

Palos Verdes Amateur Radio Club



K6PV



Q R O

APRIL 2007

High Frequency: How to get started in HF Radio

Mel Hughes, K6SY

Everything you may have wanted to know about HF.

Those of you who've heard Mel's talks know that we're in for a fun and informative evening.

Mel plans to talk about how to get started in HF Radio-- what radios are available and their price ranges, what kind of equipment is best, HF bands compared to UHF and VHF, and anything else you ask him about.

See you there!



The President Pontificates

Joe Locascio, K5KT

Well, here it is – April, and spring has arrived, at least here in Southern California; not quite so for a lot of our Country! Aren't we lucky to live HERE! In addition to the usual income tax activities most of us endure, this is usually a good time for outside work (mainly antenna work for we Amateur Radio Operators). Thanks to the high wind and gusts of late March, I too, albeit unwanted, now have antenna system work to do as a result of not insignificant damage to my Rotator system! April also marks the end of most of the significant HF DX contests. Also, in April we DXers and HF Contesters go to the International DX Convention in Visalia; this year it is being held 27 – 29 April at the Holiday Inn adjacent to the Visalia Airport and CA Highway 99. DXers from around the world frequently attend. I look forward to meeting and seeing there those that I have worked over the years as well as more local DXers from CA and around the US as well.

We, the Club BOD, like previous BOD's, are working to bring you Radio-related, interesting programs for this year. We appreciate your input from the last meeting, and will seriously consider your input in arranging Club programs. We are always open to your comments and suggestions. Nonetheless, there are already many exciting, interesting activities on the horizon for this year. This includes such social gatherings as the Club Picnic (in conjunction with the 'Lighthouse Weekend'), Christmas/Holiday Banquet, Field Day, ARRL Division Conventions here in our own back/front yard in Torrance, PACIFICON in October (bay area/northern CA), Military Radio Collectors Group convention in May, and more. So, with even a 'lil interest in Amateur Radio, one can enjoy many aspects of attending, socializing, and participating in such events.

By the way, Marian and I are planning a visit to Europe this summer. Besides being able to visit some of Marian's relatives in France and Holland, we are making arrangements to visit fellow Club members who are now living in Germany. They are the WILLERTs, Ann N6GVP/DJØIX & Ernst N6IDN/DK3FF. Some of you may recall seeing them at our PVARC meet-

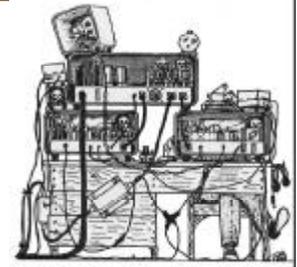
ings—in fact, Ann also served as our Club President. We are looking into the possibility of operating (our) Field Day from Europe as well as attending the world's biggest Hamfest/Radio Convention in Friedrichshafen, Germany, near the Swiss/Austrian border, in June. Yes, it is bigger than the Dayton Hamvention! I had not originally thought of the BIG Hamfest until one of my DX club buddies, Rich W6VX, reminded me of the June event. Looking at our planned activities in June, we discovered to our delight that we could actually include the visit to the Hamfest rather easily. THANKS Rich! Wow, what a nice combination we have to look forward to... Bavaria, Sauerkraut, Beer, Wine Amateur Radio, French Cousins and Dutch Aunts, and more...

With all the activities around my house of late, I've not had very much time for Radio operations. What with the finishing efforts of our Kitchen Renovation, Taxes!!!, initial Antenna system repairs, and more, I better get on with things here...

Til next month.

Vy 73

Joe



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Denzel Dyer, KG6QWJ

PVARC Programs

We really are paying attention to your responses to last month's poll. If all goes well, this year's meetings will cover most of the top-ranked ones.

Now that the Morse code test is gone, nothing stands between Technicians and the General license but a fairly modest exam, and Walt Ordway's course will help you over that. The General license allows operation on all the amateur bands below 50 MHz. But are you wondering if it is worth the trouble? In our April meeting, Mel Hughes will talk about why HF is indeed worthwhile, and how to get started on HF. From what I have seen of the Club, I suspect there will be audience comments, too.

One of the problems that one encounters with HF is what kind of antenna to put up. A 19-inch whip doesn't seem quite adequate, but perhaps one can get started without heating a hundred feet of tower with a

kilowatt. Vertical? Horizontal? Dipole? Radials? Tuning? Beam?

Our May meeting will be on HF antennas, by Bill Harper. I'm looking for a high-gain, all-frequency omnidirectional beam.

We also hope to have a presentation on Field Day: what to do, and how to operate. Remember that Field Day comes in June.

Farther out, the schedule is still tentative, but we hope to arrange talks on QRP (low-power) operation, perhaps combined with inconspicuous/hidden antennas; DCS/PVAN, digital radio, repeater operations, transmitter hunting, digital radio in its various aspects, perhaps an equipment demo or two, grounding/lightning protection; and the rest of Jeff Wolf's experience with an antenna installation. That barely leaves room for the Lighthouse Picnic and the Christmas Party.

Marathon Radio Operators!!

This is a reminder to all of you who are waiting for someone else to step forward and volunteer to take the morning of Saturday, May 19, to help out at the Marathon.

Denzel needs a measly four hours of your time on that Saturday. Besides being a fun event to work, our involvement also makes a point to the cities on the hill that PVARC is a viable, active Club and that they can count on, and need, the hams in the community. You will be making a statement about your Club by volunteering your time, and you will be making a statement about your Club if you don't.

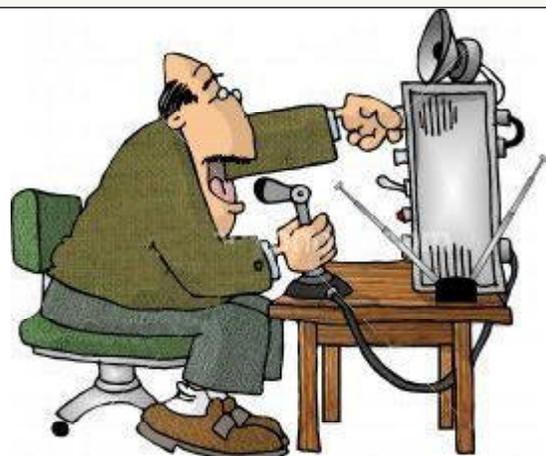
To volunteer, email Denzel Dyer at denzel.dyer@verizon.net, or phone him at 310-377-7579 (home) or 541-5320 (home office).

You can also check out the PV Kiwanis Website at www.palosverdes.com/kiwanis.

John Alexander Fund Recipient

Congratulations to student Keith Robertson, of RPV. He received his Technician's licence after taking Walt's class. We reimbursed his expenses from the John Alexander Fund.

Welcome to Amateur Radio!



"Antenna here is an inverted dipole."



40 - 4 - 40

An HF Antenna for the Apartment Dweller

Designed by Bill Harper, WA6ESC; written by Rick Murray, K6WXA



Maybe you live in an area that for whatever reason you're not permitted to put an antenna on your roof. Maybe you have an outside balcony, or, if not, maybe you have a large window an interior antenna could be placed next to. For about a \$40.00 investment, you can at least get started on one band.

In this design we have taken a pair of commercially-made *HamStick*® 40-Meter antennas, usually designed for mobile operation, and fixed them to a "T" shaped assembly mount and quick disconnect fittings and then configured the whole thing as a horizontal dipole.

Though this antenna was designed for 40 Meters, the available quick-disconnect fittings allow the elements to be quickly disassembled either for storage, or for replacing the 40 Meter whips with other band-specific whips available from the manufacturer.

At fifteen feet in length tip-to-tip, it sounds like a large antenna. Actually, it's a very light-weight pair of mobile whips mounted horizontally, and then fixed to a mast.

During set up and testing, we observed the manufacturer's label which stated: "*VSWR may vary by mounting location.*" With just a short bit of tuning using the antenna's adjustable whips, an initial VSWR of 1.2:1 in the center of the 40 Meter band was found; then, just as predicted by the manufacturer, if the antenna is moved up or down or placed in close proximity with something, the VSWR would vary at times up to 2.3:1. Still, simply retuning the antenna to suit its environment corrects the problem.

You can find all the parts and accessories for this antenna at Workman Electronics, Inc., at:

<http://www.k1cra.com/catalog/category.aspx?categoryID=148>



Visalia International DX Convention 2007

The 2007 International DX Convention will take place April 27, 28 & 29, 2007 at the Holiday Inn Hotel & Conference Center in Visalia, California. This ARRL-sanctioned convention is sponsored this year by the Northern California DX Club. It will feature programs from recent DX-Peditions and contest operations.

The Convention theme this year is, "**Elmering New DXers is Job Number One!**" Accordingly, a portion of the programming will be devoted to helping new DXers learn about how to be noticed in a pile-up, snag a "new one" and get that elusive QSL card.

Information and registration forms are available on the Convention web page, www.dxconvention.org or contact Convention Registration Chairman, Dick Letrich, W6KM via Email at dlw6km@aol.com.

Treasurer's Report

Bill Harper



As of April 4, 2007

PVARC Balance	\$2,368.12
John Alexander Fund	\$ 795.50
Repeater Fund	\$ 822.16
Total	\$3,985.78



ARRL Summary Report

Bryant Winchell, W2RGG

ARRL Report for the April, 2007 QRO



AMATEUR RADIO-RELATED WRC-07 TEXT SURVIVES CONFERENCE PREPARATORY MEETING Technical report text on two World Radiocommunication Conference 2007 (WRC-07) agenda items of interest to Amateur Radio has survived the WRC-07 Conference Preparatory Meeting (CPM-07 <snip>

Agenda Item (AI) 1.13 addresses the allocation of HF spectrum between 4 and 10 MHz, including the possibility of allocation changes in the 40 and 60 meter bands, while AI 1.15 opens the possibility of a secondary ham radio allocation in the vicinity of 136 kHz. <snip>

Method 6 would provide a worldwide secondary amateur allocation of 5.260 to 5.410 MHz “to allow communications at times when propagation conditions do not permit the use of the presently allocated bands at 3.5 and 7 MHz.

Method 7 provides a primary allocation at 7.200 to 7.300 MHz in Regions 1 and 3 to globally harmonize the Amateur Service allocations.” *Ref’: ARRL Letter, Vol.26, No.11*

FIELD DAY 2007 OFFERS A LEARNING OPPORTUNITY FOR HF NEWCOMERS Although Field Day 2007 is more than three months away, many ham radio clubs and groups already have begun making plans for this year’s event, Saturday and Sunday, June 23-24. Field Day has always been an ideal time for new hams to become more proficient operators and for prospective licensees to get “bitten by the Amateur Radio bug.” That may be even more the case during Field Day 2007, as many radio amateurs gain new HF operating privileges because of the rule changes that went into effect February 23. *Ref’: ARRL Letter, Vol.26, No.11*

ARRL VEC STILL “BUSY, BUSY, BUSY!” The ARRL Volunteer Examiner Coordinator (VEC) reports business continues to be brisk following the FCC’s deletion of Morse code as a ham radio licensing requirement.

“Busy, busy, busy!” is how ARRL VEC Manager Maria Somma, AB1FM, described the situation in her department. She says nearly 800 exam sessions are on the schedule for March with another 600 for April, “and it doesn’t look like test session activity will be slowing down any time soon,” she added. *Ref’: ARRL Letter, Vol.26, No.11*

AMATEUR RADIO ACTIVITY SHUT DOWN IN IRAQ Iraq Amateur Radio Society (IARS) President Diya Sayah, YI1DZ, has informed ARRL that all Amateur Radio activity in Iraq has been suspended until the security situation there improves. The ham radio blackout began this week.

Sayah says the suspension affects both Iraqi citizens as well as any foreigners, including military personnel and contractors — who have been on the air from Iraq identifying with YI9-prefix call signs. It does not affect the operation of Military Affiliate Radio System (MARS) stations, however, since they operate on military frequencies, not amateur frequencies. *Ref’: ARRL Letter, Vol.26, No.11*

KATRINA LESSONS LEARNED DRIVING UPDATED ARMY MARS MISSION Following an 18-month analysis of its performance in the wake of Hurricane Katrina, the US Army Military Affiliate Radio System (MARS) <<http://www.netcom.army.mil/mars/>> is reshaping its mission. Army MARS Chief Stuart S. “Stu” Carter has told the MARS membership of some 2600 Amateur Radio volunteers that priorities and procedures have been reshuffled. Retraining and the building of tighter bonds with the federal and state agencies MARS supports in emergencies are getting special attention. *Ref’: ARRL Letter, Vol.26, No.11*

ARRL OFFERS ALTERNATE APPROACH TO “REGULATION BY BAND-

WIDTH” In the wake of recent changes in the Part 97 Amateur Radio rules, the ARRL has revised its “regulation by bandwidth” proposals to match the new reality, avoid some unintended consequences and temper some of the controversy the original petition had aroused. In a November 2005 Petition for Rule Making (RM-11306 <<http://www.arrl.org/announce/regulatory/rm-11306/RM-11306-asFiled.pdf>>) <<http://www.arrl.org/announce/regulatory/rm-11306/RM-11306-asFiled.pdf>>, *Ref’*: *ARRL Letter*, Vol.26, No.12



ARRL EDUCATION AND TECHNOLOGY PROGRAM EXPANDS ITS REACH The ARRL Education and Technology Program (ETP) continues to expand and evolve. Conceived and put into motion in 2000 as “The Big Project” by then-ARRL President (now President Emeritus) Jim Haynie, W5JBP, the ETP exposes youngsters to Amateur Radio and electronics in their schools. The program is funded solely through donor dollars. It not only offers a comprehensive curriculum on wireless technology, it sponsors free Teachers Institutes (TIs) <<http://www.arrl.org/FandES/tbp/ti.html>> to get educators up to speed. Some of the latest schools to come aboard only recently received their ham radio stations and are putting their programs into gear. ETP Coordinator Mark Spencer, WA8SME, says the program now boasts 224 participating schools and colleges, public and private. *Ref’*: *ARRL Letter*, Vol.26, No.12

ARRL 500 KHZ EXPERIMENT LOGS THOUSANDS OF ACTIVITY HOURS ARRL 500 kHz Experiment <<http://www.500kc.com>> Coordinator Fritz Raab, W1FR, reports that a total of 16 participating stations have been active on the air since the experiment got under way in late 2006. The FCC Office of Engineering and Technology granted the WD2XSH experimental license to the ARRL last September. Raab says the low-frequency investigation has demonstrated ground-wave communication at distances of 100 miles in New England, in the Gulf Coast states and in Colorado. *Ref’*: *ARRL Letter*, Vol.26, No.12

SOLAR UPDATE Sunspot seeker Tad “Who Let the Spots Out?” Cook, K7RA, Seattle, Washington, reports: For the past 10 days we’ve observed no sunspots at all! Periods like this — or longer — are expected at the bottom of the sunspot cycle. *Ref’*: *ARRL Letter*, Vol.26, No.12

HAM-ASTRONAUT TO BE LEAGUE’S HONORED GUEST AT ARRL EXPO 2007 IN DAYTON NASA Space shuttle veteran and International Space Station Expedition 12 commander Bill McArthur, KC5ACR, will be the League’s guest at Dayton Hamvention <<http://www.hamvention.org>> 2007 in May. Hamvention takes place this year Friday through Sunday, May 18-20, at Hara Arena near Dayton, Ohio. The first astronaut to work all states from space, McArthur has been applauded for inspiring others through his ham radio activities from NA1SS.

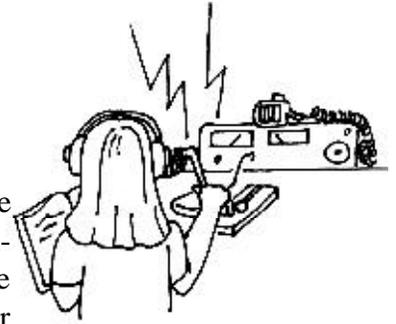
He’ll be featured speaker during a closed ARRL reception Thursday, May 17, and will be on hand all day Friday, May 18, to greet and talk with visitors to ARRL EXPO 2007 at Hamvention <<http://www.arrl.org/announce/nc/2007/>>. *Ref’*: *ARRL Letter*, Vol.26, No.13

HAM-ASTRONAUT TO COMPETE IN MARATHON FROM SPACE International Space Station Expedition 14 Flight Engineer Suni Williams, KD5PLB, will go faster than anyone has ever gone when she “runs” the Boston Marathon April 16. A native of the Boston suburb of Needham, she’ll compete as an official entrant in the annual Patriots Day event from 210 miles above Earth. Williams will run on an ISS exercise treadmill, circling Earth at least twice in the process and going as fast as 8 MPH while flying more than 5 miles per second. Williams hopes her unique run will be an inspiration.

APRIL 2007



General Meeting Minutes March 21, 2007



Rick Murray, K6WXA, realizing that Secretary Ginger Clark, KG6TAU, was missing the monthly meeting, whipped out pen and paper and took the meeting minutes. An act for which KG6TAU is eternally grateful. Thank you Rick!
And here they are:

The March 21st PVARC monthly meeting convened at 19:30 with the Pledge of Allegiance, led by Joe Locascio. Following the pledge, everyone individually stood up and introduced themselves. (There were quite a few members in attendance - a full house - including at least 6 or 7 first time visitors, or people who had just gotten their license, or who had just passed their test and were awaiting their license.)

Joe Locascio opened with comments about amateur radio's role in emergency communications; the ARRL and its supporting programs and HF as the "anchoring foundation" of ham radio.

Bill Harper gave the Treasurer's report. We have 92 paid-up members 57 are ARRL members (61%). Last year at this time we had 118 members. We have \$817.00 in the Repeater Fund and a total balance of \$3,914.00.

Denzel Dyer reported that he has a coordination meeting on Friday with Walt Ordway about the PV Marathon. He will send out a follow-up report next week to those who have volunteered to work the PV Marathon.

Bill Pomeranz announced that DCS has now trained 30 personnel who work within the library system on the hill, and that all three libraries have antennas mounted in place for emergency communications. He credited Marian Locascio with coming up with the idea. Bill also said that some local DCS personnel assisted Veterinarians with lost animals following Hurricane Katrina.

Alan Soderberg reported that volunteers have almost completed the painting, carpeting, furniture assembly and wiring in the new RPV Emergency Communications Center. Hopefully all inside work will be completed by the first week in April. The new antenna tower should go up sometime in June.

Rick Murray gave his report on the latest revisions to the club's website including the new Scanner Frequencies page, Southern California Repeater page, the PV Marathon page and the revisions done to the Projects page. He also said that the U.S. Coast Guard has approved our request to hold our annual Lighthouse operation event and picnic.

Herb Stark said that he has reserved the Point Vicente Interpretive Center for our next Christmas Dinner Party, on Friday December 14th. He also said that the Palos Verdes Concours D' Elegance will be held at the Trump National Golf Course for the next five years. (moving it from Jack Kramer Golf Club where it had been held)

Bryant Winchell had nothing to report from the city of Palos Verdes Estates.

Mel Hughes said that the last time the repeater was in for maintenance, a port was added to enable charging a battery back-up. The person who hosts our repeater has agreed to have a battery back-up installed for the repeater at his house, and now it's just a matter of coordinating when to put it in place. Additionally, new software is being written so that the automatic voice announcements on the repeater will not "over-step" a QSO in progress as they currently do.

Intermission called at 20:05 with the resumption of business at 20:35...

Bill Harper showed off a collapsible 2-Meter J-Pole he had made sometime back using stainless steel and solid brass rod, with custom machined fittings. The whole thing was very neat, light weight yet solidly built, and portable when collapsed. Mel Hughes said all it needed was some eyelets and a fishing reel. Bill also showed off a novel nylon camera bag, model REZO-30, that he picked up at Best Buy for \$14.00. He demonstrated how it was perfect for carrying an HT and that it had a separate compartments for carrying a spare battery and a mini instruction manual. Bill also passed out some charts for plotting potential



Yagi antenna gain theory. It was suggested that these charts be put on the website.

Denzel Dyer handed out a checklist-type survey form to the audience with topics one could check for their interest in future Club program presentations.

Bill Harper asked for a show of hands of people who would be interested in participating in a club IOTA this year, regardless of its destination. About 9 or 10 people raised their hands. Bill asked again for a show of hands for those who would be interested in repeating a Catalina Island IOTA excursion; the same show of hands. The possibility of a San Nicholas Is-

land excursion was quashed as unworkable.

Leroy Radcliffe expressed his appreciation for Bill and Rick's "Antenna of the Month" projects, and said that he would like to see them continue.

Diana Feinberg said she'd be interested in seeing versions of stealth antennas.

Karen Freeman expressed her appreciation for Rick's work on the website. She suggested that members be notified via email whenever a significant change to the website occurs.

Rick informed her that currently the BoD is notified whenever a change is made, but he could easily include the whole Club in the mailing.

The meeting was adjourned at 21:20.



Captain James Sommer, the new Commanding Officer of the U.S. Coast Guard's Integrated Support Command



Anacapa Island Light Station, USA-012

International Lighthouse & Lightship Weekend August 17 – 19, 2007 Point Vicente Lighthouse USA-640

The 2007 International Lighthouse & Lightship Weekend, is slated this year for the weekend of August 17 through the 19th at the Point Vicente Lighthouse. This past January, Dan Colburn-W6DC & Rick Murray-K6WXA, had the chance to meet with Captain James Sommer, the new Commanding Officer of the U.S. Coast Guard's Integrated Support Command; the proponent agency responsible for the Point Vicente Lighthouse. After some deliberations, the new Commander has approved our lighthouse operation request as well as our request to hold our annual picnic on the lighthouse grounds.

Last year, 377 lighthouses / lightships in 43 countries, participated in the event and thousands of radio contacts were exchanged with stations around the world. Each year the number of participating light-

houses increases as the popularity of this event grows; and each year it seems, a "new one" makes the list. This year is no exception.

Anacapa Island Light Station, USA-012, constructed in 1932, and the last lighthouse built on the west coast will be on-the-air for the first time ever, as station **W6C**. While Anacapa Island itself has been activated in the past by IOTA DXpedition'ers, its lighthouse has never been the focus of an amateur radio excursion. An activation of the lighthouse was planned for last year, but for whatever reason, never came about.

More details and information will follow as we get closer to this year's event. Hard to believe its still months away, and yet already 77 lighthouses in 18 countries have registered to participate in the event.

Memory Test



The Board is trying to make a list of past presidents and Vice Presidents. We don't yet think it's correct and need your help. You'd think we could remember a mere 27 years of leadership! Would you please look this list over and let us know what errors you find? Thank you!

Year	President	Vice President
2007	Joe Locascio, K5KT	Denzel Dyer,
2006	Dave Scholler, KG6BPH	Jeff Wolf, K6JW
2005	Dave Scholler, KG6BPH	Jeff Wolf, K6JW
2004	Mel Hughes, K6SY	Dave Scholler KG6BPH
2003	Steve Smith, K06ZC	Mel Hughes, K6SY
2002	Herb Epp, W6RBW	Curtis Jones AE6CJ
2001	Herb Stark, K06RC	Curtis Jones, AE6CJ
2000	Steve Smith, K06ZC	Jack Carter (acting)
1999	Jack Carter, KC6WYC	Steve Smith, K06ZC
1998	Jack Carter, KC6WYC	(None)
1997	Jack Carter, KC6WYX	Jim Smart, KE6ZWZ
1996	Merrill Stone, N6KNO	Jack Carter, KC6WYX
1995	Ken Getzin, K06ER	Jack Carter, KC6WYX
1994	Marti Brutcher, N6XDS	Ken Getzin, KD6MKJ
1993	Charlotte Iseda, KB6FXS	Bannister Bray, KM6ES
1992	Paul Weisz, K6YQ?	Pete deLettis, W1IQS
1991	Jeff Wolf, WA6DAL	Marti Brutcher, N6XDS
1990	Dale Hanks, N6NNW	Jeff Wolf, WA6DAL
1989	Robert Keefer, WA6ZTD	Bill Wiggings, WA6VLP
1988	Walt Ordway, K1DFO	Merrill Stone, K6NKO (call correct?)
1987	Bryant Winchell, N6NOP/W2RGG	John Alexander, K6SVL
1986	Joe Locascio, K5KT	Walt Ordway, K1DFO
1985	Dan Colburn W6DC/WB6JJT	Bob Kidder, W6NSZ
1984	Ann Willert, N6GVP	
1983	Clint Mason, WA6TMJ	Mike Semos, N6DBS
1982	Randy Tyndall, N6BXP	Clint Mason, WA6TMJ
1981	Peter Von Hagen, WA6HXM	Randy Tyndall, N6BXP
1980	Sam LaLande, W6OXX	Howard Munnell, WA6RZN



Welcome New Members!

WB6SIK	Bill Pohlman	RPV
WA6NSR	Dick Rath	PV
WA6LKV	Taffy Rath	PV
KI6GZC	Nigel Keep	Redondo Beach
KF6KIG	Thomas Wilson	El Segundo
KI6GUY	Steven Barryte	RPV
N6LN	John Terrell	RPV
KI6GVA	Jon Appleby	RPV

People who invite trouble always complain when it accepts.

— Lane Olinghouse

Every time I close the door on reality, it comes in through the windows.

-Jennifer Unlimited



Notes from K6JW

Choosing an HF Transceiver: Basics for the Beginner - **Part I**

J. Wolf, K6JW

Regardless of how some may feel about the moribund nature of the CW requirement for amateur radio licensing, it is a reality and, with that reality, comes another: a likely influx of new and upgraded hams who will be getting active on the HF bands for the first time. If you're one of those prospective or recently upgraded hams, then this article may be for you.

Without implying any judgment regarding the current situation, I nevertheless have observed that the lack of emphasis in recent years upon basic electronic theory as a licensing requirement has resulted in a new generation of amateurs who really have very little or even no idea of how their radios work. Given this lack of familiarity with even the basics – tuned circuits, oscillators, amplifiers – not to mention the more sophisticated operational aspects of radios, one is led to wonder how the new ham is supposed to make an intelligent choice when buying a new transceiver. I suspect that many will make their decisions based upon less than objective information (gee, that one looks keen!) combined with a nod to the wallet for available green stuff. This is most definitely not a good way to approach significant capital expenditure!

One really good source of information regarding amateur transceivers is reviews that run regularly in *QST*, the monthly publication of the American Radio Relay League. The text of these articles contains both objective and subjective information that is quite useful but, if one is to be able to compare the performance of one radio to another, some understanding of the measurements reported in the articles is necessary. What follows, then, is intended as a brief primer to help the beginner make sense of the information provided. With a little understanding of the significance of the measurements reported in *QST*, one can then have a more solid basis for deciding how one radio stacks up against another. Remember that any decision to buy a radio should be directed first and foremost by what you want to accomplish: casual operat-

ing, contesting, DXing. Perhaps surprisingly, you will discover that spending more dollars may not *necessarily* buy you more of what you need.

One caveat before we begin. Newer hams tend to concentrate on glitz. There's just something about those lights, dials, knobs and buttons that gets the juices flowing. More experienced hams know that it's not the transceiver but, rather, the antenna that's the most critical determinant of station performance. Still, most of you will, at the outset, want to think about what's going to sit on your desk – the glitz – so that's where we'll focus for now.

The most critical part of the transceiver that should influence your choice is its receiver function because, as is often said, if you can't hear a station, you can't work it. Let's take a look at the specific areas of receiver performance addressed by the *QST* test procedures.

Sensitivity

Sensitivity is the receiver's ability to hear signals. Since electronic circuitry generates electronic "noise", it will not do a receiver any good to be able to hear signals that are weaker than the internal noise being produced. Thus, *QST* measures something called the Minimum Discernible Signal (MDS), or "noise floor" of the radio. This measurement essentially says, "You can't hear signals below this level because, below this level, the receiver for which you paid your hard-earned cash will drown them out." It's measured in units called "decibels relative to a milliwatt" (dBm). The decibel is a logarithmic function which expresses a ratio between two numbers. In this case, the measurement is taken by feeding a signal with a strength of one milliwatt into the receiver and then measuring how far down below that lies the noise floor. It's expressed as a negative number since it's *below* the level of the input reference signal. A typical number might be around -125 dBm. The more negative the number, the lower the

continued on Page 11



noise floor and, theoretically, the greater the sensitivity may be.

The actual strength of the weakest signal that can be detected near the noise floor is the “true” sensitivity of the receiver, and is usually quoted by manufacturers as the strength in microvolts of weakest signal detection. *QST* measures signal plus noise that can be heard at a level 10 or 12 dB above (“louder” than) the noise floor, alone. The lower the number, the more sensitive the radio. One must be careful, however, to compare apples to apples between receivers, since higher end radios may permit the “dialing in” of advanced noise reduction circuitry which can take a seemingly mediocre sensitivity and make it much more impressive. That may be okay, but you need to know what’s happening.

With respect to this last point, one must understand that when a frequency is displayed on a receiver, it is really only the indicator of a band of frequencies actually getting through the various filters in the radio. At 14.200 MHz on the frequency display, for example, one is hearing frequencies from a bit below 14.200 to a bit above it. How wide the door, called a “pass-band”, actually is determines to some extent how much noise there is to overcome. More expensive radios allow the passband to be narrowed considerably more than less expensive ones. Narrowing the door reduces noise and can make a signal in the passband appear much stronger than it would with a wider passband and more noise. *QST* always specifies a standard width for the passband in its sensitivity measurements, generally 500 Hz. **Part 2 next month**

The hardest years in life are those between ten and seventy.

-Helen Hayes (at 73)

If you can ‘t be a good example — then you’ll just have to be a horrible warning.

-Catherine-

If all else fails, immortality can always be assured by spectacular error. -

John Kenneth Galbraith

Science is to see what everyone else has seen and think what no one else has thought.

Albert Szent-Gyorgyi



You can find this list of the Club's ARRL Audiovisual Library, on the News & Events Page of the Website

Volume	Title
1 Recruitment	New World of Amateur Radio Ham Radio In Space Your Headquarters at Work ARRL Public Service Announcements Courage in the North, Handi-Ham Radio Camp Sharing Amateur Radio with Handi-Hams
2 Shuttle Amateur Radio EXperiment (SAREX)	Ham Radio In Space SAREX Space Shuttle Missions STS-51F SAREX Space Shuttle Mission STS-58
3 Disaster Preparedness/Public Service	When Disaster Strikes At Any Moment Field Day Fever Disaster Drill: The Big One Last Voice From Kuwait
4 Operating Modes and Interests	What are those Crazy-Sounding Signals Saying This is Amateur Television Packet Radio AMSAT Phase 3D
5 Educational	What You Wanted to know about Antennas. Spark Gap
6 DXpeditions	VP8SSI: the South Sandwich Saga Journey to Peter I Island: Close To The Edge
7 More DXpeditions	Fastnet Force Seven The AH1A Saga: Howland Island DXpedition
8 Contesting	Winning On The Hill All China Am. Radio Direction-Finding Comp.
9 Amateur Radio History	1935 Tour of ARRL HQ “The Trans-Atlantic Tests and Station 1 BCG” “Am. Inventor—Maj. Edwin Howard Armstrong”
10 Club and Personal Ham Radio Applications	9NIMM Marshall Moran Tribute Dinner Amateur Radio in Elementary School FAIRS in the Former Soviet Union Genessee County (M I)RC j60 th Anniversary
12 Amateur Radio Far Away	Phase 3D Integration Lab JAS1B/Fuji 2 SANDIA Robotics SAREX at Center Street School



PVARC Vote results from the March Meeting - The Programs You Want

Vice President and Program Chairman Denzel Dyer, KG6QWJ

We had 30 sheets turned in, 13 of them with added suggestions. There were from 4 to 15 'x's' marked per sheet, 7 and 8 being the most frequent. Lots of ideas!

X-marked:

- 16 Grounding and lightning protection
- 14 QRP (low power) operation
- 13 Digital radio
- 11 DCS and PVAN: what they do, how to operate, how to join
- 11 The rest of Jeff Wolf's antenna construction story
- 11 HF antennas (fairly basic)
- 11 Equipment demonstrations (K7BV, (Yaesu), others)
- 10 Software-controlled radio
- 10 Transmitter hunting
- 9 Unobtrusive (stealth) antennas
- 9 Why HF, and how to get there at acceptable cost
- 9 Repeaters: operations, use, antenna coverage
- 8 DX, why it is fun and how to get started
- 8 Radio-control (model aircraft) (W6ODI ?)
- 8 Technician licenses: moving to General, and HF (why and how)
- 8 (Other) emergency services: Sheriff, Fire, SoCal Edison(?) (CA NG?)
- 8 Field Day: what to do, how to operate
- 7 DXpeditions
- 6 Workshops on building equipment
- 6 Satellite communication
- 6 Bill Scholz, W1HIJ, of HRO
- 6 Packet radio
- 5 Chip Angle (N6CA) on VHF/6 m)
- 4 Current ARRL information on Amateur Radio
- 4 ARES
- 3 FEMA
- 3 Contesting
- 2 Single sideband



NEXT MONTH -- OTHER SUGGESTIONS AND MEMBER'S COMMENTS



Meanwhile, if you missed the meeting and have some ideas or interests you'd like to add, be sure to corral me at the next meeting, call me, or send me a note or an email.

Denzel, KG6QWJ

OPPORTUNITIES

April

April 18 - PVARC Club meeting
April 21-22-Baker to Las Vegas race
April 27, 28, 29-DX Convention at Visalia

May

May 16 - PVARC Club meeting
May 19 - Palos Verdes Marathon-With a new Organizer! Denzel Dyer, KG6QWJ, has offered to take over this year's marathon. When he calls to ask you to help, give him a break and say yes! If he doesn't call you, offer to help anyway. One morning worth of time. And it's fun!

June

June 20 - PVARC Meeting
June 23 & 24 - Field Day Weekend, Jeff Wolf, K6JW

August

August 4 - The Hills Are Alive, RHE, Walt Ordway, K1DFO, 310-541-4007
August 17-19th - International Lighthouse and Lightship Weekend, Dan Colburn, W6DC, 310-373-5206; Rick Murray, K6WXA, 310-544-0982.
August 19 - Annual PVARC Lighthouse Picnic

Board of Director's meetings are held on the first Monday of the month at the president's house. All visitors are welcome.

Repeater Board of Director's meetings are held on an irregular schedule but all members are welcome to attend. Let a Board member know you're interested and you'll be contacted when a meeting is scheduled.

Need a Club Badge?

Contact Karen Freeman, KG6BNN
 310-541-6971 \$13

Need a Club Patch?

Contact Joe Locascio, K5KT
 310-373-8166 \$5

Want a new Club Jacket?

Contact Joe Locascio, K5KT
 310-373-8166 \$35-\$50

Who's Who? Find An Elmer

Antennas:

Bill Harper, WA6ESC;

Concours d'Elegance:

Rick Murray, K6WXA

Contesting:

Walt Ordway, K1DFO

CW:

Bill Pomeranz, KB6FB

DCS:

Jeff Wolf, K6JW

DX:

Bill Pomeranz, KB6FB

Education/Classes:

Jeff Wolf, K6JW

Field Day:

Walt Ordway, K1DFO

HF, Getting Started:

Jeff Wolf, K6JW

Lighthouse Events:

Bill Pomeranz, KB6FB

PVAN:

Dan Colburn, W6DC

PV Marathon

Rick Murray, K6WXA;

RHE 5K/10K

Alan Soderberg, W8CU

Denzel Dyer, KG6QWJ

Walt Ordway, K1DFO

These Club members have all offered to share their skills. So feel free to contact them Find contact information in the Club Roster. Want to add your name to this list?

Contact the editor Ginger Clark, KG6TAU at ginger.garnett@gmail.com or 310.378.7894.



Palos Verdes Amateur Radio Club
P.O. Box 2316
Palos Verdes Peninsula, CA 90274

New Membership Application and Member Renewal Form

New: _____ or Renewal: _____ Membership Date: _____

Individual ____ (\$15/Year) or Household and/or Family Membership ____ (\$17/Year)

(Applying) Member Information: Member Renewal same as Last Year? YES__NO__

Last Name: _____ First Name: _____ Spouse: _____

Street Address: _____

City: _____ Zip: _____

Home Phone: _____ Work Phone: _____

Email address: _____

(Unless otherwise noted emails will be sent to the applying member only)

License Call: _____ License Class: _____ ARRL Member? _____

Member of: DCS/RACES/ARES/PVAN _____ District _____ Unit ID # _____

Additional Household and/or Family Members (if Applicable):

Name _____ Call Sign _____ Class _____ ARRL _____

Name _____ Call Sign _____ Class _____ ARRL _____

Name _____ Call Sign _____ Class _____ ARRL _____

Individual membership (\$15.00) \$ _____
Household and/or Family membership (\$17.00) \$ _____
Donation to the John Alexander Fund \$ _____
Donation to the Repeater Fund \$ _____
Donation to PVARC \$ _____

Cash: _____ or Check: _____ Date _____ TOTAL \$ _____

Please make checks payable to: Palos Verdes Amateur Radio Club

Dues are based on the January 1st to December 31st calendar year.