



# The Zero Beat

Volume 30 Issue 10

June 1995

*HPARC FIELD DAY '95 THIS WEEKEND!!*

*SEPTEMBER BOARD SHAPES UP!!!*

## President's QRM

If you weren't at the HPARC Banquet this year you missed a great time. The food was great, and even those who didn't win any door prizes enjoyed the evening and the good company of the buddies and pals and many an XYL, OM and harmonic. My only regret is that in the excitement of the evening, I know I forgot to thank some folks who have helped out over the course of the last year. In particular, a big thank you goes to our Net managers, Frank AA8JN, Al N8WYO, Jim KE8QT and Christine N8WIQ, and everyone who took a turn as Net control. I'm sure there are other people who I forgot to thank. If I forgot to recognize your support, my sincere apologies.

HPARC did an absolutely outstanding job at the Oak Apple Run this year. So well, in fact, that another local race for charity has asked for our help. See Phil AA8KR's article elsewhere in this issue for details.

**Field Day is this weekend: June 24th and 25th, 1995.** Regardless of your license class, everyone has Amateur Extra privileges at HPARC's field day stations. It's a great chance to come out and sample the excitement of long distance communications. If you haven't attended Field Day before, make plans to come out and spend some time with the club. Be prepared for plenty of fun, food, and fast paced radio adventure. The HPARC Field Day site, at the Hazelwood property near Holly, is only a 45 minute drive from the Metro area. Bring out the whole family for a day or the whole weekend. Any friends who are interested in Ham Radio or simply curious are welcome as well. You'll find a handy map with directions inside this issue of the Zero Beat.

Remember that the next general membership meeting is not until Wednesday, September 13 at the Hoover Elementary School. Until then, you can stay in touch by checking into the HPARC 2 meter net on the DART every Sunday night at 9:00 PM. BCNU there!!

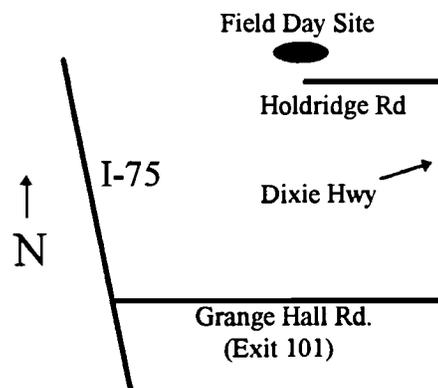
73 de Mike WD8S

## New HPARC Officers for 1995-1996 Elected in May

Turnout at the May HPARC General Membership meeting was heavier than usual, fueled by several hotly contested offices that were up for grabs in the annual HPARC election of club officers. When the dust had cleared, the donuts and coffee were gone, and there were some new faces on the HPARC governing board. The winners were:

- President - Mike Van Buren - WD8S
- First Vice President - Phil Ode - AA8KR
- Second Vice President - Marty Mendelson - KG8QT
- Treasurer - Dave Benham - K8TRF
- Secretary - Jim "Fridge" Bunting - KE8QT
- Director - Tom Austin - N8TMO
- Parliamentarian - Steve Lund - N8ZLK

## Field Day 1995 - Be There!



Take Interstate 75 north to the Grange Hall Road (Exit 101) and turn right (east). Turn left (north) on Dixie Highway. Turn left (west) on Holdridge Road and watch on the right for the Hazelwood Property, which is the HPARC Field Day site. If you get lost give us a holler on simplex (147.51) or the Clarkston repeater (146.84)[-].

## HPARC Hams Tapped To Set Pace at Troy Race

The Oak Apple Run is over and was a great success. The Hazel Park Amateur Club did a fine job with the communications necessary to have a race of this kind. Our professionalism was noticed by officials from another race group, and they have asked us to help them with the Troy Golden Corridor Run. This race is for the benefit of the Boys and Girls Clubs of Troy. Like the Oak Apple Run, it is a ten kilometer race. There is also a five kilometer race and a one mile fun run/walk. The event is to be held on Sunday, August 6, 1995 and begins at 8:30 AM. The start/finish line is at the Dana Commercial Credit Building on the southwest corner of Livernois and Big Beaver. Most of the race will be run on side streets away from any heavy traffic areas. The race organizers expect about 500 runners and I estimate that about twenty Ham volunteers will be needed. There will be a meeting before the race to answer questions and get assignments. I have spoken to the Troy police officer in charge of security for the event and he is very enthusiastic about having Ham radio operators in handling the race communications. More information will be available soon. Listen to the Sunday night HPARC 2 meter night for updates. If you want to volunteer, give me a ring at (810) 641-9723.  
73s de Phil AA8KR

## The Swap Hound

Sleazy fine print: Swap Hound listings are based on whatever event listings your editor can scam from other newsletters, the US State Department's third policy of the day towards Bosnia. These listings are certified to be slightly less accurate than Ronald Reagan's recollection of his last meal. Errors are guaranteed to creep in on a regular basis. Before wasting your gas and time, double check with a credible source.

SUN JUL 9 JACKSON, MI - Jackson HamFest & Computer Show - Cascades ARS - Jackson County Fairgrounds. Tickets - \$3.50 in advance, \$5 at gate Talk-in 146.88. Call or write Terry Osborn, KD8B, 508 Dalton Rd., Jackson, MI 49201, 517-784-2398 for more info.

SUN JUL 30 PORT HURON, MI -Eastern Michigan ARC Swap'nShop. Call or write Henry Kohl, K8DD 1640 Henry St., Port Huron, MI 48060. 810-982-7088 for more info. Also: HPARC/USECA Picnic.

SUN AUG 27 FOWLERVILLE, MI - Livingston ARC Hamfest. Call or write Ray Melosh, N8CPO 4349 East Allen Rd., Howell, MI 48843, 517-546-9209 for more info.

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SUN AUG 27 CORUNNA, MI - Five County Swap N' Shop - Shiawassee County Fairgrounds. Contact Jan (517) 893-3475 for more info. Talk-in 147.020(+)

SAT SEP 9 FORT WAYNE, IN - Summit City Computer Show & Hamfest - Fort Wayne Radio Club - Allen County Fairgrounds. Call or write Cliff Shreve N9MKB, 3412 Parnell, Ft. Wayne, IN 46805 (219) 483-7570. Talk-in 146.16(+)

SAT SEP 16, GRAND RAPIDS, MI -Grand Rapids ARA SwapnShop. For more info call or write Jeff Belknap, N8RWS, 454 Harp St. SE, Kentwood, MI 49548, 616-531-7899.

SUN SEP 17, MT. CLEMENS, MI - L'Anse Creuse ARC SwapnShop. For more info call or write Mark Castiglione, N8REZ, 26279 Fairwood St., Chesterfield, MI 48051-3031, 810-949-2508.

SUN SEP 17, ADRIAN, MI - Adrian ARC Hamfest - Lenawee County Fairgrounds. Contact Greg KZ8X, 4281 Mohawk Trail, Adrian, MI 49221 (517) 263-1153 for more info.

SAT SEP 31, LOWER COLON, MI - Colon ARC Amateur Radio and Gastric Distress Fest. Bunting VFW Hall. Contact Dave KB8RXX for further info and home remodeling advice. Talk-in 162.55 (22kHz PL).

## Finding Your Way Through the RTTY Jungle

by Norm Sternberg - W2JUP

Regardless of what you may hear by so-called "experts" in the commercial field, in AMATEUR RADIO we have used the same standard for data polarity since I got started with this RTTY junque in 1952.

In Amateur Radio, we consider the standard to be transmission in LOWER SIDEBAND, all over the world. This is regardless of the specific radio or data terminal unit you're using. You pump the data-shifted audio into your radio, which should be set to LOWER SIDEBAND ... or its equivalent.

Now there's the rub! The "equivalent" on some radios may be marked "FSK" mode. This still corresponds to LOWER SIDEBAND.

In the old days of RTTY, when you fed the data-shifted audio into the transmitter's microphone jack, you were said to be using "AFSK", or "Audio Frequency Shift

### 3

Keying". You set the transmitter's mode switch to LOWER SIDEBAND.

If you had chosen to use "FSK", or direct "Frequency Shift Keying", you DID NOT feed data-shifted audio into the transmitter; you fed the pulsating DC data signal from your teleprinter terminal into a separate circuit that "pulled" the transmitter's oscillator or VFO directly, in accordance with the required shift. In simple terms, when the teleprinter was NOT being typed on, the teleprinter sent a constant DC level to the transmitter. When you DID type a character, the DC level was changed in pulsed form, as much as seven times (five pulses to identify the character and a START pulse and STOP pulse) for each character. This changed or pulsed DC level "pulled" the oscillator, thus creating the frequency shift desired.

The early commercial RTTY users (at least here in the USA) had already adopted "sort of" a standard. We hams used the SAME standard so that we could try to print the commercial signals such as early press and weather transmissions. This resulted in the adoption of LOWER SIDEBAND for receiving the majority of commercial RTTY stations. Remember that we were using the shifting RECEIVED AUDIO tones as the signal to be demodulated into DC pulses.

These days, for data transmission in the vast majority of ham radio transmitters and transceivers, we STILL use LOWER SIDEBAND. Should you select the FSK mode in your transmitter or transceiver, the result is STILL LOWER SIDEBAND, although your rig may NOT actually be transmitting modulated audio tones.

These days many modern rigs take the pulsating DC signal introduced into the so-called "RTTY" port and actually use it to internally generate shifting audio tones which then apply carefully controlled modulation to the sideband signal. My Kenwood TS-940 does it that way. My much older Yaesu FT-901DM doesn't - it uses direct internal frequency shift keying that actually SHIFTS the transmitted carrier by the amount of the selected shift.

Now as to the question of "TXREV" and "RXREV".

Most of today's computer-based data controllers - such as the PK-232, KAM, MFJ-1278 and PacComm PacTOR controllers - provide these two commands as a method of changing the actual polarity of the data they send to and receive from the transceiver. This is done to accommodate ANY signal you may want to deal with. But be advised that the question of correct data polarity applies ONLY to Baudot and ASCII RTTY, and

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AMTOR or SITOR signals. Packet radio, because of the data encoding method it uses, just doesn't care about data polarity. Neither does PacTOR for that matter. In plain English, you can use EITHER data polarity in packet radio and PacTOR.

However, there IS some importance to the question of the send-data and receive-data polarity, which is related to the way your specific radio displays your transmit and receive frequencies on its digital display.

Why is this important? Well, here are a couple of examples taken with my Kenwood TS-940. I'll tune in a commercial SITOR signal for this example.

The station to which I'm tuned is WLO Radio in Mobile Alabama, one of the most-widely used American SITOR services. WLO uses SITOR Mode B (FEC, Forward Error Correction) broadcast weather from the USA to ships at sea.

First, I'll tune in WLO in "LSB", then switch my TS-940 radio to "FSK" mode, and then switch the 940 to "USB". In each case, I have to retune the receiver's frequency to accommodate the signal. Here are the results I get, in terms of the actual tuned frequency:

"LOWER SIDEBAND"	- 6346.20	RXREV "normal"
"FSK"	- 6343.92	RXREV "normal"
"USB"	- 6341.80	RXREV "inverted"

As you can plainly see, the frequency to which I actually TUNE the receiver depends on HOW I'm trying to copy this signal. I hope this clears up some of the confusion I see generated by poorly written TNC and rig manuals.

73s  
Norm W2JUP

## Have You Doubled Lately?

Can't make the Friday morning HPARC breakfast? A Saturday session has been added to the HPARC feedbag schedule to accommodate late risers and those whose work schedules are booked solid on weekdays. The Saturday HPARC breakfast starts at 10:00 am at the Ram's Horn, just north of 13 Mile on the west side of Woodward Avenue. Chow on Friday remains at the early hour of 7:00 am at the same venue. Why not attend one or both, and get to know your fellow club members better? Bring your appetite, or just join the crew for coffee.

## 75 Meter Lids: Threat or Menace? (From Our WWW Correspondent)

Is it my imagination, or is 75 meters getting more and more loaded up with lids operating on their own private frequency? The other bands are falling asleep during this propagation low, and so they go to bands that are still flipping and flapping with life, be it as low as it gets, claiming a frequency and then talking for hours, upon hours about chitty chatty nothings, whining and bragging and really having a ball with their small brains. If everybody else doesn't enjoy exactly what they enjoy, then they are garbage and shouldn't be on the air. There's room for everybody on all the bands. I can see wanting to talk with your buddies on the same freq night after night, in the comfort of you own home, in your underwear, with your own brand of libation. That sounds like a hell of a deal for the folks that are a problem to look at, or smell, or are in other ways difficult to be near. I can't see running a "woodpecker" that is 15 kcs wide to make your private frequency know to all who crowd it. I can't see running a mike with the gain turned all the way up to splatter the daylights out of everyone in the neighborhood, which is quite crowded mind you, just to let them know you don't like them transmitting so near as to create a little garbage on your private frequency. This all occurs after the usually assortment of "I was here first" and "You're supposed to allow 3 kcs" and "Please QSY" and "We've been meeting here for 47 years, take a hike bonehead" etc. etc. etc.

There used to be intelligent people on ham radio. Now we've got an entire spectrum loaded with havoc, self serving lonely people, self righteous abuse, and lack of patience and consideration. Is this what the internet will be like 40 years from now? After what happened with me tonight on 75 mts (3900 - 3908) I don't believe I'll be around that area for some time to come. I'd rather dig sewers than deal with that level of stupidity.....major league dorks!

**Larry Fisher - KR7RI**

Preach it brother! I had a demo for some scouts one afternoon and scanned down to around 3870 or so. This "gentleman" was calling CQ so I replied to him. He then changed from CQing and entered into a cussing contest. He was a total idiot. 40 is almost as bad too.

I enjoy 160. It is truly the gentleman's band. 10 is good too until the 80 crowd finds out it's open, then they park up there and whine and moan. I used to wonder why in

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the world people would want to tap CW instead of talking. After listening to 80 for about 15 minutes, I knew why! Boy, do I know why now. Also, you might try 17 or 12, they're a lot of good folks on there too.

**Phil Heaton, KE4KRT**

Well, that's the problem isn't it? There isn't room for everyone right now. I've seen that once before on 75 meters. That wasn't at the last sunspot minimum, rather it was before that, when AM still ruled. The band was saturated from end to end with contending heterodynes. People got rather snappish then too.

Psychologists have conducted experiments with rats where they keep increasing the number of rats in a fixed size cage. Eventually a point is reached where the rats start to snarl and snap at each other. We see the same thing among humans in crowded inner cities like New York where extreme rudeness becomes the order of the day. This is the territorial instinct at work, as the Californians say, "Give me some space, man."

Back at the last congestive collapse of HF, during the AM era, the solution was to go to SSB. After a brief, but relatively violent, adjustment period, there was once again enough "space" to relieve the crowding, and the bands got back to a semblance of decorum. At the last sunspot minimum, crowding was returning to the lower HF range, but it was still tolerable. Today at this minimum, it has reached the point of the rats in the cage, and the snarling and snapping has started up again. People are like that. Crowd them together tightly enough and their worst behavior comes out (just listen to any Dx pileup anytime). Stay out of their faces and they'll return to a semblance of good manners.

So what's the next SSB? Why digital methods of course. By creatively using both the time and frequency domains, we can effectively more than double the size of the cage once again and bring back a semblance of order and decorum to HF. Since we'll need rule changes to allow digital methods (in this case adaptive DSS) to supplant SSB, and that won't happen quickly, let me suggest trying 160 meters for a while until the sunspots perk back up. Or switch from voice mode altogether and move to text based narrow band digital for a while. There are already permissible methods for increasing the throughput and channel sharing of text based HF digital systems that far outstrip simple RTTY or packet. Experiment with them and you'll find you have plenty of room.

**Gary Coffman KE4ZV**

## HT Shoot-Out: Yaesu 51R vs. Standard 568 Tri-Band

by Don Fenstermacher - KB5TMM

I live in a horrible intermod area, so I recently sold my new Yaesu 51R and bought a Standard 568 tri-bander HT based on Standard's reputation for intermod rejection. The Standard is a GREAT radio, but the bells and whistles and the basic operation of the Yaesu are better. If they put the circuit quality of the Standard C568A into the Yaesu FT-51R it would be a killer radio, as long as all of the 51's operation and features were kept.

Here is a rundown of the Standard's operation and quirks, including those that particularly bug me after using the FT-51 for a while:

The 568 has only 20 memories per band, plus a call memory and VFO for each. You have to pay about \$40+ for a chip to increase the memories to a total of 200. The 51 comes with 120 total memories, plus call channels and 2 VFO's per band. There is no memory skip while scanning on the 568. As far as I can tell, the only way to do this is to use a feature that lets you specify or "mark" certain memories to be scanned, and don't mark the ones you want to skip. Then you have to enable the feature that scans only the "marked" memories. This is so tedious and involved that I haven't done it. The Yaesu 51 lets you skip or unskip a memory by pushing two buttons. Much easier when you want to temporarily lock out a busy repeater.

On the 568 you have to specifically lock EACH memory channel, or any changes you make (like tone, offset) when you are on that memory channel will be made to the memory. That means you have to add an extra multi button and dial step to storing each memory to "protect" the memory. The Yaesu 51R, on the other hand, lets you make temporary changes to a memory channel, but doesn't make the changes permanent unless you go through the process of storing the memory channel again.

The auto power off feature on the 568 turns the radio off after 30 minutes if there has been NO activity for that time, and that includes nothing breaking the squelch. So, if you use the APO like I do, to turn the radio off if you leave it on and forget it, it will not do so unless you are lucky enough to be tuned to memory channels or frequencies that stay quiet for 30 minutes. If you are scanning in an area with any activity at all, the radio

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will never turn off and you will come back to a dead battery. You can't change the time to anything else, it's 30 minutes or no APO. This feature might be better if you could set it to a shorter time, but not much better. In contrast, the 51 lets you choose 10, 20 or 30 minutes and shuts off if you don't use the controls in that time. To make it worse, the 568's manual does not make this clear. I had to call Standard because I couldn't understand why the radio never shut off. (The 568's manual is generally very well written and laid out, however.) The 51 displays a little stopwatch type graphic when the APO is turned on, the 568 displays only a tiny dot between the frequency readouts to show the APO is on.

The 568, like most Standard radios, scans the memories very quickly. But, if you turn the battery save feature on, the scan slows dramatically according to the saver setting you choose. If you choose the maximum saver setting, which turns off the radio for 5 seconds at a time, it takes more than 5 seconds to scan each channel. The lowest saver setting is 0.25 seconds. That setting makes the 568 scan at about the same speed as the 51. This makes you go through several steps to turn off or change the battery saver setting when you want to scan at the faster speeds. The Yaesu design is better, in my opinion. The scan speed is always the same. It "turns off" the saver feature when you scan, but if you have it turned on, it activates when you stop the radio on one channel or frequency. That way you don't have to remember to turn it on again after scanning, like you do on the Standard. The 568's lack of a transmit power saver is not much of a disadvantage. In my experience, these features can set the tx power too low, and I'd rather control what power setting is being used.

The poorly designed APO and battery saver aggravate the Standard's voracious battery appetite. While the 51 seemed to go through battery charges much faster than my single band Yaesu FT-11, the 568 is much worse. I was used to at least a week or 10 days of mostly monitoring with the 51. The 568's standard ni-cad battery (7.2v, 700mah) seems hard pressed to go more than about 2 days (about 8-12 hours, if that much) of mostly monitoring. This can be increased by using the battery saver, but you lose the fast scanning. The alkaline pack seems to hold out much longer, as most alkaline packs do. The Standard 568 alkaline pack uses 6 AA's, versus 4 AA's for the 51. The Standard's ability to take a direct DC input is a big plus over the 51, and is one of the other main reasons I "traded" from the 51. The 568 displays a "half-full" battery on the display when the voltage is less than 10 (I think that's the

number). That is a little unnerving until you get used to it, because it looks like it's telling you the battery is low. The Yaesu's digital battery voltage readout is much better. The 568 seems to give you little or no advance warning that the battery is low.

The keypad lock on the 568 is awkward. The 51 has a nice, one button lock. The 568 requires you to press the function and the 2 key to turn the lock on and off. That means you have to look at the radio (and usually use 2 hands), while you can lock and unlock the Yaesu without looking because of its special lock key and the location of that key. You can also lock the volume and squelch on the 51 because it is a pushbutton control, while on the 568 you can still accidentally turn both band's volume and squelch controls even while the radio is locked. Some other features on the 568 also require 2 buttons. The repeater reverse (to quickly listen to the input frequency) is a dedicated button on the 51, but requires pushing the function key and 9 on the 568. Again, this is a two hand operation.

The 568 does not have the automatic repeater offset (plus or minus setting) like the 51. I know the offset is fairly standard based on the frequency, but it's nice to have this set automatically in case you don't remember, and it saves you from having to enter the plus or minus each time you tune to a new frequency or a repeater in a new area.

The 51 has a telephone style face, with the microphone and speaker at opposite ends so you can use a full duplex phone patch easily. The 568 has the standard speaker and microphone and speaker in one area so I think a full duplex patch would be a problem without an earphone. The 568 has a neat feature that lets you set the external speaker to one band and the internal to another. That would facilitate duplex use, as long as you had the external speaker or earphone.

The 568 does not have the common up/down arrow controls. The only way to advance the memory or frequency (other than scanning) is to turn the channel knobs (or input the frequency or memory number). You press the # key to start scanning and the \* key to stop. It only scans up.

The display on the 51 is better than the 568, although the 568 is not bad. The 568 lacks the scrolling help feature of the 51, and dialing through the function settings is sometimes tedious. The 568 does have alphanumeric labels for the function settings, but they are short and somewhat cryptic. Not like the 51 which

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spells out almost everything in plain English, plus gives you a scrolling instruction menu. Much of the programming for the 568 seems awkward.

Both the Standard 568 and the Yaesu 51 have PL tone scan, but the Yaesu's is easier to use. You activate the tone squelch and then go to the tone setting in the setup menu and press an arrow button to start scanning. You know you have found the correct tone when the signal breaks the squelch, plus the Yaesu lights up the display when the squelch breaks. That is a big help because the tone scan can take a while and it's nice to have the visual indication. The 568 tone scan works basically the same way, but you have to press the function and \* keys to start scanning, and it does not light the display when the squelch is broken. Like most other functions, the operation of this feature on the 568 is much less intuitive than with the 51, and requires pressing function plus another key, instead of one key.

The 568 is better at what I bought it for: intermod rejection. But it is not intermod proof (they don't claim that, either). The single band Yaesu FT-11R is more resistant to intermod than either the 51 OR the 568. When I was providing radio support for a bike ride last week, I switched from my 568 to my FT-11 because the intermod was so bad. The 568 does allow me to generally scan the memories without the frequent pauses for pagers and other noise which I got with the FT-51, but I wonder how much of that is attributable to the higher gain of the FT-51's antenna. The quality of the 568 appears excellent, and the receiver operation and audio appear to be very good. The 568 also has the 1200 Mhz tx and rx, and a lot of out of band receive capabilities (according to the July, 95 QST, the receive is 100-200, 310-400, 400-500, 800-976 less cellular, and 1200-1300). There is not much use for the 1200 Mhz transmit capability in my area. (I do not know of any tx or rx mods for the 568. These radios seem somewhat rare and I have not read much about them at all.)

The 51 is somewhat more compact, most notably in the "depth" or thickness of the radio. The 51 also has some features which are not included on the 568. These include the scanning light system (display lights up when it stops on an active frequency, and/or when it detects a PL tone). The spectra scope, which shows activity a several frequencies at once, is also neat.

The bottom line: I don't think the 568 is worth the extra money unless you have a severe intermod problem and/or you want the 1200 Mhz capability. The 568 is a solid, quality radio which feels like a commercial radio.

But the 51 is also a quality radio and it is easier to use and offers many more features for less money. I tend to wish that I had kept the 51, although I'm sure the intermod would continue to drive me crazy. The 568 will also pick up the pager interference here, especially with a 1/2 wave antenna. So you get improved, but not "ideal" intermod rejection.

73s de Don KB5TMM

## Upgrade!!! VE Exams are Available This Summer!

For further information, please contact the test session CONTACT PERSON at the telephone number provided. Although the test session information presented here does not indicate whether walk-ins are accepted or not, most test sessions do allow walk-ins. Always contact the CONTACT PERSON at the telephone number provided so that the VE Team is aware that you be attending the test session. If necessary, you may contact the ARRL/VEC at 203-666-1541 x282 for additional information.

### EXAM LISTINGS - DEFINITION OF FIELDS

#### Test Date,VEC,City,,Contact Phone,Contact Person

The SECOND field in the following listing specifies the VEC which is coordinating this examination. This single-character designator denotes the VEC as defined below. An "A" (for example) indicates that this examination is coordinated by the ARRL/VEC.

For further information on any examinations listed, or if you do not find any examinations listed for your area, you may contact any of the coordinating VECs:

A = ARRL/VEC, 225 Main St, Newington, CT 06111;  
(d) 203-666-1541. The 1995 test fee is \$5.90.

5 = W5YI-VEC, PO Box 565101, Dallas, TX 75356-5101; 817-461-6443. The 1995 test fee is \$5.90.

The exact wording of written examination questions will vary from VEC to VEC.

## The Zero Beat Michigan VE Exam Schedule

### July 1995:

07/07/95,A,Grand Rapids,,616-458-6000,John W Wittmann  
07/08/95,A,Ann Arbor,,313-663-4625,Roger Place  
07/08/95,A,Dearborn,,313-676-6248,Motor City Radio Club  
07/08/95,A,Flint,,810-743-3980,Tom Sanders N8DYN  
07/08/95,A,Houghton,,906-337-2542,George R Thurner  
07/08/95,A,Manistee,,616-723-2119,Elmer Stamp  
07/15/95,A,Flint,,810-634-6077,Bill Coale  
07/15/95,A,Kalamazoo,,616-327-2529,Wray I Marshall  
07/19/95,A,Grayling,,517-348-8663,Kenneth D Wright  
07/22/95,A,Corunna,,517-675-5858,William Blick

### August 1995:

08/01/95,A,Oak Park,,810-642-3608,Jeff Albrecht, N8WRV  
08/05/95,5,Iron Mountain,,906-246-3641,F D Le Quia  
08/11/95,A,Grand Rapids,,616-458-6000,John W Wittmann  
08/12/95,A,Flint,,810-743-3980,Tom Sanders N8DYN  
08/19/95,A,Flint,,810-634-6077,Bill Coale  
08/26/95,A,Allegan,,616-673-5340,Bryan Lane  
08/26/95,A,Corunna,,517-675-5858,William Blick  
08/27/95,A,Stevensville,,616-471-5869,Ken Simpson, KU8Y

### September 1995:

09/05/95,A,Oak Park,,810-642-3608,Jeff Albrecht, N8WRV  
09/08/95,A,Grand Rapids,,616-458-6000,John W Wittmann  
09/09/95,A,Flint,,810-743-3980,Tom Sanders N8DYN  
09/09/95,A,Marquette,,906-249-3837,Richard Schwenke  
09/09/95,A,Roscommon,,517-275-4661,Richard L Maki  
09/16/95,A,Dearborn,,313-676-6248,Motor City Radio Club  
09/16/95,A,Flint,,810-634-6077,Bill Coale  
09/16/95,A,Kalamazoo,,616-327-2529,Wray I Marshall  
09/23/95,A,Corunna,,517-675-5858,William Blick  
09/24/95,A,Stevensville,,616-471-5869,Ken Simpson, KU8Y  
09/28/95,5,Hazel Park,810-399-7970,Mike,WD8S

## Zero Beat Takes Summer Off

As is our custom, the Zero Beat will be on vacation until September, at which time Jim N8QMD will take over the helm of the newsletter. Thanks to everyone for their support, help and patience over the last nine months. I really enjoyed it.

73s de Arlan KG8OW

## Hazel Park Amateur Radio Club

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### **Second Vice President**

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1419 Harvard  
Berkley, Mich. 48072  
(810) 398-6496

### **Treasurer**

**KT8RF - Dave Benham**  
4105 Cumberland  
Berkley, Mich. 48072  
(810) 280-0385

### **Secretary**

**KE8QT - James Bunting, Esq.**  
162 Hillboro  
Bloomfield Hills, MI 48301  
(810) 645-2704

### **Parliamentarian**

**AA8JN - Frank Cunningham**  
21535 Wendell  
Mt. Clemens, Mich. 48043  
(810) 465-6694

### **Director**

**KF8KS - Steve Harris**  
88 Duncan  
Troy, Mich. 48098  
(810) 689-4048

### **Club Call Trustee**

**KI8V - Verline Ferris**  
Hazel Park, Mich. 48030

### Board of Directors Meeting Schedule:

April 3, 1995

May 1, 1995

June 5, 1995

### HPARC Chairpersons

Membership Chairman & Badges AA8KR Phil  
VE Team Co-Chairs - WD8S Mike N8SWQ Bill  
Novice Classes - N8UUF, KA8NDY, WB8YRV  
Zero Beat Editor - KG8OW Arlan  
Mailing Crew - KA8NCH Ed,  
WB8OSZ Gene, KB8NIH Bill  
DART Board of Directors- WD8S, NR8D,  
WD8JWM, KA8PHP, KG8OW  
Repeater Trustees - 2m N8MLM 440 N8EQD

CW Net Managers - AA8JN Frank N8WYO Al

2m Net Manager - KE8QT Jern

Kids Net Manager - KB8TVE Joe

Club Refreshments - K8DZT Frank

Club Tee Shirts - N8UUS Phil

Public Information Officers - AA8EG, WB8TIV

Club Equipment Custodians - KF8KS, WB8ATZ

County Liaison - KA8PEH Al

Dayton Hamvention Trip Chairman - WD8S Mike

Club Jackets - K8DZT Frank

1995 Field Day - Marty KG8QT Dave KB8RXK

Rocking Chair Net Manager - WB8OSZ Gene

Club HF Awards Manager - KB8NKD Dick

Club VHF Awards Manager - KB8HSR Tim

ARRL Technical Coordinator - AA8EG Don

1995 Banquet Chariman - WB8JWM Barry

1995 Swap n Shop - N8TMQ Tom

**Club Repeaters - DART (Detroit Area Repeater Team) Sponsor Hazel Park Amateur Radio Club**  
**2 Meters - 146.640 (-)**  
**440 Mhz - 443.225 (+)**

2 Meter HPARC Net- Sundays 9 p.m. 146.640-DART

15 meter CW Novice Net 8 p.m. Mondays 21.125

15 meter CW Net 8:00 p.m. Tuesdays 21.125

Kids 2 meter Phone Sundays 7:00 p.m. 146.640-DART

**Hazel Park Amateur Radio Club**  
**Post Office Box 368**  
**Hazel Park, MI 48030**