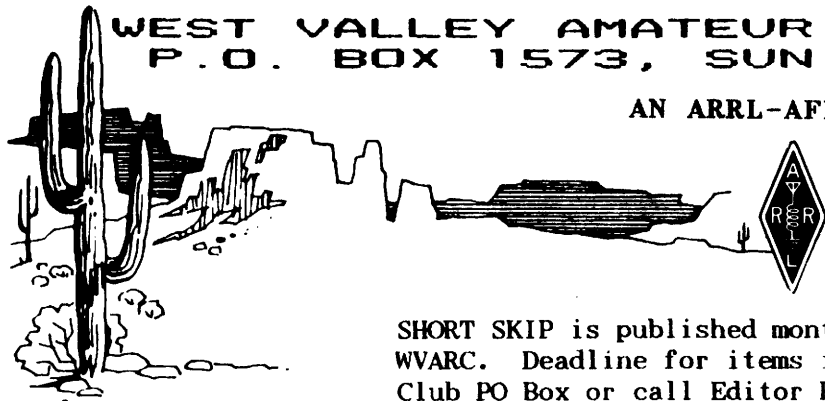


SHORT SKIP



SHORT SKIP is published monthly (every 2 months in summer) by WVARC. Deadline for items is 2 weeks before meeting. Mail to Club PO Box or call Editor Ray Summer NW7R (972-8733).

JAN 6 MEETING: DEL HULL KC7CE, KOOL SPEAKER

The West Valley ARC will meet on MONDAY, JAN 6, at St Clement Social Hall, 15800 Del Webb Blvd, Sun City, at 7:15pm. The program will be a presentation by KOOL-AM radio personality Del Hull KC7CE, whose voice and musical programs are heard around the country daily on a national broadcast-via-satellite system. Del will describe the system and reproduce on-the-air clips of his programming. The technical aspects will be of interest to hams, and the "golden oldies" may be enjoyed by everyone. Bring your spouse.

Membership renewals are payable at the January meeting. Dues are still \$10 and include all family hams at same mailing address. If you can't attend the meeting, please mail dues to the club PO Box. The club appreciates your support.

At the December meeting, the following officers were elected to serve for 1992:

President Frank Smith AA7FM (Gld) 876-2718
V Pres Ralph Barr W0DNO (Phx) 582-8208
Sec'y Ray Van Skiver W7LQM (SC) 974-1322
Treas Shirley Barr KB4HSP (Phx) 582-8208
Directors: Don Burk KE0EU (SC) 972-4607
Bob Gormley W1MHZ (Gld) 843-2193
Jerry Haigwood KY4Z (Peo) 496-2756
(* Bert Davidson W2GOB (SCW) 584-6260
Past President Bill Kosanovich WA8KFC will also serve on the Board.

(* Bert was appointed to fill the fourth Director's seat created by a vote of the members at the December 2nd meeting.

ANSWERING MACHINES

Telemarketing practices have become such a pain that many of us - perhaps most of us - have installed answering machines on our telephones to block the intrusion. If you call this editor, please identify and tell why you called. I am sometimes sitting smugly by the phone and will pick up once I know that it is someone who is not trying to part me from my money.

JANUARY CALENDAR OF EVENTS

[See individual articles for details]

SAT, JAN 4, VEC EXAMS - 8:30 to Noon
MON, JAN 6, WVARC Monthly Meeting, 7:15pm
SAT, JAN 11, Monthly breakfast, 8am
MON, JAN 13, New Exec Board meets, 7pm
TUE, JAN 14, Novice Class starts, 7pm
TUE, JAN 21, Amateur TV group, 7pm
SAT, JAN 25, Digital Modes group, 10am
FRI, JAN 31, Technician Class starts, 7pm

EVERY WED, WV 2-mtr Net, 6:45pm, 145.29/-
EVERY THURS, Lunch, 11:30am (Ritter's)
EVERY DAY, WV Call-in Net, 9am, 145.29/-

VEC EXAMS are scheduled for JAN 4. DeVry Institute is closed that day. Efforts are under way to find a nearby test site. Information on the location will be posted at the DeVry entrances. DeVry will be available for the February 1st exams.

Jim Chilcote WU7V is stepping down as Core Director for the DeVry Volunteer Examiners due to family health problems. Jim and XYL Freda have handled a few thousand forms in some three years of leadership in the test program, and the Amateur Radio community is indebted to them. The program will go on, we hope, with the present group of VEs and as many new ones as can be recruited. Ed Blaszczyk N7EB will assume the responsibility of checking and submitting the test results to DeVry VEC in Chicago.

NOVICE and TECHNICIAN CLASSES will start in January, with Instructors George Hands KE7DH 974-3361 and George Thompson AA7LA 977-9855, at Vencor Hospital, 12207 N 113th Av, Youngtown. The classes will have about 8 weekly sessions starting Jan 14 (Novice) and Jan 31 (Tech); 7 to 9pm. There is no charge.

GENERAL and ADVANCED CLASSES will begin in January, time and place to be determined after the holidays. Some 8 to 10 hams have expressed interest in each class. Call Ray NW7R 972-8733 to be added to the list.

AMATEUR TV and DIGITAL MODES GROUPS

These two groups meet on the **THIRD TUESDAY** and **FOURTH SATURDAY**, respectively, at Bank of America, 14601 Del Webb Blvd (LaRonde Center), Sun City. **NO-CODE TECHNICIANS** are especially encouraged to attend these meetings to discover the world beyond voice communications.

If you have a Camcorder, ATV is probably within the reach of your pocketbook. The experts at these sessions will give you all the information you need. Tom Watts NY7S (972-6589) is the guru of this group.

Similarly, if you have a computer, all you need is a Terminal Node Controller (TNC) to get you into Packet or Amtor or other digital modes of transmission. For more info on this group, call Dave Pollack (933-8771). Also listen on the 145.37/- repeater at 7:30 Wednesday nights.

BREAKFAST/LUNCHEON MEETINGS. At the monthly breakfast meeting at Michael's, 10109 Grand Ave, you may now have the buffet breakfast for around \$2 or the pancake breakfast for around \$1.50 -- both excellent choices -- on the **SECOND SATURDAY** at 8am.

The luncheon meeting at Ritters in Youngtown **EVERY THURSDAY** (11:30am) is an open menu. Spouses welcome at both events.

CLUB REPEATERS

The West Valley Wednesday night 2-meter Net on 145.29 will begin at 6:45 as of Jan 1, in order to accommodate those who check into other nets at 7:30. Please join us for ham radio news from Newsline, ARRL Letters, W5YI reports and local sources. Jan NCOs: Jan 1, anyone who's here on New Year's Day; 8, KE7DH George; 15, AA7LA George; 22, W7YU Chuck; 29, NY7S Tom.

The Daily Call-in Net, which meets on 145.29/- at 9am **EVERY MORNING**, is well attended. We are especially looking for shut-ins and those with health problems who would like someone to keep tabs on them if they fail to check in, but we welcome all hams who want to start their day with a cheery "Good Morning!" for their colleagues.

Stan Edgerton K8RAL reminds us that the autopatch on the K7NHR 2-meter repeater on Boswell Hospital (147.3/+) works very nicely, thank you. Remember to wait for the dial tone after the 3-character access code before inserting the phone number. The W7JHQ 70-cm repeater (449.8/- MHz) is still awaiting a state-of-the-art autopatch board.

RFI NOTE

One local ham reports that the RF energy from his transmissions turns on his solar water pump. Does yours? Call your RFI committeeman or Bill Johnson W9WV 584-2107.

FOR SALE

SEARS/YAESU COMMUNICATIONS RECEIVER, 500 KHz to 29.9 MHz; \$35. Frank W7NSN 972-6653

SPRAGUE "KWIK TEST" CAPACITOR TESTER Model KW-1; \$10. TELREX TRAPPED INVERTED VEE ANTENNA for 40 and 20 Meters, w/W2AW balun; \$20. Dick KB6TI 584-4116

2-m HT KENWOOD 215A TRANSCEIVER (new in 9/88); TWO PB-2 NI-CAD BATTERY PACKS (2.5W output); BC-8 COMPACT BATTERY CHARGER; PG-3D FILTERED CIGAR LIGHTER CORD (5W output); PG-2V DC CABLE; SMC-30 SPEAKER MIKE; MB-4 MOBILE MOUNTING BRACKET; RUBBER ANTENNA; MANUAL. All for \$190. Bill W9WV 584-2107

FREEBIE. WILSON 3-ELEMENT 20-m MONOBAND ANTENNA. (Must remove from roof.)

Bob W7LNS 974-9018

WANTED

LATE MODEL 2-m TRANSCEIVER.

Bill W7DTA 932-1315

SM-3 DESK MIKE and 312B-4 STATION CONTROLLER for Collins Gear.

Marvin Wood 584-8001

ANY HAM GEAR that would be appropriate for a group of 5th graders at Desert Horizon Elementary School. Their teacher, Barbara Shasetz, was in the club's Novice Class. Their Elmer is Ron Smith KF7JF, whom you can reach at 877-2382 after 5pm.

USED "NOW YOU'RE TALKING" MANUALS for loan to beginning students. We've had young prospective hams turn pale when told the price of this manual. Ray NW7R 972-8733

THE ZIA CONNECTION

[There have been several changes since we listed the ZIA Repeaters, Dec 1990. Here is an updated version. Tnx Milt Jensen N5IA.]

Telegraph Pass, Yuma AZ	N7LZK	145.25-
Mt Lemmon, Tucson AZ	KF7PV	147.16+
Guthrie Peak, Safford AZ	N5IA	145.39-
Guadalupe Mt, Quartzsite AZ	WB7FIK	145.31-
White Tanks, Phoenix AZ	WA7ZNY	146.70-
Pinal Peak, Globe AZ	WA7ZNY	145.25-
" "	WA7ZNY	224.76-
Greens Peak, Show Low AZ	N7AIL	146.70-
Jacks Peak, Lordsburg NM	N5AIL	145.21-
Caballo Mt, Truth or Cons NM	N5IA	145.41-
Benson Ridge, Alamogordo NM	N5IA	145.23-
Sandia Peak, Albuquerque NM	N5IA	145.29-
Comanche Peak, El Paso TX	KC5EJ	145.33-
Notrees, Odessa TX	W5KNS	147.00-

ALL 2-m PL = 162.2 Hz; 220 PL = 156.7 Hz.

THE GRINCH LIVES

I was monitoring the KE7DH repeater one day recently when someone accessed the patch and an answering machine responded, playing a Christmas song. I immediately disconnected the call, but the caller tried again. The second time I informed him that music wasn't allowed on Amateur Radio frequencies. He disengaged before I could offer to relay the message on the land line. I apologize for being the Grinch but the club shouldn't risk losing its repeater privileges, even in the spirit of the Holidays.....Ray NW7R

W5YI ARTICLE STIRS MUCH INTEREST

The lead article in W5YI Report's Dec 15 issue reads FCC Refuses to Restrict Amateurs in RFI Cases. It deals with two cases where neighbors of hams refuse to recognize the inadequacies of their own home electronic appliances and blame the hams for their RFI problems. The FCC reply in each case was not encouraging for either the complainants or for the hams, who would like to live in harmony with their neighbors. It said in part that

(1) Congress authorizes the FCC to regulate home electronic equipment and establish minimum performance standards to reduce their susceptibility to RFI, but that

(2) the FCC does not wish to impose the additional costs associated with reduced susceptibility. And

(3) it is not reasonable to place the burden for resolving all interference problems on the amateur service licensees.

The letters seem to be saying that users of home electronic equipment at some future time may rely on voluntary standards set up by manufacturers, under the auspices of the American National Standards Institute, but until that time users will have to live with the interference, if unwilling to accept the cost of modifying their home equipment.

Under these circumstances, no wonder complainants and hams alike are frustrated. Unfortunately, the impasse may be settled in federal courts, and not necessarily in our favor.

PERSONAL TOUCH

The golf cart of Barry Goodman KB6YGR, one of our Westbrook Village members, was recently featured in a Phoenix Republic article by Connie Cone Sexton. Barry has redesigned his cart to resemble a train, with a cowcatcher and windshield resembling the train front and an insignia that reads PACIFIC ELECTRIC, the line that he rode on as a youth. Now, if he could only feel that young again!

DX REPORT de FRANK SMITH AA7FM

Highlighting this month's DX report is activity from Afghanistan. Currently OKLIAI/YA is active, generally on 20m CW. Also, Romeo Stepanenko showed up unexpectedly as YAØRR and will probably stay through the end of December, mostly CW, hopefully also on 40m and 80m. Finally, UT4UX will be active as YA5MM in February and March. All of these operators should give us all this much-needed country.

African countries are coming in like gangbusters on 40m CW, late nights, including rare ones like Togo 5V, Guinea Bisseau J5, Lesotho 7P, Rwanda 9X, Swaziland 3D, Gabon TR, Guinea 3X, etc.

Swedish DXers Erik SMØAGD and Eva SMØOTG (not to be confused with our OWN top DXer Eva KC7RY!), are about to embark on a pacific tour to include Micronesia V6, Marshall Islands V7 and Western Kiribati T3Ø. These will no doubt be easy catches on 15 and 10m, perhaps in the evenings as well, but then on CW 40m and 80m beginning at about 0600 UTC.

Manus Island is now active as P2ØKDE on 15 and 10m. QSLs to Box 5, Logengau, Manus, Papua-New Guinea.

The island of Providencia (NA-Ø49) will be active beginning the first of January as HKØDF4UW on SSB, 7Ø62, 1416Ø, 2126Ø, 2862Ø.

We're still waiting for Bangladesh, S21A and S21B for the end of December - first part of January.

Keep looking for Albania if you missed ZALA. The Albanians have issued about a dozen calls now to their own nationals, and ZALTAG is assumed now to be on regularly.

Finally, Laos is expected to be activated as XW8KPL just after Christmas.

Phoenix area hams (including some WVARC members) are contemplating an early March DXpedition to Georgetown, Guyana (BR1) for the ARRL DX Contest. More on this as details clear up.

NEW FORMAT FOR SHORT SKIP

With this issue, SHORT SKIP returns to the 8 1/2 x 11" format it had prior to 1987. We hope to maintain a four page edition (or six if material warrants) but we need more input from readers, with items of local interest. Also, remember that there is no charge for WANTED and FOR SALE items; they must be ham-related, however.

This part of Florida [lower Gulf] has the highest rate of lightning strikes per year for the whole country -- an average of 90 per month, but mostly in the summer. Lightning surges can cause damage by several modes. The most common are:

- 1) Direct hit on tower or antenna.
- 2) Conduction into shack by power, phone or TV wires from local hit.
- 3) Pulse generated in equipment from electrical field generated from local hit or charged atmosphere.
- 4) Differential voltage between equipment units connected to different power sources.
- 5) Different voltage between different grounds.

ANTENNAS

Probability of a strike depends greatly on the height of the tower or antenna, where a

30'	tower is exposed to	0.3 strikes/yr
50'	" " " "	0.8 "
100'	" " " "	3.3 "
200"	" " " "	13.5 "

The configuration of the tower is also important. A flat yagi will be much less exposed to attracting a strike than a vertical (such as a Ringo mounted above a beam), each at the same height. For the same reason, a flat dipole or an inverted vee is even less exposed than a tower at the same level. For vertical dipoles on a tower, it is recommended to mount them on the side of the tower just below the top.

Antenna protection is provided by surge suppressors at the lead-in bulk-head, and best by use of grounding and coaxial disconnects.

A lightning stroke is usually a multiple of 3 or 4 flashes, which consist of extremely high voltage and current pulses with a pulse duration of 1 to 50 microseconds. These pulses oscillate back and forth from the clouds to the grounded target. The current is very high, ranging from 18,000 amperes average to about 120,000 amps 1% of the time. This high

current stream of electrons will raise the air temperature to an estimated 60,000 F, which makes the noise of the thunder and strike.

Since we are dealing with a pulse, we have some factors going our way. The strike path can be diverted to ground to minimize damage to house and equipment. A 50' tower has an approximate inductance of about 13 microhenries and will have a strike voltage L (di/dt) of about 117,000 volts top to bottom with an 18,000 amp hit. Coax or sloper leading from the top (without guys) will bring this high voltage into the shack. A ground system at the base of the tower, with coax and rotator wires grounded there, will reduce the voltage Inductance in the leads from the shack to the tower will also reduce the pulse voltage. At the shack, a good outside ground, with a low inductance conductor like copper tubing, and lightning protectors on all coaxial and rotator cables will limit voltage in the shack. In our sandy soil, a very good ground can be made by connecting to reinforcing rod in in buried concrete just below the feedthrough bulk-head. Power panel and point of use protectors are also recommended. All grounds should be connected together to minimize electrical field potentials and ground-to-ground voltage differentials.

Surge suppressors are recommended at the house breakers and at the point of use. These are usually metal oxide varistors (MOV) and when they fail, will short the power line. Fuse or breaker them. Disconnect all power leads if possible when a storm threatens.

All equipment grounds should be tied together with short leads, and a short copper tubing ground lead run through to the outside ground system. Phone and TV leads should have surge suppressors when tied to ham gear. These methods will greatly reduce the electrical field exposure, and will also reduce the ground-to-ground voltage differential in case of a strike or near miss.

(Ref: Motorola cellular phone practices.)

LEAGUE NOTES: ARRL has asked the FCC to 1) grant Novices use of all of the 222-225 MHz band. 2) reserve 222.0 to 222.15 for weak-signal work (e.g., EME), and 3) grant hams secondary, non-interference access on a case-by-case basis to frequencies in the 216-220 MHz band....ARRL Letter, 12/2/91.

NOTE FROM OLIVER GRIEVE W7WGW

"I am running a system from my home QTH that acts somewhat of a "450" downlink. I pick up 10 meter FM (usually 29.5 or 29.6) and re-transmit (downlink) on 443.100 from my QTH.....SOON to be located downtown..."