THE OHM TOWN NEWS

Voice of the Bridgerland Amateur Radio Club

December 2003

>>>>>> http://www.barconline.org <<<<<<

HAM PROFILE

By Boyd Humpherys W7MOY

This guy has a lot of miles on him, about the same as the truck he drives. When I contacted Kris Kalin KD7MHB on the land line the other day to chat, his reply came from some road in Michigan. No privacy any more, however that's the nature of our lives now days. According to the castle supervisor, he generally isn't home long enough to cast a shadow a great deal of the time. He drives for CRETE, the big rigs you have seen roaring down the free way on a regular basis. Kris has had a General ticket for a spell, licensed since 2001, sports an old standby, KENWOOD TH22 HT, an ICOM 706 for mobile with an MFJ antenna tuner and 20-30-40 Ham Stick to QRM the passing CBers. Kris has participated in field day activities along with Latoja. He nearly got elected for a BARC board member at large, at the last meeting. That means he could conduct club business whenever you could catch him with one hand on the wheel on an 18 wheeler and the other with a cell phone barrelling down one of our nations toll roads. Saw a blurb in the paper the other day about a new gimmick the Japanese were working on that might solve some of these cell phone--drive challenges. One would hold the cell phone somewhere near the noggin, with your index finger stuck in your ear, the sound was transmitted down the bone of the finger and you would hear the vibrations in the ear as sound. No fooling, that's what it said. Now you don't have to holler at someone with "answer the telephone", you just blurt out "stick it in your ear" Neat eh!

He was born in Kansas City MO, land of the chiggers and tornados. (Unquote) Attended High School in Garden City KS. Has lived in Phoenix, Salinas CA, and now calls Hyrum the storage address for the ham gear, the good frau and 2 harmonics.

PRESIDENT'S MESSAGE

Wow, December already. It's hard to believe how fast this year has gone. Since this will be the last opportunity I get to inflict my prose upon the newsletter, I'd like to publicly thank everyone in the club who helped keep everything working. I'll admit that when I signed on for this job I was a bit nervous, but folks stepped up to help and the job got done. I have really enjoyed the challenge of serving as club President. Kevin Reeve, N7RXE, will be taking over the reigns in January, and I know he will do a fantastic job.

This year has seen some new hurdles for Amateur Radio as well as the continuation of some old ones. Other technologies and interests are competing for the youth and new licensees, government entities and industry are competing for our spectrum, city governments and zoning commissions are making antennas difficult to erect, and now we have the added threat of BPL. These challenges will be difficult both for Amateur Radio in general and for the club itself.

I think these problems can be overcome simply by doing what we do best--providing service to the community for events and in times of emergency, keeping our communications skills sharp, innovating and advancing the radio art, and most importantly, continuously telling the world who we are and what we are about.

I'm optimistic about our chances. We have very talented people, and I think the spirit of volunteerism is as strong in our ranks as in any other. Let's keep preaching the good word.

Again, thank you all for a great year.

Oh, by the way, one of my favorite events of the year, the Christmas party, is coming up on the 11th at 6:30 pm at the Cracker Barrel restaurant in Paradise. I hope everyone can make it.

Thanks and 73!
N7XZ

(Continued on page 2)

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The BARC Christmas Party!

On our usual club night Dec.11
(an hour earlier, at 6:30 p.m.)
at the Cracker Barrel Café in Paradise
on the main road into town, 8990 South
(you can't miss it)

The meal will be buffet style and will include:

Prime Rib, Chicken Monterey, Augratin Potatoes, Sea Food Salad, Tossed Green Salad, Rolls, Coke Products to drink and 'Better Than Almost Anything Cake' for dessert.

Great grand prizes and many other door prizes!
It will be a fun night out, see you there!

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(Ham Profile Continued from page 1)

He received an associate degree in Auto & Diesel Mechanics and performs some duties for the National Guard in driving an 8 wheel OSH KOSH, ammo and tank transport. DON'T make a left turn in front of those big green and brown machines on the road, they'll eat you up.
He likes car racing, monster trucks, four wheeling and of course our noble avocation.

His good frau the former Genene Kreutver was born in San Diego, CA. She got involved in some Auto & Diesel training, working in the Customer Service area and guess what? Kris came along at about the same time and they traded old war stories about plugged injectors over bean sandwiches and found a common interest. They have two youngsters by the names of Julie, 16, and Kyle, 8, who looks like the next sure bet for club membership. Genene's interests are craft ceramics, sewing, and one which I had never heard of before. Are you ready for this one? She is avidly involved darts (the throwing kind) and gets involved in league games in Ogden and elsewhere. Now that has to be a different one. Kris indicated that when he failed to take notice of an upper echelon command, he makes sure he is either locked in the bathroom or well out of range. One of those things between the eyes could make you stand up and take notice.

Kris experienced a tornado in Kansas City not long ago, all sorts of things were air borne. The local Amateur group got involved in short order with interconnects with NOAA relaying all sorts of data down the two meter interconnect. Now that's a good idea.

Genene prefers Kris get involved with Ham Radio to something like guns, but wondered why it costs so much. Need to run a cost analysis on that one Kris.

Welcome to the area folks, keep up the good work, especially as an Elmer, they need you.

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Answers to Questions on Page 6
1-D, 2-D, 3-B, 4-B, 5-B, 6-D

Merry Christmas

New Club Officers for 2004

President:	Kevin Reeve	N7RXE
Vice President:	Gary Roberts	AG1T
Secretary:	Julie Dabb	KC7RPP
Treasurer:	Dave Fullmer	N7RRZ
Board Members:	Rik Stallings	N7XZ
	Dave Hancey	KC7CXF
	Ted McArthur	AC7II

VE Test Session

Coming up at 8:00 a.m. on 13 December 2003
At Campbell Scientific Inc.
815 West 1800 North Logan, Utah

VE Test sessions are your opportunity to become a ham or upgrade your current license. Those seeking a ham license should bring two forms of ID, one of which must be a picture ID. Those seeking an upgrade to a current Amateur should bring a copy of their current license, any CSCE, and a picture ID. The fee will be $12.00.

Bridgerland Amateur Radio Club **Log-in #** _____

Application for the Year 2004 Membership

Dues are in effect January 1, 2004 through December 31, 2004

Name _____ **Call Sign** _____ **Date Paid** _____

P.O. Box _____ **Street Address** _____

City _____ **State** _____ **Zip Code** _____

Home Phone ( ) _____ **Work Phone ( )** _____

Phone # for Auto-Dial Slot _____ **E-mail** _____

☐ **Individual Membership - $25** **$**_____

☐ **Additional Family members in same household - $3 ea.** **$**_____
(One Newsletter per household)
Names and call signs of additional family members **Total $**_____

Name _____ **Call Sign** _____

Name _____ **Call Sign** _____

☐ **Are you an ARRL Member?**

Mail your completed form and a check to: B.A.R.C., P.O. Box 111, Providence, Ut 84332-0111
B.A.R.C. is a non-profit organization

The ARRL Letter Vol. 22, No. 44 November 7, 2003

==>SOLAR UPDATE

Tad Cook, K7VVV, Seattle, Washington, reports: Last week's events caused excitement, but this week was positively historic. The largest explosion ever recorded in our solar system occurred Tuesday, November 4, when an X28 class flare exploded from sunspot 486. The flare erupted as the giant sunspot was about to rotate from the visible disk. This means the blast wasn't aimed at earth, but was in a great position for taking images. The eruption saturated X-ray detectors on NOAA's GOES (Geostationary Operational Environmental Satellites, and was so strong that the X28 measurement had to be estimated, as did the solar flux for November 4. The flare saturated observing satellites for about 13 minutes during the peak of the event, according to Christopher Balch of NOAA SEC, who spoke with Tomas Hood, NW7US. The measurements stopped at X17.4. The level of the flare was estimated by analyzing data from HESSI, the High Energy Solar Spectroscopic Imager. The last time a huge flare saturated X-ray detectors was in April, 2001, and that one was X-20, the biggest recorded at that time. Keep in mind that there aren't any accurate records of flare intensity before about 30 years ago. Sunspot numbers for October 30 through November 5 were 293, 266, 277, 174, 76, 79 and 32, with a mean of 171. 10.7 cm flux was 271.4, 248.9, 210.4, 190.4, 166.9, 168 and 114, with a mean of 195.7. Estimated planetary A indices were 162, 93, 21, 18, 10, 31 and 9, with a mean of 49.1.

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? Progress Energy reaches out to NC hams on BPL: North Carolina amateurs are getting heard regarding broadband over power line Internet delivery by a company whose infrastructure would carry such a system. Raleigh, North Carolina-based Progress Energy has responded to many calls and e-mails this fall from concerned hams by contacting several local Amateur leaders and beginning a dialog that will include Amateur Radio in their BPL testing. In October, Progress Energy network engineer Bill Godwin met separately with Wake County ARES EC Tom Brown, N4TAB, and Gary Pearce, KN4AQ, Wake County ARES PIO, and talked by phone with Technical Specialist Frank Lynch, W4FAL. Godwin wanted to know more about Amateur Radio, what hams thought problematic with BPL, and who in the amateur community he and Progress Energy should work with. ARRL North Carolina Section Manager John Covington, W4CC, and ARRL Lab Supervisor Ed Hare, W1RFI, were identified as primary persons for Progress Energy to work with. Godwin set a positive tone by promising that Amateur Radio operators would be part of the next phase of testing, to begin early in 2004 in Wake County, NC. Godwin asked about notch filters. It was explained that notching the ham spectrum might work in a limited sense, but it wouldn't protect other services like shortwave broadcast listeners, aviation, etc. Progress Energy completed their Phase I test in the Wakefield area of north Raleigh early last summer. Phase I was designed to give Progress Energy engineers experience with the hardware, and let them know if it really worked. Amateur Radio was not involved in that test, and no Amateur Radio interference monitoring was conducted. But they have been hearing from hams steadily, and stridently, ever since. Phase II is planned for the end of 2003 and early 2004. It will be a larger test and focus more on marketing than technology, but hams will be invited to participate, and their interest will be technical. Both Phase I and II tests involve mostly underground wiring. ARRL Lab Supervisor Ed Hare's testing in areas with underground wiring showed that substantial interference still occurred, though above ground wiring was worse. Progress Energy is testing a system manufactured by Amperion. More information about BPL and Amateur Radio can be found at the ARRL Web site at www.arrl.org/tis/info/HTML/plc/ -- Thanks to Gary Pearce KN4AQ, Wake County, NC ARES PIO

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The ARRL Letter Vol. 22, No. 45 November 14, 2003

==>ARRL SPONSORS BPL GATHERING FOR COMMUNICATIONS PROFESSIONALS

The interference potential of Broadband over Power Line (BPL) to over-the-air radio services was the topic of an ARRL-sponsored meeting of 25 communications professionals November 7. The National Association of Broadcasters hosted the gathering at its headquarters in Washington, DC. "Listening to everyone introduce themselves and explain why they had come made the trip to Washington worthwhile all by itself," said ARRL CEO David Sumner, K1ZZ, who offered opening remarks and guided the discussion. Sumner showed excerpts from the ARRL BPL field test videos, which graphically demonstrate that BPL's interference potential at HF is real, not just theoretical. During the meeting, representatives from the shortwave broadcasting, public safety, aeronautical and scientific communities joined amateur and amateur-satellite representatives to discuss the threat of BPL and possible avenues to combat its interference potential to licensed HF and low-VHF spectrum users. Military and consumer electronics representatives participated as observers. Coming the farthest was Chip Margelli, K7JA, who attended on behalf of the Yaesu Amateur Division of Vertex-Standard. ARRL General Counsel Chris Imlay, W3KD, reviewed the status of last April's FCC's Notice of Inquiry on BPL and noted that more than 5000 comments were filed with the Commission—most of them from Amateur Radio operators. Imlay said that proposed FCC rules changes could come as soon as early next year. Imlay added that a number of non-amateur organizations support ARRL's position on BPL. Representing the National Association of Shortwave Broadcasters, George Jacobs, W3ASK, affirmed their strong support for the ARRL position. ARRL Technical Relations Manager Paul Rinaldo, W4RI, provided a technical review of BPL. BPL delivery systems would use existing low and medium-voltage power lines to distribute Internet and other broadband services to homes and businesses. Other points the group touched upon included:

? BPL emission measurements by government agencies are under way, but the results have not yet been made

public. The FCC denied an ARRL Freedom of Information Act request on the grounds that their test results represent work-in-progress.

? A government representative observed that concerned groups should be wary of tying in the overused term "homeland security" with any anti-BPL campaign, since it could be spun back against BPL opponents.

? Meeting attendees cited numerous and increasing instances of interference from Part 15 devices, suggesting that such instances only infrequently result in complaints to the FCC—and even less frequently in any FCC action.

A follow-up meeting may be held early next year if it becomes clear that the FCC intends to release a Notice of Proposed Rulemaking regarding BPL. Some attendees indicated a willingness to accompany ARRL representatives to meetings with federal officials to underscore that concerns about BPL are not confined to radio amateurs. "It's apparent that concerns about BPL run very deep and include nearly every over-the-air radio service," Sumner remarked after the meeting. "Now we can work together much more effectively to express our concerns both inside and outside of govemment."—Derek Riker, KB3JLF, compiled information for this report.

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==>UO-14 REACHES THE END OF THE TRAIL

UO-14 has officially ended its long run as an Amateur Radio satellite, although it continues to transmit telemetry and respond to commands from Earth. The Mission Control Centre at the Surrey Satellite Technology Ltd (SSTL) Center for Satellite Engineering Research announced this week that the venerable and popular bird "has reached the end of its mission after nearly 14 years in orbit." Launched in 1990, UoSAT-OSCAR-14 pioneered the PACSAT communication concept as the first 9.6 kbps Amateur Radio data communications satellite, although it became best known in recent years as an FM "easy sat." "Since launch, UO-14 has completed over 72,000 orbits and as many charge/discharge cycles of its on-board NiCd battery," said AMSAT-UK Chairman Martin Sweeting, G3YJO. "However recently one of the battery cells has become exhausted and can no longer support continuous operation of the repeater." Sweeting said UO-14's transmitter shuts down shortly after it is commanded "on" due to undervoltage, so the microsatellite's mission has been terminated. "Thank you UO-14 for your long service!" Sweeting concluded. AMSAT-NA Board Member Bruce Paige, KK5DO, an enthusiastic UO-14 user, called the AMSAT-UK announcement "sad news." He said the loss of UO-14 leaves amateurs with SO-41 and SO-50 as the only two LEO FM voice satellites. He noted, however, that the planned 2004 launch of OSCAR-ECHO would help to fill the void. OSCAR-ECHO is set to launch next March 31. The popular and heavily used FM satellite's repeater quit working in August, but hope remained within the amateur satellite community that UO-14 somehow could be revived. Ground controller Chris Jackson, G7UPN, at one point was able to reset the satellite, but he later determined that UO-14 had suffered a primary power system failure that was causing the spacecraft to shut down during some eclipses. During its active lifetime, UO-14 served several roles. After some 18 months as a PACSAT, UO-14 was switched to non-amateur frequencies for humanitarian use by Volunteers In Technical Assistance, which used it for messaging into Africa. After the store-and-forward communications computer proved no longer able to perform that task, UO-14 was turned back to amateur use as a single-channel FM voice repeater. UO-14 again served a humanitarian role in early 2001 when hams assisting with earthquake relief operations in the Indian State of Gujarat took advantage of the satellite to provide communication from the stricken region. The beauty of UO-14 was that it required minimal gear to make contacts—typically 5 W and modest antennas would do the trick. Operators with dual-band handheld transceivers and "rubber duckie" antennas often could make QSOs via UO-14.

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==>SPECTRUM PROTECTION ACT COSPONSOR LIST TAKES A GIANT STEP

Encouraging news this week from Washington: The list of House cosponsors for the Amateur Radio Spectrum Protection Act, HR 713, has reached 69. ARRL President Jim Haynie, W5JBP, says he's pleased with the progress since mid-October, when he'd expressed his frustration over a lack of cosponsors. Since that time, the list has grown by 17 representatives. The Senate version of the legislation, S 537, is holding at eight cosponsors. "I'm cheered up that we've got new representatives to sign on, but we can't just stop," Haynie said. "We gotta keep at it. "He said the League has been concentrating its efforts on promoting HR 713 because the bill has the best chance for success of any Amateur Radio-related legislation now before Congress. Haynie continues to encourage ARRL members to not only urge their senators and representatives to cosponsor HR 713 and S 537 but to write and ask them to actively support them. "This is something that's important to the future of Amateur Radio," Haynie reiterated. Sponsored in the House by Rep Michael Bilirakis (R-FL) and in the Senate by Sen Michael Crapo (R-ID), the Spectrum Protection Act would require the FCC to provide "equivalent replacement spectrum" to Amateur Radio if the FCC reallocates primary amateur frequencies, reduces any secondary amateur allocations, or makes additional allocations within such bands that would substantially reduce their utility to amateurs. HR 713 has been referred to the Subcommittee on Telecommunications and the Internet. Haynie testified before that panel in June. S 537 has been referred to the Committee on Commerce, Science, and Transportation. For the convenience of those writing their representatives and senators to urge cosponsorship of the Amateur Radio Spectrum Protection Act of 2003, sample letters are on the ARRL Web site. For guidance on the best methods of contacting your members of Congress, see "Communicating with Congress," by Derek Riker, KB3JLF, on the ARRL Web site or in the April 2003 issue of QST (p 46). Additional information—including the text of the Spectrum Protection Act and information on how to write members of Congress—is on the ARRL's "The Amateur Ra-

dio Spectrum Protection Act of 2003" Web page <http://www.arrl.org/govrelations/arspa.html>. Those writing their lawmakers on behalf of the Spectrum Protection Act are asked to copy their correspondence to the League via e-mail to specbill03@arrl.org.

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The ARRL Letter Vol. 22, No. 46 November 21, 2003

==>HAYNIE PROMOTES HAM RADIO AT HOMELAND SECURITY CONFERENCE

ARRL President Jim Haynie, W5JBP, this month used the Amateur Radio Today <https://www.arrl.org/catalog/?item=8861> CD presentation to promote the potential of Amateur Radio as a part of homeland security at the community level. Haynie served on a panel of national Citizen Corps affiliates during a Volunteers in Homeland Security Conference November 4-6 in Austin, Texas. ARRL became an affiliate of Citizen Corps <http://www.citizencorps.gov>--an initiative within the Department of Homeland Security <http://www.dhs.gov/dhspublic/>--in June during the ARRL 2003 National Convention. Haynie said Amateur Radio Today turned out to be the proverbial picture worth 1000 words for the crowd of some 300 conference attendees. "When it was finished and they turned the lights back up, everybody applauded," he said. "I didn't have to say another word." Haynie said several public officials on hand at the event also praised the capabilities of their local Amateur Radio communities in providing assistance during emergencies and disasters. Citizen Corps is a federal volunteer effort aimed at enhancing public preparedness and safety by bringing together volunteers and first responders. In some localities, ham radio is being incorporated into a Community Emergency Response Team (CERT) <http://www.citizencorps.gov/programs/cert.shtm>, a Citizen Corps program. Haynie says the Citizen Corps affiliation is "part of the bigger picture of getting emergency communications aligned with what our government needs." "Amateur Radio stands ready to serve the country as needed in times of emergency," he said. Citizen Corps Liaison to the White House Liz DiGregorio, headed the three-day gathering and provided an overview of Citizen Corps. She has urged Amateur Radio operators to explore ways to expand their role in the community beyond being a last resort when other communication systems fail. Those attending the conference primarily represented agencies and organizations serving Federal Emergency Management Agency <http://www.fema.gov/> Region VI. FEMA now is a part of the Department of Homeland Security <http://www.dhs.gov/>. They included representatives of volunteer organizations as well as FEMA officials and members of local law enforcement.

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==>INTERNATIONAL SPACE STATION MARKS FIVE YEARS IN SPACE

As of this month, the International Space Station has been in space five years and has had Amateur Radio and a permanent crew onboard for three years. The first component of the unique orbiting laboratory complex—home to the first permanent Amateur Radio station in space, NA1SS—was launched November 20, 1998. Since attaining orbit, the ISS has grown from a lone, uninhabited module into a continuously staffed, house-sized research facility. The Amateur Radio on the International Space Station (ARISS) program has been a part of the ISS since November 2000, when the Expedition 1 crew of William Shepherd, KD5GSL, Yuri Gidzenko, and Sergei Krikalev, U5MIR, arrived on board for a four-month tour. "Together with our international partners we have learned how to build, operate and maintain a very complex spacecraft, through the good times and the bad," NASA Space Station Program Manager Bill Gerstenmaier said in marking the ISS's fifth birthday. "With this experience to guide us, we look forward to the future, with a vast expansion of the station on the horizon." The US, Russia, Canada, Japan and Europe have cooperated in making the ISS a reality as well as with making ARISS a success. The first ISS element, the Russian Zarya functional cargo block (or FGB), was launched in 1998 from Baikonur, Kazakhstan. The shuttle Endeavour delivered the second element, the US connecting module called Unity, two weeks later. The ARISS initial station gear went into space in September 2000. A month later, the FCC granted vanity call signs NA1SS and NN1SS (the official ARISS Earth station at Goddard Space Flight Center in Maryland) to the International Space Station Amateur Radio Club for US ARISS operations. Russia has issued the call signs RZ3DZR and RS0ISS for ISS use. Using the initial ham station gear, Shepherd—who dubbed the ISS "Space Station Alpha"—made the first ARISS school group contact on December 21, 2000, answering questions posed by students at Luther Burbank Elementary School near Chicago. Some 200 youngsters, teachers, parents and news media representatives were on hand to witness the event. So far, 22 crew members have staffed the ISS. The current Expedition 8 crew of Commander Mike Foale, KB5UAC, and Alex "Sasha" Kaleri, U8MIR, arrived at the ISS earlier this month and has been settling in aboard the spacecraft. Residents have conducted research in a wide range of disciplines, and the ISS remains the largest and most complex international space research project in history. The February 2003 shuttle Columbia tragedy and the subsequent grounding of the NASA shuttle fleet at least for another year has slowed construction and trimmed crew complements from three members to two. The ISS scientific capacity will triple with components awaiting the space shuttle's return to flight. "At five years old, the ISS continues to grow," NASA says. "More than 80 tons of equipment and hardware are in the Space Station Processing Facility at NASA's Kennedy Space Center, being prepared for launch." The capabilities of NA1SS also are slated to expand in the near future. During the recent AMSAT-NA Symposium and Annual Meeting in October, ARISS International Chairman Frank Bauer, KA3HDO, outlined the delivery of the so-called Phase 2 ham equipment to the ISS. Already on board is a Kenwood TM-D700E VHF/UHF transceiver. The unit will mean a significant boost to the power output of the ARISS initial station gear—from 5 W to 25 W. Additional gear, including SSTV hardware, tentatively is set for transport in January. For more information on the ISS, visit NASA's Human Spaceflight Web site <http://spaceflight.nasa.gov/home/index.html>.—information from NASA was used in this report

Questions for Extra Class License

1. (E1A17) Why might the FCC modify an amateur station license?
A. To relieve crowding in certain bands
B. To better prepare for a time of national emergency
C. To enforce a radio quiet zone within one mile of an airport
D. To promote the public interest, convenience and necessity

2. (E2B12) What information is sent by slow-scan television transmissions?
A. Baudot or ASCII characters that form a picture when printed
B. Pictures for permanent display on paper
C. Moving pictures
D. Still pictures

3. (E3C13) As the frequency of a signal is increased, how does its ground wave propagation change?
A. It increases
B. It decreases
C. It stays the same
D. Radio waves don't propagate along the earth's surface

4. (E4B01) What is a frequency standard?
A. A frequency chosen by a net control operator for net operations
B. A device used to produce a highly accurate reference frequency
C. A device for accurately measuring frequency to within 1 Hz
D. A device used to generate wide-band random frequencies

5. (E6B18) Which of the following circuits is used to recover audio from an FM voice signal?
A. A doubly balanced mixer
B. A phase-locked loop
C. A differential voltage amplifier
D. A variable frequency oscillator

6. (E8A13) What would be the most accurate way of measuring the RMS voltage of a complex waveform?
A. By using a grid dip meter
B. By measuring the voltage with a D'Arsonval meter
C. By using an absorption wavemeter
D. By measuring the heating effect in a known resistor

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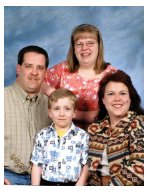

December, 2003

Happy Holidays!!

Some Contents…