

FEEDBACK

THE OFFICIAL NEWSLETTER OF THE
GEORGIAN BAY AMATEUR RADIO CLUB

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MAY 1993



GBARC 20th ANNIVERSARY

MEMBERSHIP

- | | |
|----------------|----------------|
| VE3AEO TED | VE3MVS MERV |
| VE3AUB JACK | VE3MWU NICK |
| VE3BFV JIM | VE3NEM TOM |
| VE3BIS DICK | VE3RHJ BRAD |
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| VE3GDH DEREK | VE3TWI OKKE |
| VE3HIO RICK | VE3TWJ DAVE |
| VE3HIP IAN | VE3TWK JACK |
| VE3HMZ BILL | VE3TWL CATHY |
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| VE3IXG DOUG | VE3UWX MORRIS |
| VE3IXR MURRAY | VE3VTO DON |
| VE3JLZ JACK | VE3WNW BILL |
| VE3LKD BOB | VE3WWS VIHLO |
| VE3LPD LAVERNE | VE3XOX BOB |
| VE3LPT MOE | SWL STAN |
| VE3MTG LARRY | N5ZIK JACK |
| VE3MTV NORM | |

GBARC

The Georgian Bay Amateur Radio Club, founded in 1973, is based in Grey and Bruce counties. The club meets at 7:30 P.M. sharp on the second Tuesday of each month, except July and August, at the Billy Bishop Airport.

NET SCHEDULE

Sunday 09:30 hrs 3.783 Mhz SSB
WEDNESDAY 20:30 HRS 3.670 Mhz CW

CLUB OFFICERS

President _____ VE3XOX Bob Vary
Vice-President _____ VE3JJD Gene McDonald
Sec-Treasurer _____ VE3HIP Ian Trenholm
Technical-Director _____ Vacant
Program-Director _____ Vacant
Bulletin Editor _____ VE3TSA Tom St.Amand

FEEDBACK

The official bulletin of the Georgian Bay Amateur radio club, published monthly, except July and August. Contributions of articles/letters are encouraged and should be sent to
Tom St.Amand, VE3TSA,
1232 3rd Ave. East, Owen Sound, Ont.
N4K2L5

DUES

\$25.00 per year

This Issue:

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VE3RVG

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FOR SALES / WANTS

UPCOMING EVENTS

NEXT GBARC MEETING
MAY 11th 1993

JUNE 8th 1993

BREAKFAST MEETINGS:
MAY 8th & 29th 1993

JUNE 12th & 26th 1993

GBARC FLEAMARKET
MAY 29th 1993 AT THE
OWEN SOUND RACEWAY
(VICTORIA PARK)

MINUTES OF THE LAST GBARC MEETING

MINUTES OF GBARC MEETING --- APRIL 13, 1993

Meeting opened at 7:35 P.M. with 26 members and one guest present. This guest Ve3UWZ , Gerry Banks from Southampton. Minutes of March 9 moved by Henry UWD, seconded by Dan, DQC. Approved as recorded. Treasurers report shows balance of \$ 706.88 in GBARC account and \$ 357.27 in the student account. No outstanding invoices to be paid. Canwarn meeting in Craighleith on April 28th at 8:30 PM. Tom, TSA reports he has another student about to write his 12 wpm test. Gary Strobel has just recently passed his 12 wpm and was congratulated by club members. His call Ve3KPH.

FLEAMARKET- Secretary reports that the room is available at the Owen Sound Raceway, (Victoria Park) Under the grandstand for date of May 29, 1993 for our flea/swap market. There will be no charge for non-profit organization such as ours, particularly since we provide communication facilities for Santa Clause parade, Scouts group , etc There will be a \$ 100.00 damage deposit ,but this will be returned in full when we clean up. Suggested admission price of \$ 1.00 and tables for \$ 2.00. Coffee is included and will be paid by the club. Ve3HIP will pay deposit from club funds and get the key a day or two before from the contact Jack Bristoll. Club members to spread the word on packet and Ontars. Doors open at 9:00 AM for set up. VE3OSR for talk-in.

Nomination committee reports that no new names have come forward to stand for election of club executive. Club president asked for a member to head up the program directors vacancy. This person to head up the various functions of the club, NOT to do all the work. No offers were forthcoming. Rick, HIO agreed to stand for Technical director.

INCORPORATION - Ted Stevens (our lawyer) has sent the incorporation papers away to the ministry for approval and filing.

Still no approval for our repeater at the MacLean - Hunter site. Members felt another site should be considered. President Bob outlined to members the importance of getting involved with club operations. We have a good club here now, but it will not remain so if only the same key people are involved.

SILENT KEY JACK VE3AUB - Noted that the club sent a donation of \$ 25.00 to the Canadian Cancer Society in memory of silent key, Jack Barrett, VE3AUB. Three members attended the service at the funeral home , Dave, DXO; Jim BFV and Ian HIP on Friday Apr. 9th.

Elections will be held next month, May 11th.

FAMILY Y CAR RALLY - Gene IJD and Bob XOX will contact the Family "Y" in Owen Sound, and find out how our club can assist with the car rally communications in their fund raising program. Extensive repairs and renovations are being carried out on the "Y" building and any help civic groups such as ours is greatly appreciated. A poll taken of the members present show many will assist with communications ,however not with organizing the car club or donation cards, recording, etc. Roy, EMB agreed to take a leading part as soon as some organizing is in place. It was agreed that this is a local fund raising campaign, and we should not go to other clubs, etc.

FEEDBACK - Tom, TSA thanked those members submitting articles to " Feedback " and if your submission does not make one issue it will get in the next one. No cut off date as such... To keep this bulletin alive, all members should participate . Many of our membership is made up of people who are unable to make the meetings, and this ' printed word ' is valuable to keep all in touch. Tom can handle news on IBM diskett ,packet or on the blank pages he supplied for photo-copying.

PACKET COURSE - Some indication that several members are ready to take a packet course. Agreed that this fall might be best time. Gene, IJD mentioned that up to 200 messages a day are received at his repeater station. More and more amateurs are getting into this mode of communication.

Meeting closed at 8:45 PM by Roy EBM ,seconded by John TXB... Winner of 50/50 draw was Cy , VE3CC.

THE WIRELESS WORLD OF ANTENNA ENVY

by Christina Blizzard

Reproduced from the feature; SATURDAY SPOTLIGHT, The Saturday Sun, January 30, 1993

Let me tell you about the strange and mysterious double life my husband has been leading.

By day he is my mild manner Dave - loving husband, devoted father, computer wizard for the *Sun* and all-round nice guy.

But by night and on weekends my normal quiet Dr. Jekyll turns into a mysterious Mr. Hyde.

That's when he becomes Victor Echo Three Sierra Victor Lima, amateur radio enthusiast, habitué of the short-wave frequencies and perennial electronic tinker.

Amateur radio enthusiasts are bred unto themselves. They speak in their own cryptic language, enforce their own ridged rules of etiquette and take immense pride in the speed of their Morse code and the strength of their signal.

Let other men display their virility by driving fast cars and pumping iron, hams take pride in a well hung antenna, so to speak. Even in these liberated times, ham radio is a male dominated hobby with only a handful of female hams.

At any rate, antenna envy can lead a man to desperate measures.

During December's huge snowstorm for example, while I fretted that a tree might topple and send hydro wires crashing down into the yard, my husband kept running outside - to check on his aerial.

After the storm finally subsided, he insisted on scrambling up to the roof in the freezing weather to restore the drooping antenna to its full majesty.

For several months, friends stopped visiting us, mainly because my husband constantly press-ganged our dinner guests into clambering across the steep roof of our two-storey house in search of the perfect place to anchor the antenna.

My nephew, James, was suckered twice. The first mission was to secure an antenna atop the garage, which proved to be no problem. But poor James made the mistake of returning again, and ended up scaling the side of the house to the roof.

Amateur radio enthusiasts are a breed apart, speaking their own language, enforcing rigid rules of etiquette, taking immense pride in the speed of their Morse code and the strength of their signal

Just when he thought it was safe to come back for a visit, a guy wire came loose and his services were commandeered once again. James doesn't visit very often these days. And when he does he wears hiking boots.

One of the first rules of amateur radio is that you should never, ever, under any circumstances confuse it with Citizens Band. Got that? Okay, you can read on.

Hams consider themselves the aristocrats of the airwaves (must be those big antennae) and take great offense if they're confused with those CB "plebes."

The art of amateur radio has changed a great deal since the early years when an exceptional proficiency in Morse code was required for operators transmitting on long-distance high frequencies. Operators don't need to know Morse to transmit locally.

And while the communications revolution and the advent of cellular phones have certainly changed the face of world-wide communications, amateur radio is still the only reliable method when disaster strikes and power and telephone lines are knocked out.

When a cyclone hit American Samoa last year, for example, one amateur radio operator maintained the island's only link with the outside world. In fact, he kept the whole of the southwest Pacific in touch, keeping up communication with a group of operators in

New Zealand. He was so successful that the military came to him afterwards to ask him how he'd done it.

At the height of the five-day tempest, the governor of Samoa, the Australian embassy and the military all relied on him for communication. He kept his rig running with an emergency generator and batteries.

Most serious hams believe that their license gives them not just the right to transmit, but a responsibility to serve in times of need. Amateur radio operators keep disaster networks in place all the time, just in case.

After the Barrie tornado several years back, hams were the first means of communication to come back on the air. Their assistance was so speedy, so well-organized and efficient, that as a reward the province dropped the price of special ham radio license plates.

The world of amateur radio is so esoteric as it is complex. And the language simply defies explanation.

"Fine business," is the phrase most commonly used, mainly because it means anything you want it to. It can mean "hello," as in, "Fine business. My name is Dave, VE3SVL," or it can be an acknowledgment that you have understood something. As in, "Fine business. I'm glad the weather on Easter Island is good."

And for some reason, "73" means good-bye, not just in, "Well, 73-over and out," but in, "Well I'll just say my 73s for now and back to you."

Then there's "saltmines" for place of work. No explanation needed, I guess. But what's this "XYL" business which refers to wives? (The husbands of the few female hams are referred to as "OMs" but that's easy. It stands for "Old Man.")



When he isn't calling Peru or Tierra del Fuego or Israel or Christmas Island or tuning in to the Space Shuttle's amateur radio operator, my husband can be heard yacking with his local pals on the two metres frequency on his portable FM rig.

And while most people would find it odd to have "friends" you never see, that is part of the attraction of amateur radio. After years of overhearing the same voices, I feel as if I've known "Moe" and "Jordan" and "Willy" all my life. They shoot the breeze each morning on the way to the "saltmines," and pass snippets of information they've picked up or tidbits of ham gossip they've heard on the airwaves.

They're a patchwork of personalities, with little in common except the same droll, understated sense of humor and an ability to talk intelligently on just about any topic - a talent no doubt acquired because of their

constant communication with a broad range of people.

One of the most endearing things about amateur radio operators is their meticulous care in avoiding vulgar or obscene language on the air. Serious hams abhor any kind of foul language or risqué material. And they are vigilant with others who flirt too closely to the line. Concern for the sensitivities of others often borders on the extreme. I actually heard

one operator ask his listeners to "pardon the expression," when he announced to anyone listening that he had, "fallen on his fanny."

Serious hams are also scrupulous about ethics. Most were shocked by the recent "Squidgy," tapes, purported to have been recorded by a British operator who taped Princess Diana's private conversation with her close friend James Gilbey.

Reports that the operator had a tape recorder handy to his radio raised hackles with many hams. While it is not illegal to tape such a conversation, it is illegal to disclose what's been heard. And they say that unless the operator had been following one of the callers around in a car, it is an incredible coincidence that a ham would accidentally tune in to a conversation on one frequency and then also quite by accident know exactly which frequency to tune to in order to record the other half of the same conversation, all the while clutching a tape recorder.

They suspect the public hasn't been told the story and that the entire incident reeks of a set-up.

One of the most recent innovations in transmissions is packet radio. This is a method of communication that is not for the technologically faint at heart, since it uses radio to transmit messages from computer to computer.

My husband sends and receives messages around the world in this fashion, and recently received a pathetic plea from a beleaguered operator in Bosnia, describing the horrendous conditions in that state.

Such innovations in radio technology also allowed an operator to transmit undetected from Baghdad to the outside world during the Persian Gulf.

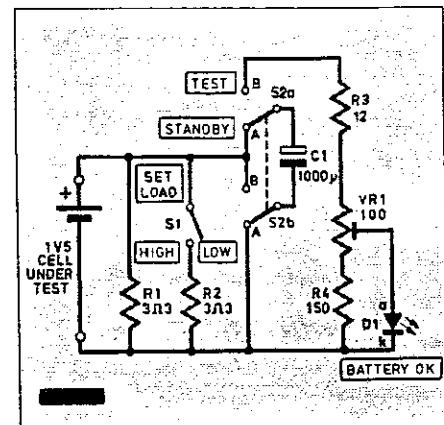
On the lighter side, I was cooking dinner the other day when Dave took a break from his electronic fiddling and asked what was on the menu.

"Baked ham," I said innocently.

"Oh," shot back Dave, "What's his call sign?"

Very funny, David. Obviously it's time we said our 73s.

Over and out.



BATTERY TESTER

Testing a battery with a voltmeter isn't a particularly good test, since the battery voltage can still be quite high if no load current is being drawn. This circuit tests 1.5V batteries by draining about 400mA in the *Low* position and about 800mA in the *High* position.

Since a red LED requires about 1.6V to operate, C1 is switched as a voltage doubler. To adjust VR1, it's easiest to have one good cell and one that's run down but not completely dead. Test the good cell to confirm circuit operation, then test the run-down cell while adjusting VR1 until the LED just fails to flash. It may need some tinkering until you get reliable operation; since the LED does not switch sharply, some interpretation is needed — you'll find that the LED stays on over a fairly large adjustment of VR1.

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SMOKED HAM

This art of DX'ing can be quite perplexing
With the high QR Mary an such.
When you contact a ham who lives in Japan
A Kilo is not very much.

My ten meter rig is not very big,
I built it some time in the thirties,
My copper long wire disturbs neighbors'ire,
And they say that my signal is dirty.

With my hand-held two meter I can hit a repeater
That will take me where I want to go,
But, son-of-a-gun, it isn't much fun
When you're up to your whip in the snow.

I'd go seventy -five just to prove I'm alive,
But that band is a big traffic jam.
If I go on the net I'm willing to bet
That they dont even know who I am.

So I built me a rig,- man this thing was big.
With a kilowatt out to the tower.
The chassis got hot, but that's like as not
When you're pushing out that kind of power.

And then came the day I was hitting Bombay
My signal was ten over nine.
The hour was late, but the copy was great,
With the QSO going just fine.

When out of the blue a loose wire threw
An arc about two inches long.
The shack filled with smoke, and I started to choke
But I couldn't see what had gone wrong.

Then the smoke alarm screeched, and blindly I reached
For the switch that turns everything off.
And there on my desk was all that was left,
Some ashes, some smoke, and a cough.

So now I'm confessing, I learned a hard lesson.
Keep power where it ought to be.
Check all the loose wires that arc and cause fires,
AND YOU WONT HAVE TO GO QRT..

VE3EBM

WHAT? ME CONTEST? by Brad Rodriguez, VE3RHJ

I admit it: for most of my hamming years, I have viewed contests as one of those aberrant behaviors that attract a small crowd of fanatics, wreak havoc on parts of the band I never use, and fill up the center pages of QST. What's the attraction of a 30-second QSO? Why go looking for pileups?

I late 1992, I found out. I can pinpoint the place and time: it was at our club booth, at the Split Rail Festival in Flesherton. I had wanted to make this year's booth extra special, so I brought my HF rig and TNC to demonstrate a RTTY station. Little did I know that the CQ Worldwide RTTY contest was on the last weekend in September! Suddenly, I -- a completely "green" RTTY operator -- was making RTTY contacts left and right. RTTY with Japan! With only 10 watts!

From that point on, I was hooked. I've never been a DXer or a Big Time Operator, but during that contest I sure felt like one. Usually my signal gets ignored by DX -- but during a contest, EVERYONE wants to talk to EVERYONE! Even if you're only running 10 watts and a lash-up antenna! Well, I'd been a frustrated QRP enthusiast for years...maybe I'd just been working QRP in the wrong places.

Thus was born the GOAL: to actually make some serious contacts with my Ten-Tec Argonaut. I'd never got anywhere with this rig. I know that this is partly because I never used a decent antenna, but for years this rig had been sitting neglected on my shelf. If anything could vindicate this rig in my eyes, it would be a contest.

I realized that my best chance for QRP would be a CW contest. I've always liked CW, but never been able to attain much proficiency. But I had read somewhere about a ham who doubled his CW speed in a contest. Thus was born the SECOND GOAL: increase my CW speed as much as I can.

So, with a freshly tuned-up rig, I entered the next CW event that happened along: the November ARRL Sweepstakes. The ARRL, bless them, had set aside "slow speed" CW segments -- a perfect starting place for a contest tyro like me.

The Operating Manual suggests setting objectives during a contest. Mine was to make 25 QRP contacts -- this would prove to me that the rig was getting out. Seven and a half hours into the contest, and not trying hard, I made my 25th QSO.

Okay, okay...I was too conservative. The Manual also says you should measure yourself against comparable stations -- similar location, similar power. So I bumped my objective up to "make as many points as the lowest-scoring VE3 station last year." (About 3,000.) And I'm getting excited now, and the pace in the slow-speed segment is becoming frustrating...maybe I should move down where the Mega Operators are.

There's no way I would call CQ in the "fast lane." I can't handle a pileup at 30 WPM. So I continued with "hunt and pounce," which is the best way for a neophyte to contest: find a station calling CQ, and call him. Then call him again, and again, and again, until he works his way through HIS pile-up and hears your signal.

Gee...I can't copy 20 or 30 WPM, but while I listened to a station knocking off contact after contact, I realized that I could pick up his call -- one letter at a time. And I could pick up his ARRL section, and check number, and serial number, and I could hear the serial number increasing by one for each contact. Hey, if I could make him hear me, I'd know in advance everything he would send back! I cranked the keyer up to 15 WPM, the fastest I could send, and sent my call...and scored a QSO!

That set the pattern for the rest of the contest. Suddenly I could make ten contacts an hour! I hit 3,000 points in no time. No problem, revise the objective upward once more: now I'd try for an even 100 QSOs.

Oh dear, 100 QSOs and the contest still wasn't over. One more revision: I'd try to equal last year's top VE3 QRP score (about 9,000 points).

Well, when the dust settled, I had 137 QSOs, covering 56 of the 77 ARRL sections, for a total of 15,344 points. Hmmm...I guess that Argonaut works after all! And a quick check revealed that I had increased my CW speed from 12 WPM to 17 WPM.

BRAD'S TIPS FOR NEW CONTESTERS

First, three basic observations:

1. You can contest casually. Sometimes it's a lot of fun to jump into a contest, just so you can give contact points to all the other participants. You don't HAVE to submit logs, or fill out forms, or anything -- just find out what information the other guy needs to complete a contest exchange, and send it to him. Usually this is a signal report and your location: province, ARRL Section, DX Zone, or whatever, depending on the contest. You can look this up in QST, but if that's not available, a contester will usually be happy to tell you what to send. (Anything for a contact!) This is a great way to get the "feel" of contesting, without panic.
2. Look up the contest rules. These appear in QST's "Contest Corral", and for ARRL contests often appear as articles. Write down the "exchange" -- the information to be exchanged by stations in the contest, and the recommended contest frequencies.
3. Read the Operating Manual. There's a good chapter on Contesting.

Having done that, if you decide to contest "seriously," here are several suggestions I found useful, and several lessons I learned, as a complete neophyte to CW contesting. Much of this applies to phone contesting, too.

4. Set achievable goals. Contesting is more fun if you feel you've accomplished something. You get an emotional boost that can carry you onward, or you can quit with a feeling of satisfaction. Start with modest goals -- you can always adopt new ones.
5. Hunt and pounce. If you have a weak signal, or can't copy fast CW, or don't know the contest procedure yet...let the OTHER guy call CQ.
6. Listen to a few exchanges. If you're new to contesting, you'll learn the "protocol" of a contest exchange. If your CW speed is slow, this gives you a chance to copy the other guy's info, without having to ask him for many repeats.
7. Ask for a repeat if you need it. If you missed something, most stations will be happy to repeat it. Some will even slow down. I've found it best to ask for a repeat BEFORE sending your half of the exchange -- once he's got your info, he's off to someone else! (This is another reason to let HIM call CQ -- he sends his info first.)
8. Outwait pileups. If there are 30 stations calling him, be patient. He'll work through that list quickly, and eventually will hit a lull. Stay with him until you're the only station left -- then he'll hear you. (This may not work for DX.)
9. Sneak into pileups. This is where full break-in keying is a godsend. After he calls QRZ?, you can try to jump in ahead of everyone else -- but when you hear that pileup of CW, stop sending. Sometimes everyone in the pileup stops to listen at the same moment. When you hear that moment, send your call quickly! (One of my great pleasures was snatching a DX station from a pileup of QRO operators in this way.)
10. Start in the low speed segments, but move to the high speed as soon as you can. The low speed segments build confidence, teach you the contest protocol, and improve your CW speed. But it can take several minutes to complete one exchange in the "slow lane" -- everyone is sending slowly and asking for repeats. If it's points you want, move to the "fast lane" as soon as you can copy the exchanges. If the contest doesn't have an official "slow lane", look for the slow stations at the high end of the contest frequency segments.
11. Sweep from one end of the contest segment to the other. You need a system, so you don't spend several minutes discovering that the station you're listening to is one you've already worked. (Duplicate contacts with the same station count ZERO!) I usually sweep from low to high frequency -- the activity is heaviest at the low end, and gradually expands higher as more stations join in.
12. Get propagation forecasts beforehand. For multiband contests, this will tell you when to switch bands. I've had good luck with the charts published monthly in QST. Better information can be had from ARRL bulletins, which usually appear on packet as well.

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13. Use an electronic keyer. Otherwise your arm will fall off.

14. Use a memory keyer. This can really take the chore out of sending your call (repeatedly), sending your half of the exchange (especially if it's complex), and (if you dare) calling CQ. I program 5 memories into my keyer: 1) VE3RHJ ...to respond to a CQ or QRZ? 2) R 5NN ON VE3RHJ ...my half of the exchange (RST & section) 3) CQ TEST DE VE3RHJ K ...for use when things are quiet! 4) 5NN ON ...to send when someone responds to my CQ 5) TU VE3RHJ TEST ...to end the contact when I'm calling CQ To illustrate how these memories are used by both stations, here's a typical CW contest QSO:

(him) (me) CQ TEST DE K8XXX VE3RHJ VE3RHJ 5NN MI R 5NN ON VE3RHJ TU K8XXX TEST

"He" uses memories 3, 4, and 5, and "I" use memories 1 and 2, in that order. If I'm not sure I have his call right, I'll send it before the "R 5NN ...". Memories #2 and #4 will change depending on the particular contest. Some contests require sending a serial number for each contact; many memory keyers can handle this automatically.

15. Use a CW filter. If you can't copy fast CW, you'll never copy it in the midst of twenty other stations. An IF filter is best, but if your rig -- like my Argonaut -- doesn't have one, even a simple audio filter can make worlds of difference. I've found that 500 Hz bandwidth is too wide; 250 Hz would probably be about right.

16. Use a tape recorder. Perhaps I shouldn't admit it, but between the pileups, the fast speed, the QRN, and my frazzled nerves, sometimes I don't copy the full exchange sent by the other guy. So I keep a tape recorder connected to my receiver and running constantly. If I miss something, but I know it was clearly audible -- maybe just a shade too fast -- I won't ask for a repeat. Instead, I'll rewind the tape and replay the QSO until I've copied everything. I've lost track of how many contacts this has saved, when the other guy didn't hang around for repeats.

17. Use a dupe sheet, even if the contest doesn't require it. A dupe (duplicate) sheet is a record of all the stations you've worked, organized by call sign. This lets you quickly find out if you have already worked a station you hear. Trust me -- after 25 QSOs you won't be able to remember any call signs you've worked! Also, most contests require dupe sheets after 100 QSOs, and if you reach 100 by accident --like I did -- you'll be glad you kept the sheet. Dupe sheet forms are often available from the contest organizer, or you can make your own.

18. Use the "official" contest log sheets. Not a requirement, but it certainly makes logging easier, since they have blanks for exactly the required information. Log sheets are usually available from the contest organizer.

SO...

Why am I still contesting? First, I need to keep up my CW proficiency: my weekends have been too busy for contests these last few months, and I feel my "fist" and "ear" slowing. Second, it validates my faith in QRP (not to mention my purchase of a QRP rig!) Third, it's exciting! I've always had a competitive spirit, and if I choose the terms, I can actually make a good showing! I placed second among Ontario QRP stations in the 1992 ARRL 160-Meter contest.

Of course, there were only two Ontario QRP stations...

THANKS TO THOSE WHO CONTRIBUTED TO FEEDBACK THIS MONTH

VE3TFQ, VE3RVG, VE3EBM, VE3RHJ AND DAN P.

AND TO ALL OTHERS WHO LIKELY WOULD HAVE GIVEN PERMISSION TO USE THEIR MATERIAL HAD THEY BEEN ASKED.

Engineer plots lightning hot spots

By Michael Smith
TORONTO STAR

Afraid of being struck by lightning?

Stay away from Walkerton; it's Ontario's hot spot.

But Metro is middling safe and remote Webeque is the province's most lightning-free zone, according to data compiled by Wasyl Janischewskyj, University of Toronto engineering professor.

In 1991, a sensor in Walkerton, northeast of London, registered more than 4,500 lightning strikes — the highest in Ontario.

The sensor in Webeque — deep in the heart of the Winisk River Provincial Park, about 360 kilometres (225 miles) north of Thunder Bay — showed just 175 hits during the year.

And Janischewskyj's "lightning map" shows the Metro area was just about in the middle — a slightly above average 1,812 lightning strikes registered on a sensor in Kleinburg.

With the aid of local power companies, Janischewskyj has installed lightning sensors across all but two

provinces, and hopes to have Alberta and British Columbia hooked up soon.

The sensors register lightning strikes within a 20-kilometre (12-mile) radius. There are 18 in Ontario and 60 so far across Canada.

An average lightning bolt has a peak energy of 30,000 amperes, Janischewskyj says, enough to light 30,000 100-watt bulbs. They would only flicker, though; the peak lasts only 2-millionths of a second.

Still, "it's definitely an energy that can cause damage," he says.

The 11-year study — now entering its fourth year of collecting data — is aimed at understanding how lightning varies from year to year and place to place.

It's not just intellectual curiosity, Janischewskyj says. The findings will be useful for fighting forest fires and for planning electric power grids.

For instance, knowing that a certain region is prone to lightning strikes could mean a fire-fighting station is built nearby, cutting the response time when fire breaks out.

Power lines are often targets for lightning strikes, he says. "If hydro-electric utilities know where power failures will occur, they can prepare for outages."

And sometimes power companies can redirect power "out of the path of lightning," avoiding millions of dollars of costs related to power failures.

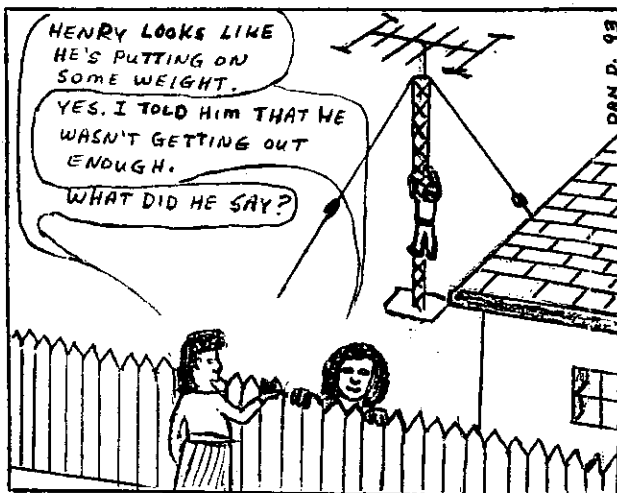
Janischewskyj has collated data for the first two years of the study, 1990 and 1991, and is still studying data for last year.

The study is intended to last 11 years because, for reasons that aren't understood, lightning is directly affected by sunspots, which vary according to an 11-year cycle.

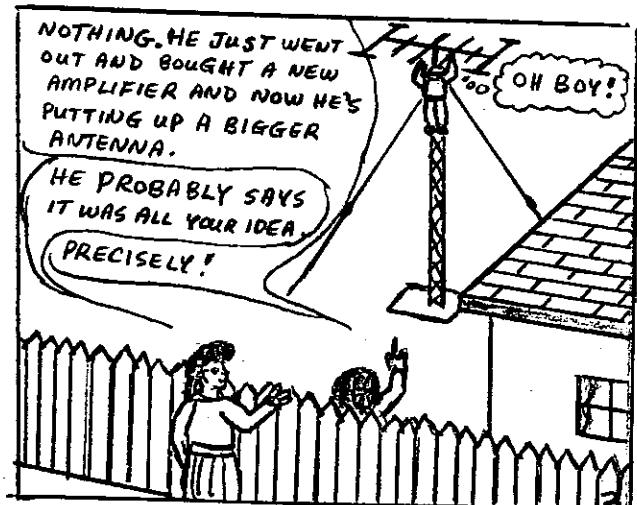
Over the next few years, Janischewskyj expects the average number of lightning strikes to rise and then drop off again as the sunspot cycle winds down.

But any particular spot could go up or down at random, he says. "These are statistical readings and they vary from year to year."

Sunday, January 31, 1993 THE TORONTO STAR



HENRY HZ.



SHORT BITS

VIA VE2QST/VE2ALE QST DE VE3VCA & VE3QST HR
**SPECIAL BULLETIN 01 CARF&CRLE001 FROM
CRRL LONDON ON FROM CARF KINGSTON ON
APRIL 09, 1993 TO ALL RADIO AMATEURS**

FCC AND DOC TALK ABOUT 220-222 MHZ IN CANADA

CANADIANS DO NOT NEED UNWISE AND UN-
NECESSARY " BAND TAKEOVERS " TO ADD TO
OUR " FREE TRADE " PROBLEMS! HOWEVER, THAT
COULD EASILY HAPPEN IF DOC ALLOWS FCC TO
INFLUENCE THE RE-ALLOCATION OF THE 220-222
MHZ BAND IN CANADA. CRRL AND CARF WANT
THIS CRUCIAL AMATEUR " EXCLUSIVE " BAND
PROTECTED FOR THE USE OUR FAST GROWING
AMATEUR POPULATION AND FOR DIGITAL
NETWORKING LINKING. A POWERFUL SERVICE
INDUSTRY LOBBY WAS BEHIND THIS SAME BANDS
SEGMENT LOSS IN THE U.S.. WE ENCOURAGE
EVERY CANADIAN AMATEUR TO WRITE TO THE
MINISTER OF COMMUNICATIONS DEMANDING THE
CANADIAN " EXCLUSIVE " AMATEUR ALLOCATION
OF THIS BAND BE MAINTAINED.

FCC TALKS WITH DOC

THE U.S. FEDERAL COMMUNICATIONS COMMIS-
SION (FCC) IS MAKING OVERTURES TO DOC TO
POSSIBLY RE-ALLOCATE THE USE OF 220-222 MHZ
PORTION OF THE 220-225 MHZ AMATEUR BAND.
WHILE IN CANADA THE BAND IS ALLOCATED ONLY
TO THE AMATEUR SERVICE ON A PRIMARY BASIS,
IN REGION 2 THE BAND IS ALLOCATED TO THE
AMATEUR, FIXED AND MOBILE SERVICES ON A
CO-PRIMARY BASIS. SPECIAL INTEREST GROUPS,
SUCH AS THE UNITED PARCEL SERVICE (UPS),
PLAYED A MAJOR ROLE IN THE LOSS OF THIS
SEGMENT TO AMERICAN AMATEURS. CARF AND
CRRL ARE TALKING TO DOC TO EMPHASIS THE
VITAL IMPORTANCE OF THIS SEGMENT FOR
AMATEUR RADIO LINKING AND NETWORKING
ACTIVITIES. THE TREMENDOUS INTEREST AND
GROWTH OF AMATEUR RADIO MAKES IT ABSO-
LUTELY CRUCIAL TO RETAIN VHF " AMATEUR
PRIMARY " SPECTRUM IN CANADA.

MAKES NO SENSE TO LIMIT AMATEUR SPECTRUM

DOC HAS BEEN FORWARD LOOKING AND
PROGRESSIVE AND PLAYED A KEY ROLE IN
FOSTERING PIONEER AMATEUR DIGITAL COM-
MUNICATIONS, IT MAKES NO SENSE FOR THE
GOVERNMENT TO PROMOTE THE GROWTH OF
AMATEUR DIGITAL EXPERIMENTATION; THEN TAKE
AWAY OPPORTUNITIES AND LIMIT FUTURE
POTENTIAL BY DIMINISHING THE AVAILABLE VHF
SPECTRUM. CANADA MUST NOT FOLLOW
HARMFUL FCC POLICY. CANADIAN AMATEURS CAN
SHARE THE SEGMENT WITH THE U.S. LAND
MOBILE SERVICE ALONG A 150 MILE INTER-
NATIONAL BORDER CORRIDOR. POSSIBLE
INTERFERENCE BETWEEN THE SERVICES ALONG
THE BORDER CAN BE EFFECTIVELY MANAGED BY
THE ADOPTION OF CO-ORDINATION PROCEDURES
SIMILAR TO THE WHICH IS CURRENTLY USED FOR
U.S./CANADIAN VHF FM REPEATER ASSIGNMENTS.

ASK FOR PROTECTION

CANADIAN AMATEURS EXPECT THEIR GOVERN-
MENT TO PROTECT THIS CRUCIAL " AMATEUR
PRIMARY " BAND SEGMENT FOR THE USE AND
ENJOYMENT OF CANADA'S FAST GROWING
POPULATION (NOW OVER 36,000). THERE IS NO
REASONABLE JUSTIFICATION TO FOLLOW THE
DEVASTATINGLY SHORTSIGHTED POLICY OF THE
FCC WHICH, IN THIS CASE, SQUANDERED
AMERICAN AMATEUR BAND " EXCLUSIVE " VHF
OPPORTUNITIES.

**CARF AND CRRL ENCOURAGE AMATEURS
FROM COAST TO COAST TO WRITE TO PERRY
BEATTY, MINISTER OF COMMUNICATIONS,
ASKING FOR HIS ASSURANCE THAT
CANADA'S VALUABLE 220-222 MHZ " AMA-
TEUR PRIMARY " BAND SEGMENT NOT BE
ALLOCATED TO COMMERCIAL USE UNDER
ANY CIRCUMSTANCES. SEND A COPY TO
YOUR MP AND TO CRRL/CARF.**

REMINDE THE MINISTER THAT AMATEUR RADIO
BAND ARE A " NATURAL RESOURCE " WHICH
MUST BE NURTURED AND PROTECTED FOR
FUTURE GENERATIONS OF CANADIANS.

THE EDITOR THE CANADIAN AMATEUR P.O.BOX
356 KINGSTON ON K7L 4W2

AR

A friend of mine was trying to tune in the Jackalope Net on 40 meters, but there was a strong heterodyne right on the net frequency. His brand-new transceiver wouldn't notch it out, no matter how hard he tried. He tweaked the knobs and cursed the radio until his wife - also a ham - came out of the kitchen and asked, "Don't you know the difference between a heterodyne and the smoke alarm?" -K00DF

The 19th Annual CENTRAL ONTARIO AMATEUR RADIO FLEAMARKET

=====
Jointly Sponsored by: Guelph Amateur Radio Club & Kitchener-Waterloo Amateur Radio Club

Date: Location: Saturday, June 5th, 1993 BINGEMAN PARK 1380 Victoria Street North Kitchener, Ontario

Time: Cost: 8:00 a.m. to 2:00 p.m. General Admission \$5.00 Vendors ONLY 6:00 a.m. (Children 12 yrs and under free) Table Rentals \$8.00 / 8 ft. space

Talk-in: Information: KSR - 146.97 ZMG - 145.21 Jack Knight VE3RGY Simplex 146.52 519-823-1358

Thanks..73 de Dick VE3WOT : CAMBRIDGE

**PARRY SOUND AMATEUR RADIO CLUB -PRESENTS
-----THE NEAR NORTH HAMFEST**

SATURDAY MAY 15, 1993 10:00 AM - 2:00 PM PARRY SOUND HIGH SCHOOL GYMNASIUM PARRY SOUND, ONTARIO IN ASSOCIATION WITH NORTH BAY, SUDBURY & MUSKOKA CLUBS

COMMERCIAL VENDORS FLEA MARKET COMPUTER HARDWARE & SOFTWARE FOOD AND REFRESHMENTS AVAILABLE, PLENTY OF FREE PARKING LOTS OF TABLES "DOOR PRIZES"

HOURS: PUBLIC: 10:00 AM - 2:00 PM TABLES \$ 5.00
PRIVATE VENDORS: 8:00 AM - 4:00 PM \$10.00
COMMERCIAL, ADMISSION: \$2.00 (14YRS AND UNDER FREE WITH AN ADULT) (ONE FREE ADMISSION PER TABLE), VENDOR REGISTRATION PRIOR TO 30 APRIL 1993 . FOR INFORMATION CALL (705) 746-9115 TALK IN FREQUENCY : 145.490 MHZ (-) VE3PSH IN CO-OPERATION WITH THE PLAYLAND AMATEUR REPEATER ASSOC.

FOR PACKET INQUIRIES CONTACT AL VE3GBY @ VE3RZX 73 DE VE3GBY

TO ALL VISITORS

WELCOME TO AMATEUR RADIO STATION _____
THIS STATION IS LICENSED BY THE FEDERAL DEPARTMENT OF COMMUNICATIONS . BEFORE YOU ASK ANY QUESTIONS, HERE ARE THE ANSWERS:

- 1) The cost of this equipment cannot be discussed here, as creates marital conflicts.
- 2) No, we cannot send a message to your uncle in Hong Kong. We suggest you call Western Union.
- 3) This is strictly a hobby; we do not have the facilities or the time to fool around with TV sets, vcr's, toasters or your wives' hair dryer. We suggest you see a service technician.
- 4) Yes, the antenna in the backyard is essential to the operation of the equipment.
- 5) The farthest station we have contacted has been in the Ubangiland.
- 6) The cards on the wall are called QSL cards. They are confirmation of contacts made with other stations.
- 7) It is technically impossible for this station's equipment to interfere with television reception, telephones or stereo systems. Any interference problems of that nature are caused by design flaws in the home-entertainment devices themselves.
- 8) An Amateur Radio station may only be operated by a highly qualified, technically skilled electronics expert. It takes dedication, training and intelligence to reach the level of competence that justifies one to be license by the Canadian Federal Government. Therefore, it is not considered inappropriate to show proper awe, respect and general obsequiousness when I discuss my hobby or operate the controls.

FURTHERMORE...IF YOU ARE GRANTED THE EXTREME HONOR OF BEING INVITED TO SPEAK INTO THE MICROPHONE, PLEASE OBSERVE THE FOLLOWING RULES:

- 1) Speak in a low and soothing tone.
- 2) Do not disagree with me in any manner.
- 3) Say no bad words and tell no off-color jokes.
- 4) It is customary for guests to make complimentary remarks about this station and its licensed operator when talking to other hams on the air.

DO NOT TOUCH ANYTHING, TURN ANY KNOBS, SIT ON EQUIPMENT, ETC. I HAVE LOST SEVERAL VISITORS BY ELECTROCUTION

**Satgen 211 Meteors and Interstellar Dust by
GM4IHJ 10th April 93**

Satgen 180 introduced the (still awaiting launch) UNAMSAT-1 . This Mexican satellite will carry store and forward digigital communications , and, a bonus for experimenters in the shape of a 40 MHz Meteor Radar. A bonus it was suggested which might reveal to us just how much if any of the meteor dust hitting the upper atmosphere had its origins in distant star systems far from our own Solar system. 31 weeks later this question posed in Satgen 180 , appears to have been amplified by some very interesting reports from Ulysees, the European Space Agencies Solar Probe. Ulysees has recently used a gravity sling shot manouevre around the giant planet Jupiter to alter its orbit out of the plane of the Solar system, and thrust it back in towards the Sun on a high inclination track which will eventually take it over the North and South Polar regions of our star. Providing us with our first views of regions which are not observable from the Earth. It is however , Ulysees's recent flip around Jupiter which has produced an unexpected surprise. Previous Jupiter probes included two Pioneer craft and two Voyager craft. But none of them carried sensitive dust and minor particle detectors, and none of them flew the inclined orbit of Ulysees, which makes it easier to distinguish the orbits and speeds of these particles. What Ulysees found in Jupiter space was quite unexpected. Not only are there particles escaping Jupiters massive gravity and escaping from the planet and its system of moons, but there are also particles travelling the opposite way to the way the planets orbit the Sun , and doing so at velocities greater than 26 Kms/sec ie the Solar system escape velocity. Material travelling through the solar system is not new. It has long been known that our solar system in riding through a stream of light elements (mostly helium) which is coming in from the constellation of Centaurus and heading out towards Cassiopeia. What is different now, is that the material encountered by Ulysees is dust (collections of millions of atoms), with small but measurable mass, moving at Solar system escape velocity. Just how much if any of this material gets in to the Earth we may discover with UNamsat-1. The problem of sorting out true particle velocity from a reading of radar doppler shift , and satellite velocity , or earth velocity, is not a simple one. But it should be solvable with the modern computers in most ham shacks. Meanwhile as a ball park figure. You can expect ordinary Solar system dust and meteors to produce doppler at 40 MHz of up to 1.4 kHz at the

most. But material on an orbit coming from far away into and through our solar system may in certain circumstances exhibit doppler shifts well above 3.4 kHz . So lets hope UNamsat -1 launches soon, and gets its radar operating . Meanwhile if you monitor 62.495 MHz or there abouts for best European TV propagation by meteor scatter Eg during the forthcoming April Lyrids peaking 21st April 93 (below horizon in our European afternoon), you might try rough guesses at the doppler you hear on some rare pings. Anything over 5 kHz might just be a dust motes of the type Ulysees encountered, ending its inter stellar travels in a fiery finish as it hits the Earth's atmosphere. 73 de GM4IHJ @ GB7SAN

The Amateur's Code

1. The Amateur is considerate....He never knowingly uses the air in such a way as to lesson the pleasure of others.
2. The Amateur is loyal....He offers his loyalty, encour-agement and support to his fellow radio amateurs, his local radio club and to the (RAC) Radio Amateurs of Canada, through which amateur radio is represented.
3. The Amateur is Progressive....He keeps his station abrest of science. It is well built and efficient. His operating practice is obove reproach.
4. The Amateur is Friendly....Slow and patient sending when requested, friendly advice and counsel to the beginner, kindly assintance, cooperation for the interests of others; these are the marks of the amateur spirit.
5. The Amateur is Balanced....Radio is his hobby. He never allows it to interfere with any of the duties he owes to his home, his job, his school or his community.
6. The Amateur is Patriotic....His knowledge and his station are always ready for the service of his country and his community.

**FOR
SALE**

VE3HIP IAN 371-5479

HONEYWELL AES COMPUTER - 2 -5 1/4" DISK DRIVES, MANUALS, SPARE KEYBOARD, SPARE DRIVE, MONO GREEN SCREEN 6"X9". SPARE DISKETTES. BUILT IN PINWHEEL PRINTER, 14" HORIZONTAL CARRIAGE WITH SPARE PRINT-WHEELS AND RIBBON CARTRIDGES. EDIT FEATURES. \$225.00 OBO FOR COMPLETE SYSTEM

VE3TWK JACK 376-3440

MISC COMMODORE- MODEL 1700 MONITORS 12" \$50 EA, MODEL 1541 DISK DRIVES \$50 EA, PRINTERS \$75 EA

VE3BFV JIM 371-1209

TAPE RECORDER- SONY 7" REEL TO REEL, PORTABLE, ALL SOLID STATE, 3 SPEED 7 1/2, 3 3/4, 1 7/8 "/SEC SELF CONTAINED POWER AMPLIFIER WITH 4 SPEAKERS, 2 DYNAMIC MICROPHONES, MINT....\$200.00 NEGOTIABLE

WANTED

VE3TSA TOM 371-9805

CARTOONS / ARTICLES FOR FEEDBACK.... I NEED SUITABLE CARTOONS AND/OR ARTICLES FOR USE IN FEEDBACK

TTL MONITOR.....I AM LOOKING FOR A TTL MONOCHROME MONITOR....MUST BE TTL BUT CAN BE AMBER OR GREEN OR PAPER WHITE

VE3HIP IAN 371-5479

TUBES 6JS6A QTY 2



TO ERR IS HUMAN

*TO REALLY FOUL THINGS UP
TAKES A COMPUTER*