

The Zero Beat

Volume 30 Issue 4

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N8LTM AND N8TMQ DEFY ODDS!

BRING UR QSLs 2 MEETING!

HPARC Swap A Hit!

While other area swaps suffered cutbacks and reduced attendance in 1994, the HPARC Swap 'N Shop firmly established itself as king of the Motor City swap hill. Attendance was up from last year and vendor space was completely sold out, requiring the opening of an overflow area.

Although reports from the floor indicated that sales of new high-end rigs were soft, the used gear market was going gangbusters from the minute the doors opened. Many vendors complimented us on the excellent organization and good turnout. Kudos to Lee N8LTM and Tom N8TMQ for their outstanding management of the event. Set-up and tear-down was accomplished in record time due to an excellent turnout of volunteers from the HPARC ranks.

On a more somber note, we all had a bad scare when Bud N8ZDI, suffered a heart attack during setup. As this issue of the Zero Beat goes to press, Bud is in good hands at William Beaumont Hospital in Royal Oak, recovering from two angioplasties. We all wish Bud a speedy recovery and look forward to seeing him again soon.

President's QRM

This month meeting will be held on December 14 at 7:30. It will be our annual Holiday Party, and Thanks needs to go out to Jerry N8UUF and Pat KB8??? for the food and gifts they're providing. Also by the time you read this the swap-n-shop will be history, a special thanks should go out to Lee N8LTM for his 5th year as swap chairman, Lee has done a outstanding job and will be handing the duties next year to Tom N8TMQ.

This month's program will be QSL Night. Everyone is asked to bring in 20 of your most unusual cards for display during break. Three mystery judges will pick out the best QSL card and the owner of the card will receive a special gift from Santa.

On November 11 the DART membership voted in favor of the Hazel Park Club to take over the repeater so as of then the dart is now owned by the HPARC. There is a lot of work still to do between the two clubs and improvement to be made, so your support is still needed during the transition. All paper work has been filed to incorporate the club the board of directors have set this up to make the filing of paper a yearly breeze.

I hope that you all have a Merry Xmas and Happy New Year may the Holidays be safe and God Bless all. I hope that Santa brings all of you that new rig that you have been looking for. Best of the Holidays for the President . Thanks and 73 - Mike Van Buren - WD8S

ZB Editor Fit To Be Tied!

There's no need to send in your rig for repair if you found you couldn't check into the Roadrunner or Rocking Chair nets using the frequency mentioned in last month's issue of the Zero Beat. Rumor has it that one KB8QLV, was found the morning after the last general membership meeting strapped into a Lazi-Boy rocker covered with guano. The correct transmit and receive frequency is 145.625 MHz, AM/FM vertical/horizontal. The Rocking Chair Net meets Monday through Saturday at 8:00 p.m. The Roadrunners can be found on frequency Tuesday, Thursday and Saturday at 11:00 am..

QRS! HPARC CW Net Puts the Brakes On!

It's easier than ever for CW beginners to participate in the HPARC CW Net on 15 Meters. The net regulars have agreed to back off the throttle and keep the sending speed at a comfortable rate for all. Just tune in 21.125 MHz or below at 8:00 p.m. every Monday night and leap into the fray. Don't assume the fleet of fist have been forgotten...watch for a new, weekly high-speed CW net in the very near future.

Unclassifieds:

Antennas For Sale:

Cushcraft Ringo Ranger - 2 Meter

Cushcraft R5 Vertical - 10,12,15, 17, 20 Meters

Wilson SY-33 Beam, 3 Element Tri-Bander, 10, 15, 20 Meters. Call Frank K8DZT at 810-758-4239

Vertical Antennas - Like 'Em or Love 'Em

By Don - AA8EG

Someone once said, "A vertical antenna is one that radiates equally poorly in all directions." He kneweth not of what he spake.

Generally, we opt for a vertical antenna for one of two reasons: (A) Lack of space or (B) Lack of adequate supports (You live in a subdivision that they bulldozed flat as a pool table and named *Rolling Oaks Estates*).

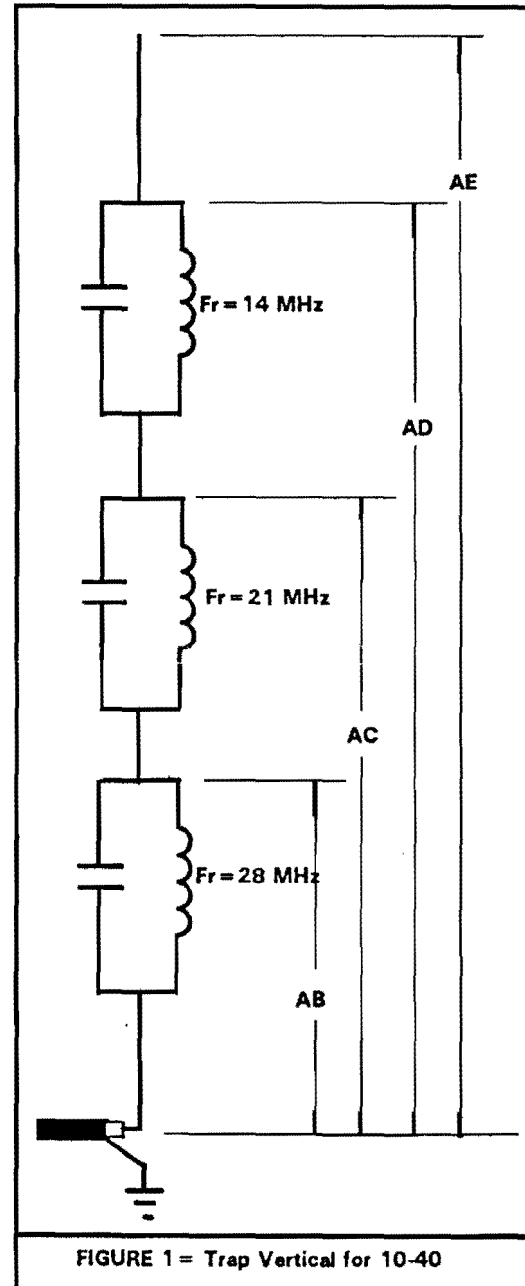
Verticals have a very low takeoff angle making them ideally suited for DX. Most of the transmitted energy is directed at the horizon. This benefit, down on 40 or 80 meters becomes a liability. On the lower bands, you want an antenna that will take advantage of the high critical angle of daytime propagation to work the "close in" stations. An example of this is one afternoon I was on 40 SSB in QSO with two stations. The station in Toledo gave me an S-7. The one in Washington, DC gave me 20 over S-9. With a dipole, the results would probably have been reversed.

Now that you know what you're getting in to, let's look at a typical vertical and find out what makes it tick.

Looking at figure 1, the first section (AB) is the 10 Meter radiator. As you can see, the trap is a parallel resonant circuit. At resonance (28 MHz), it has MAXIMUM impedance. The rest of the antenna is effectively eliminated and the transmitter "sees" only the 10 Meter section. However, if we transmit on 15 Meters, what happens to this trap? Well, the capacitive reactance (X_c) INCREASES and the inductive reactance (X_L) DECREASES. The RF is no dummy, so it takes the path of least resistance... through the inductor into the 15 Meter radiator (AC). The inductor in the trap now acts as a loading coil. AC will be considerably shorter than

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1/4 wave (λ) for 15 Meters. A typical 10-80 Meter vertical is about 25 feet tall. Without traps, your 80 Meter vertical would have to be over 60 feet!



The other traps work in a similar fashion. At resonance, they act as an open and below their resonant frequency they act as a loading coil..

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This space saving does not come without cost. Any loaded antenna will be less efficient and have less bandwidth. On 80, 2:1 bandwidths of 25 kHz are not uncommon. A tuner will greatly help out.

It seems to me that verticals get a bad rap due to two factors. A poor radial system and inadequate decoupling of the feed line.

Straight out of the box, a vertical is an unbalanced, $1/4 \lambda$ antenna. If you removed the ground connection from a dipole, you would have a similar device. It wouldn't work very well.

The radials are actually the other critical half of the antenna. The length of each radial will be determined by two factors: Operating frequency and whether the antenna is ground mounted or on a mast or roof. Table 1 gives the appropriate formulae.

A ground mounted antenna should have its feed point 6" to 1 ft. above grade. The radials may be buried. The sod can be cut and the wire tucked into the ground. This makes mowing a good deal less hazardous.

If your antenna is mounted on a mast or roof, the radials should be "drooped" at an angle of about 45 degrees. In other words, for each foot of elevation, the radial tie-offs should be 1 foot from the antenna center. Try to keep the radials at a safe height as they are "hot" and you don't want to "base load" a passing pooch.

You should have three radials for each band but two will usually suffice for 80 & 40.

$$L \text{ (ft)} = 248 / f \text{ (MHz)}$$

Roof Mounted

$$L \text{ (ft)} = 196 / f \text{ (MHz)}$$

Ground Mounted

Table 1- Radial Length

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Okay, we have radials but what's this stuff about "decoupling"? In theory, it's a whole lot more complicated than it is in practice. Essentially, it stops any current from flowing on the coax shield and provides two benefits, it forces the radials to do their job and reduces TVI.

The simplest decoupling device known to man is 8 or 10 turns (6" diameter) of the feed line at the antenna feed point. Simply wind up the coax and tape it tightly with plastic electrical tape. Looks funny but it's effective.

Now you have a REAL antenna and you can set out to disprove that thing about "equally poorly" as you start collecting DXCC cards.

de AA8EG

The Swap Hound

Sleazy fine print: Swap Hound listings are based on sunspot activity, listings we find in refuse containers, and hidden messages in "psychic friends" infomercials. Errors are guaranteed to creep in on a regular basis. Before wasting your gas and time, double check with a credible source.

SUN JAN 8 SOUTH BEND, IN - Michiana Valley Hamfest Association. South Bend Hamfest & Computer Expo. Century Center Convention Hall. Tables \$5-\$20. Admission - \$4 advanced, \$5 at door. Talk-in 145.29. Call Denny at (219) 291-0253 for info.

SUN JAN 22 SOUTHFIELD, MI - Southfield High School ARC Swap & Shop. Southfield High School, 24675 Lahser Rd. Tables - \$17, Admission - \$5. (810) 746-8853 for info.

SUN FEB 26 DEARBORN, MI - Livonia Amateur Radio Club Swap-N-Shop. Dearborn Civic Center. VE exams by appointment only. Admission \$5. Talk-in 145.350. Call (313) 261-5486 for info.

SAT MAR 18 MARSHALL, MI - Michigan Crossroads Hamfest. Marshall High School. Tables - \$4 per 4 ft table. Admission - \$3 advanced, \$4 at door. (616) 979-3433 for info. Talk-in 146.66 & 146.52.

SUN MAR 19 MAUMEE, OH - Toledo Mobile Radio Association. TMRA Hamfest. Lucas County Recreation Center. Tables - \$15-\$25. Admission - \$4 advanced, \$5 at door. (419) 259-5473. Talk-in 147.87.

SUN APR 9 GROSSE POINTE, MI - Southeast Michigan ARA Swap & Shop. Grosse Pointe North High School. Tables - \$10. Trunk Sale - \$5. Admission - \$3 advanced, \$4 at door. VE Testing. Talk-in on 146.74. Call (313) 886-6354 for more info.

HPARC Jackets and T-Shirts Available Now!

Frank K8DZT has informed the Zero Beat Editorial Staff that those stylish HPARC jackets have arrived. If you have one on order, pick it up at the December club meeting. Remember that layering your clothing is recommended during winter. According to Phil N8UUS, there's no better foundation for the "layered look" than a genuine HPARC T-Shirt. A variety of sizes will be available at the next HPARC meeting.

Minutes Of 11/9/94 HPARC Meeting

by KE8QT - HPARC Secretary & Bon' Vivant

Welcome and introductions commencing 7:40 P.M. Motion by K8DZT to accept minutes of October meeting; seconded by N8GMA. Passed. Treasurer's report by K8TRF. Motion to accept by N8GMA; seconded by K8VDA. Passed. Presentation of 10 Meter WAS endorsement and Friendship Award to WD8S. Program on Amateur Television presented by Jeff Ouelette, KB8CRM. Broke for refreshments at 8:25

Resumed at 8:50. Review of Sweepstakes rules and exchanges. Swap information. Review of club incorporation process. Expression of interest in Skywarn training. Expression of interest in obtaining direction finding kits. Notification that club will have a table at area swaps. Reminder by AA8JN of club CW net. No formal program for December meeting. Bring in your favorite QSL cards. Explored possibility of operating a contest from Hazel Woods property. Notice that DART has a 440 repeater on the air. Acceptance and welcome of new members. Club drawing won by Phil Ode, AA8KR. Meeting adjourned at 9:15 P.M.

Motley Crew Tickets!

They may not be pretty, but they are licensed by the FCC. Of course we're referring to the weekly jam and toast session featuring your favorite HPARC buddies and pals. Chow begins at 7:00am on Friday mornings at the Ram's Horn, just north of 13 Mile on the west side of Woodward Avenue

TAPR Takes Stand On Packet Message Content

There has been a recent flurry of activity on the packet networks over some packet bulletins issued by Frederick Sober, AB6GQ, an Official Observer Coordinator in the Sacramento Valley section of the ARRL. The concern expressed by AB6GQ is that packet bulletins whose contents do not relate to amateur radio are in violation of Part 97. I have reviewed AB6GQ's bulletin, two letters from (FCC Personal Radio Branch Chief) Johnny Johnston, and discussed the matter personally with AB6GQ by phone on Sunday, October 23rd.

Here is a brief history of events, primarily reported by Frederick: in 1993 as an OO, AB6GQ was contacted by several local packet BBS sysops who were concerned over the content of bulletins addressed, for example, to ALL @ ALLUS, ALL @ WW, and so forth. The content of many of these bulletins did not include ham radio-related subject material, and they wondered if this was a violation of Part 97.

According to Frederick, he contacted his section manager, who advised for him to get in touch with League headquarters. He was advised by a League Regulatory Information staffer to contact the FCC directly. Someone at the Hayward field office referred him to Washington. An exchange of correspondence with Johnny Johnston ensued. AB6GQ has been advised that the League is going to 'undertake an educational effort' about which something will appear in QST after the first of the year. Frederick advises he is going to wait for further word through the League chain of command for his next, if any, action regarding packet bulletins.

Because the spark which created this particular packet 'crisis of the day' was a statement to other amateurs from an Official Observer Coordinator, and because there was a reported exchange of correspondence with an FCC branch chief, Greg Jones, President of TAPR, received numerous phone calls asking for TAPR's position on this matter. Greg discussed this situation with several League officials and other respected advisers prior to discussing it with the TAPR Board. Subsequently, Greg requested that I draft this position statement for TAPR. To be succinct, most of the flame wars and great debates over permissible communications exhibit a problem with semantics, not a lack of specificity in the rules. Packet* is not some mutant communications form that is not definable by the rules. Packet is no more or less privileged than any other form of amateur

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communications. (*packet is used here, but this argument extends to all legal forms of amateur digital communications which are used for the forwarding of bulletins).

Did you know that Part 97 comes complete with its own dictionary? 97.3 includes a list of definitions for the terms used in the document. Two definitions that are either overlooked or misinterpreted by many are 'broadcasting' and 'informational bulletin.'

'Broadcasting' specifically means transmissions intended for reception by the general public (see 97.3 (10)). The term 'informational bulletin,' defined by Part 97.3 (23) has no relation to what we refer to as a packet 'bulletin.' Part 97 defines an 'informational bulletin' as a one-way transmission to hams of a message of subject matter composed solely of interest to the amateur service.

A good example of an informational bulletin is a transmission of ARRL bulletins from WIAW. To conclude that all of this means that a packet bulletin must be confined to amateur-only subject material is using terribly convoluted logic. Packet makes a poor choice for an informational bulletin anyway. WIAW doesn't use packet for bulletin dissemination. Packet, in its one-way mode, unproto, is a lousy way to transmit a bulletin (hmmm, maybe that's why WIAW doesn't use unproto for its transmissions...)! Except for unproto, there is no one-way packet mode. It takes two to tango.

A packet bulletin is entered on a BBS from the originating station in a two-way communication. From then on out, that packet bulletin is a third-party message. If it gets forwarded from one BBS to another, it is a third-party message being forwarded during a two-way communication.

97.113 lists prohibited communications and their exceptions. There is no specific prohibition against content with potentially controversial or frivolous subject material. This particular 'crisis of the day' arose, as so many others have arisen, because of message content. There is general agreement that many of the bulletins traversing the network aren't worth the electricity used to forward them. Studies in several metropolitan areas show that over 70% of the bulletins NEVER get read. They just get listed. This means users are being very selective about what they read. They DO have a choice. So do sysops.

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The process of reducing the amount of what many of us consider to be 'noise' on our boards begins with each of us exercising leadership at home. If someone posts a SALE @ ALLUS bulletin on your board trying to unload a camping tent, tell them nicely that this isn't appropriate. If you have a religious fanatic or political alarmist climbing on the electronic soapbox (and that soapbox has your callsign stenciled on the side), it's time for a heart-to-heart.

Easy? Not always. Whoever said that running a BBS was gonna be easy? What are you doing to get the word out that packet radio, while sometimes loose, is not a free-for-all. Ham radio, ALL facets of ham radio, because of the wide constituency we have, is a place where people have to be responsible. It's much harder to educate than legislate, but which do you think has the more effective results?

The lessons learned: If you've got a question about the rules, use the resources available to you WITHIN the amateur community INSTEAD of making an end run straight to the Commission. Document who you speak with and what was said. Get whatever you can in writing. Think of the potential impact on ALL of amateur radio when a small chunk of the overall activity (such as packet in relation to everything else) is the focus of possible new regulation or enforcement. This is not to suggest that the rules be violated or that anyone stick their head in the sand about abuses that may exist.

It is better to try to take care of business ourselves, as we are encouraged to do in the rules, than to invite possible over-regulation by the FCC. This issue may be put to rest forever preferably by the League setting the record straight that packet bulletins are not one-way transmissions or broadcasting, and that 97.113 is explicit about permissible content of amateur communications. Incidentally, I found AB6GQ to be very open about this incident and very surprised to find himself at the eye of a hurricane. He admits to a degree of initial naiveté in his effort to be a responsible OO (and now an OOC). Frederick wants everyone to know that he and his team of OO's don't have a hidden agenda and most importantly, they aren't vigilantes. They wanted some answers to questions about packet bulletins. Some missteps and miscommunications (by numerous people) led to something being given far more relevance than it deserved.

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TAPR BBS SIG Chair

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