CLUB APPOINTMENTS

Club Historian	Bob Evans	WB6IXN	543-9111
W6ZE Trustee	Bob Eckweiler	AF6C	639-5074
RF Editor	Bud Barkhurst	WA6VPP	774-6361
Refreshments			

DUES

Regular Members \$15.00 Additional Members \$7.50 each
Teenage Members \$ 6.00 Optional Club Badge \$5.00 each
Dues for new members are pro-rated quarterly from January 1st each year. Family members must reside at the address of a regular member.
Only one RF is sent per household.

NETNEWS
by WB6IXN

12/4 15m phone net - W6ZE/AF6C checks in WOX and IXN. AF6C, on his new 440-S, tests microphones wid the rig. IXN tells Bob that the 2nd mike has better audio quality. WOX has his "pearlies" cleaned at the dentist, and Art will vacation Christmas week! IXN and brother 'freeze' in the Santa Rosa mts. over Thanksgiving, and ZE says NGO is vacationing in Missouri and HHC is on a business trip to Dallas.

12/4 2m phone net - W6ZE/IXN checks in QW, VDP, RE, ZH, ESD, VFC, N6CCE, LDC/m, and BWH/m. QW gets bk from the ice storm in Spokane. Wid the generator running, Rolf doesn't mind the power outage frm downed, ice-laden wires! VDP TGs at mom's house wid friends, and Larry and VFC will travel to a Hamfest in AZ, missing the Christmas Dinner. RE, XYL and harmonic dine on chicken, yams and pumpkin pie over TG. And Ralph hears a physical hum in the power supply tonite! ZH and TAM flew bk to a High School Reunion on the 25th. They vacation fer a week wid Chris' parents during the TG Holiday. And ZH gets QSL cards frm CY0 land, and, 4U1ITU! ESD TGs at a friend's house, and Bob inquires abt the Dexpedition to Heard Is. ESD is a QCWA Life Member! VFC weekends in Tahoe, wid TG dinner at the hotel. And VDP tells Larry that he may hve a Gonset manule for him. CCE, Ken, 'flies in & flies out'! LDC/m TGs at his sister's house, and Larry, WOX, and VDP attend the TRW Swapmeet. And LDC's new quarter wave ant. is armchair copy at IXN's QTH. BWH/m will try to attend the Christmas Dinner if his companies' move to new quarters is completed on time! Bob airs Newsline on the 'Net-after-Net'!

12/11 15m phone net - W6ZE/HHC checks in NGO, IXN, & AD6B. AF6C is 'bushed' after a 'hard day at the races'! HHC flies to Dallas, TX., the same day that NGO & Ida take off fer St. Louis, MO. Kei tells OPs abt a trip thru The Arch! IXN quips, "What a thrill to experience a 5+ mag. EQ frm the New Madrid fault 600 ft. up in the air!" Kei & Ida find Branson, Mo., entertaining. IXN and brother are off to Occidental, CA., due east of Bodega Bay, fer Christmas. HHC says Jim & Jeannie Talcott, and, Al & Dotty Watts were at the Christmas dinner. AF6C is finally awarded his 'Good of the Club' plaque fer 1981, tnx to HHC's detective efforts! This year's 'Good of the Club Award' went to Art, WOX. Congrats, Art! RE checks in at net's end after a supper of bratwurst! And HHC discovers that his mom likes persimmons! AD6B 'flies in and flies out'! Art is still hving problems wid the receiver in the rig!

12/11 2m phone net - W6ZE/IXN checks in LDC, VDP, NG7D, RE, VFC, QW, & BWH. LDC, at the QTH tonite, gets ready to administer finals. So next week, Larry might make net by 8:30 pm! QW, IXN, & RE won't put up Christmas trees this year...Too many 'irons in the fire'! OPs enjoy the Christmas dinner at the China Palace, and VDP meets and old friend, N6HI, in Phoenix last week! And NG7D gets OSCAR WAS Certificate #253, CW mode! Congrats, John! Now John awaits a new OSCAR satellite wid uplink on 15m & downlink on 10m! RE, 'duckin the rain', will hve family in fer Christmas, and VFC & VDP attend a Swapmeet and gunshow in Phoenix. Dennis says 6m has been open the

last 2 days, hearing a TI2NA in Costa Rica, and a TI4, too! QW investigates pole construction for a barn-type building as a workshop. And Rolf enjoys the snow on his past trip to Spokane. BWH makes the 'net-after-net' and airs Newsline for his waiting audience...We hear that Guatemala assigns the 70 cm band for commercial use!

12/18 15m phone net - W6ZE/AF6C checks in NGO, IXN, WOX, & RE. AF6C, at a late meeting, gets home just in time to start Net! Bob changes direction of the beam & NGO can hear him better now. NGO & WOX hve weak, but readable, sigs at IXN's QTH. And IXN says he'll Christmas vacation in Occidental, CA., next week. WOX is relieved that the 2m Quad stayed up in the high winds. AF6C can't copy Art in the QRN tonite, but Art says his daughter will soon be home for the Christmas holidays. RE & XYL get a clean bill of health from the Doc, and Alex says the XYL's arm has healed nicely from the skin cancer operation! RE expects company for New Years at the QTH. NGO has a dipole mounted under the roof.

12/18 2m phone net - W6ZE/IXN checks in VFC, QW, RE, WOX, LDC/m, VDP, WB6RZX/m, and BWH. VFC's antennas all remained erect, but Dennis had to nail down some shingles! Hitting his finger in the process, VFC has now become a member of 'the Purple Nail Club'! Dennis says 6m was open Sun & Wed eves! The SA winds relocate QW's huge shade canopy 3 houses from home, and also uprooted the orchid house, blowing it apart! QW quips, "You didn't read the directions for the proper use of a hammer, Denny!" SA winds increased RE's downed fence from 60 ft. to 150 ft.! And WOX works the 10m contest last weekend, with local contacts only! LDC/m has no problem with ants. during the high winds, but don't ask Larry about Ficus trees!...His 3rd loss makes a charm! No more Ficus trees!! On his way to Costa Rica, LDC hopes to be back for the Club Bfast in Jan. The winds rip apart a wet cardboard box in VDP's backyard, scattering soda pop cans hither & yon! And Larry tells OPs that the Forest Service wants to raise rental rates for repeater owners on Frazier Mt.! And LDC!...VDP's Pepper trees did well in the winds! BWH loses his antenna, and ZE doesn't hear him check into Net earlier! At the QTH, Bob airs Newsline at Net's end. Tnx, Bob!

From the shack of Ray Davis, W6NT:
NEED A NEW CALL BOOK? Save \$18.00! See page 174, Dec. QST, the Ad by AA6EE. Ray got one!

PROGRAMS NEEDED

if you have a program you would like to give at the club, please contact me. If you have a program you would like to see, and know all the particulars, please contact me. I will need to know the subject, who is and how to get in contact with the presenter, and any special equipment needed. Please contact Art, AD6B at (714) 997-3737 or email at: oneoldham@aol.com or 46ecor@juno.com.

SHOW AND TELL NIGHT

Our illustrious President would like to have, for need of a better title, a **SHOW AND TELL NIGHT** at the club. The tentative month for this event is May 97. The night will consist of the different aspects of Amateur Radio as depicted by you, the members. You may also have a friend who would be happy to be a part of this night. The participants will **SHOW**, their favorite mode of operation, an antenna they have built, a project or equipment they have built for use on or off the air, any aspect of amateur radio, and **TELL**, a short talk of what they are showing. All special equipment will be supplied by the presenter. If you, or someone you know, would like to be a part of this evening, please contact Art, AD6B at (714) 997-3735 or email at: oneoldham@aol.com or 46ecor@juno.com. This will be a great evening for all and especially for those would-be hams we know.

Test Your Knowledge!

It's time to get back to basics: Ohm's Law, decibels and units

At first glance this probably looks like a difficult quiz. Too many numbers and symbols—right? Well, the key to a perfect score is as close as a license study guide, *The ARRL Handbook*, or any number of references. A calculator will come in handy, too.

- 1) Doubling the voltage across a load causes the power dissipated to:
 - a. double
 - b. triple
 - c. quadruple
 - d. remain unchanged
- 2) The smallest noticeable change in audio volume detectable by the human ear is:
 - a. 1 dB
 - b. 3 dB
 - c. 6 dB
 - d. 10 dB
- 3) Calculate the power ratio from the equivalent dB change:
 - a. 3 dB = ___ : 1
 - b. 6 dB = ___ : 1
 - c. 10 dB = ___ : 1
 - d. 16 dB = ___ : 1
- 4) If a load resistance is doubled and the voltage across it doesn't change, the power dissipation...
 - a. doubles
 - b. remains the same
 - c. is halved
 - d. is quartered
- 5) Match the reciprocals of the units:

a. resistance	d. admittance
b. impedance	e. conductance
c. reactance	f. susceptance
- 6) Match the units with the physical quantity:

a. electrical charge	d. coulombs
b. energy	e. mhos
c. conductance	f. joules
- 7) A kilowatt amplifier that is 50% efficient needs about how much current from a 220-V ac circuit when producing full output?
 - a. 5A
 - b. 8A
 - c. 9A
 - d. 15A
- 8) If a 13.2-V lead-acid battery has an internal impedance of 0.05 Ω, how much current will it supply through a dead short?
 - a. 125 A
 - b. 210 A
 - c. 264 A
 - d. 353 A
- 9) A lamp-driver IC's output is rated at 100mA. What is the lowest value of load resistance the IC can handle in a 24-V circuit?
 - a. 120 Ω
 - b. 240 Ω
 - c. 360 Ω
 - d. 480 Ω
- 10) An amplifier tube's screen supply ballast, or loading, resistor needs to draw 20 mA from an 800 V supply. What is the lowest power rating for the resistor that will allow it to dissipate the necessary energy?
 - a. 1 W
 - b. 5 W
 - c. 10 W
 - d. 20 W
- 11) A transistor power amplifier's bias resistor needs to produce a 0.7-V drop at a current of 5 A. What's the correct resistance value and power dissipation?

a. 7.1 Ω and 3.5 W	The correct answer is: 0.14 Ω and 3.5 W de AF6C
b. 3.5 Ω and 7.1 W	
c. 7.1 Ω and 2.5 W	
d. 3.5 Ω and 3.5 W	
- 12) All you have is a 24-V power supply to drive a 12-V light bulb. The bulb needs 10 mA of current for full brightness. What value of series resistor will allow the 24-V supply to fully light the bulb without overloading it?
 - a. 600 Ω
 - b. 1200 Ω
 - c. 1800 Ω
 - d. 2400 Ω
- 13) Which of the following is a unit of power?
 - a. joules/second
 - b. watt-hour
 - c. coulombs/second
 - d. joules/coulomb
- 14) What is the dc feed-point current of a 75-Ω dipole driven with 500 W at 7.05 MHz?

Bonus! What was the nationality of Georg Ohm?

22916-107th Ave SW
Vashon, WA 98070

Total Your Score!

Give yourself 1 point for each correct answer.

- 15–21: You obviously managed to remain awake during the theory part of your license class!
- 8–14: A fair score, especially if you're unaccustomed to working with formulas.
- 1–7: You could have scored this high by just guessing. Why not spend some time getting reacquainted with electrical theory? (It's the foundation of how our radios work, after all.)



Answers

1. c—Power is proportional to the square of the voltage.
2. a.
3. a—2:1, b—4:1, c—10:1, d—40:1.
4. c.
5. a—e, b—d, c—f
6. a—d, b—f, c—e (“mho” is “ohm” spelled backward!)
7. c—The amplifier needs 2000 W, which at 220 V requires 9.09 A of current.
8. c—13.2 V divided by 0.05 Ω. Don't drop a wrench across those terminals!

QST

Bonus: Georg Ohm was Swedish.

9. b—24 V divided by 0.1 A
10. d—20 mA at 800 V is 16 W. Choose a 20 W or larger resistor
11. a—5 A divided by the drop of 0.7 V = 7.1 Ω, while 5 A × 0.7 V equal 3.5 W.
12. b—Dropping 12 V across a resistor at a current of 10 mA requires a 1200-Ω resistor.
13. a—1 J/sec is 1 watt, b—is energy, c—is current, and d—is voltage
14. Zero! The dc component of an RF waveform is zero.

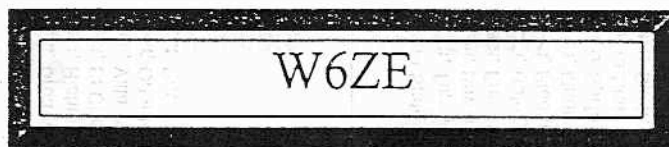
MAJOR ARRL OPERATING EVENTS AND CONVENTIONS-1997

HAMFESTS AND CONVENTIONS LISTED ARE THOSE OF RECORD AS OF
 NOVEMBER 15, 1996; CHECK QST MONTHLY FOR UPDATES.



JANUARY	FEBRUARY	MARCH
1 Straight Key Night 4-5 RTTY Roundup 5 Hamfest, South Bend, IN 11 Hamfest, Marathon, NY 11-12 Hamfest, Sarasota, FL 18-20 January VHF Sweepstakes 18 Hamfest, Crystal River, FL 18 Hamfest, Hammond, LA 18 Hamfest, St Joseph, MO 19 Hamfest, Yonkers, NY 19 Hamfest, Broadway, OH 19 Hamfest, Richmond, VA 25 Hamfest, St Charles, MO 26 Hamfest, Villa Park, IL 26 Hamfest, Odenton, MD 26 Hamfest, Dover, OH	1 Hamfest, Amarillo, TX 1-2 Southeastern Division Convention, Miami, FL 1-2 Mississippi State Convention, Jackson 8 Hamfest, Blaine, MN 8 Hamfest, North Charleston, SC 9 Hamfest, Mansfield, OH 9 Hamfest, Latrobe, PA 9 School Club Roundup 10-14 Northern Florida Section Convention, Orlando 14-16 International DX Contest, CW 15-16 Hamfest, Oberlin, PA 15 Hamfest, Freeport, NY 16 Hamfest, Elkin, NC 16 Hamfest, Russellville, AR 22 Hamfest, Dalton, GA 22 Great Lakes Division Convention, Cincinnati, OH 22-23 Hamfest, Dearborn, MI 23 Hamfest, Cuyahoga Falls, OH	1-2 International DX Contest, phone 1 Hamfest, Parsippany, NJ 1 Hamfest, Elk City, OK 7-9 Nebraska State Convention, Norfolk 8 Hamfest, Englewood, FL 8 Hamfest, Hazard, KY 8 Hamfest, Puyallup, WA 8 Hamfest, Charlotte, NC 8-9 Hamfest, Lindenhurst, NY 9 Hamfest, Marietta, GA 15 Oklahoma State Convention (Tulsa) 15-16 Hamfest, Midland, TX 15-16 Hamfest, Sterling, IL 16 Hamfest, Maumee, OH 16 Hamfest, Charleston, WV 22 Hamfest, Kansas City, MO 23 Hamfest, Grayslake, IL 23 Hamfest, Trenton, NJ 23 Hamfest, Kinston, NC 23 Hamfest, Madison, OH
APRIL	MAY	JUNE
5-6 Maryland State Convention, Timonium 11-12 Hamfest, Tupelo, MS 12 Hamfest, Bowling Green, KY 12 Hamfest, Fredericksburg, PA 13 Hamfest, Raleigh, NC 13 Hamfest, Bloomsburg, PA 13 Hamfest, Madison, WI 14 144-MHz Spring Sprint 14 Delaware State Convention, New Castle 20 222-MHz Spring Sprint 22 Hamfest, Little Rock, AR 25-26 Iowa State Convention, South Sioux City, NE 26 Hamfest, Belvidere, NJ 26 Hamfest, Roseburg, OR 27 Hamfest, Arthur, IL 27 Hamfest, Poughkeepsie, NY 30 432-MHz Spring Sprint	3 Hamfest, Kansas City, MO 3 Hamfest, Klamath Falls, OR 3 Hamfest, Greenville, SC 4 Hamfest, Yonkers, NY 4 Hamfest, Wrightstown, PA 10 902-MHz Spring Sprint 10 1296-MHz Spring Sprint 10 2304-MHz Spring Sprint 10 Hamfest, Statesboro, GA 16-18 Dayton Hamvention (not an ARRL event) 17-18 50-MHz Spring Sprint 30-Jun 1 Atlantic Division Convention, Rochester, NY	1 Hamfest, Princeton, IL 1 Hamfest, Manassas, VA 1 Hamfest, Friendship, WI 7 Hamfest, Plattsburgh, NY 8 Hamfest, Wheaton, IL 8 Hamfest, Wabash, IN 8 Hamfest, Bethpage, NY 8 Hamfest, Akron, OH 13-15 Northwestern Division Convention, Seaside, OR 14-16 June VHF QSO Party 14 Hamfest, Hermon, ME 14 Hamfest, Cortland, NY 15 Hamfest, Frederick, MD 15 Hamfest, Monroe, MI 21 Hamfest, Durellen, NJ 21-22 Georgia State Convention, Atlanta 28-29 Field Day

Orange County Amateur Radio Club



An ARRL Affiliated Club

About the Orange County Amateur Radio Club

The Orange County Amateur Radio Club is a club for anyone interested in "Ham Radio" The club is located in Orange County California. You are invited to attend one of our informative meetings or check into one of our weekly nets

The Following OCARC members who have Online(E-Mail) addresses:

Phil Anderson	KK6QE	blkhawkadv@aol.com
Howard Atwell	KA6CZI	howard-atwell@fullcoll.edu
Bud Barkhurst	WA6VPP	obarkhurst@aol.com
		BWA6VPP (Juno Free E-Mail)
Bob Buss	KD6BWH	kd6bwh@aol.com
Bob Eckweiler	AF6C	r.eckweiler@genie.com
		coo5291@mdcpo04.1b.mdc.com
Loyd Harwood	WB6ULU	lloyd@exo.com/fhrk40a@prodigy
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Frank Smith	WA6VKZ	104675,3022@compuserve.com
Jack Hollander	N6UC	jack_hollander@net999.com
Ken Konechy	W6HHC	73223.1400@compuserve.com
		kkonechy@rnbo.com
Club Web Page	W6ZE	http://www.geocities.com/athens/2473/

These addresses will be updated quarterly.

Club Nets

<u>Band</u>	<u>Mode</u>	<u>Day</u>	<u>Local Time</u>	<u>Freq. Mhz.</u>	<u>Net Control</u>
15 Meters	SSB	Wednesday	7:30 P.M.	21.375*	AF6C
2 Meters	FM	Wednesday	8:30 P.M.	146.550 Simplex	WB6IXN

(Listen for W6ZE, Net Control)

* Plus or Minus QRM

General Meeting

January 17
February 21
March 21

General meeting is the third Friday of each month, 7:30 P.M., at the AMERICAN RED CROSS facilities.
601 N. Golden Circle Dr. , Santa Ana, CA
Major cross streets: Fourth Street and Tustin Ave.
Talk-in frequency 146.550 MHZ. simplex.

Board Breakfast

February 1st
March 1st
April 5th

Board Meeting is the first Saturday of each month at 8:00 A.M. The Wildflower Restaurant - members and visitors are welcome.
2525 N. Grand Ave., Santa Ana, CA
Exit the 5 freeway at 17th St., go east to Grand Ave. Go north on Grand; or exit the 22 Freeway at Glassell/Grand. Go south to restaurant.



Orange County Amateur Radio Club, Inc.
P.O. Box 3454
Tustin, CA 92861



First Class Mail

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**Time Dated Material
PLEASE RUSH**

