Central Michigan Amateur Radio Club

THE SCOPE

Lansing Civil Defense Repeater Association

www.qsl.net/cmarc Serving Our Community Since 1927 January 1999





NEWS FLASH!

On December 4th. our President "came out"... to the CMARC meeting, as promised, wearing a Tutu.

As part of a challenge to achieve a goal of 200 members for CMARC by the Decembers meeting, Erv said he would wear a Tutu. Well as you can see - Erv kept his word.

With help from all of you, our members, Central Michigan Amateur Radio Club is over 200 members strong and still growing.

With the positive changes and growth of the Central Michigan Amateur Radio Club and the Lansing Civil Defense Repeater Association, Lansing area 'Hams' have a bright future ahead. With our Lansing area repeaters coming into the 21st century and the addition of a new 'Link' repeater to our area, and the growing interest in serving our community. Our board members form both clubs are working hard to keep our hobby alive and growing. Thank you.

Cary M. Britten-KC8JKA, Your Scope Editor



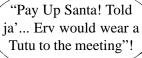














National Ham News

FCC ENFORCEMENT HONCHO DONE "TAKING NAMES"

The FCC's Riley Hollingsworth, K4ZDH, is making his list and checking it twice. And now that he knows which hams are naughty, not nice, he's ready to take enforcement actions against the most flagrant amateur offenders.

"Fully half of the amateur problems on HF relate to a specific group of jammers—malicious interferers who apparently enjoy disrupting as much amateur communication as possible," said Hollingsworth, the FCC's point man for amateur enforcement within the Compliance and Information Bureau. "Enforcement action against this group is long overdue."

Coal could be showing up in some Christmas stockings. Hollingsworth has prepared a report to his boss, CIB Chief Richard D. Lee, detailing his findings and fingering the most serious violators in a "top 10" list which he declined to make public just yet. His memo urged "immediate enforcement action."

Hollingsworth said he's talked with more than 250 people on the amateur enforcement line (202-418-1184) since the end of September, when the FCC's latest amateur enforcement initiative kicked into high gear. In addition, he has received more than four dozen letters and e-mailed comments concerning problems in the Amateur Service. Hollingsworth has concluded that, while most amateurs abide by the rules, a few habitual offenders continue to flout the law.

"We are not going to stand for the Amateur Service to be further degraded or destroyed by them," he said.

Hollingsworth says that jamming and deliberate interference is the most common problem, accounting for 31% of all complaints. Repeater misuse and jamming account for another 29%. But he considers the HF abuses—most typically reported on 75 and 20 meters—to be the more serious offenses because they can be national or international in scope. Other general problems accounted for another 17% of the complaints, Hollingsworth said. A full 10% of complaints concerned an unlicensed individual in California who already has spent time in jail for past convictions.

Hollingsworth has sent out 30 informal "warning letters" to individual operators as a result of complaints. The letters warn the recipients that a complaint has been received about the recipient or someone using his or her call sign, indicate that the allegations—if true—could jeopardize the amateur's license, and request the recipient to contact the FCC to discuss the matter.

"In almost every case the recipient has contacted us," he said. "In one case, the licensee contacted us, apologized, and reports since that time indicate that the licensee has become a model operator." Some amateurs have reported to the ARRL that amateur behavior has improved—dramatically in some areas—since word hit the street that the FCC was taking amateur enforcement seriously. For its part, the League has said it is willing, for now, not to pursue its request to further privatize amateur enforcement. Hollingsworth says the warning letters will continue, but now he's taking aim at the hard-core scofflaws within the Amateur Radio community. "We have now let everyone out there know we're back," he said. Continued violations will "guarantee" license revocations, fines, or—in extreme cases—equipment seizures.

"Church is out now," he said. "We mean business and we're strapped in and ready to ride." Hollingsworth said Amateur Radio rulebreakers "continue these violations at their own risk." *ARRL 12/11/98 Newletter*

SHORE STATION PCH SCHEDULES "FAREWELL DAY" EVENT

The longest established maritime radio service in the world—Scheveningen Radio, PCH, in the Netherlands—closes for good January 1, 1999. To mark the sad occasion, PCH will hold a "Farewell Day" special event later this month—on its 94th anniversary and has invited hams worldwide to participate. But there's a fly in the ointment for US hams!

The idea is for hams to contact either special event station PA6PCH (from the Radio Club Kennemerland station, PI4RCK), which will be active on 2 and 75 meters, or PCH itself on crossband. But that latter possibility—actually working PCH—should raise a warning flag to US hams. Lacking specific FCC authority, it's strictly illegal for US amateurs to communicate with a station operating in another radio service. Section 97.111(a)(4) in Part 97 of the FCC rules makes an exception only for Armed Forces Day contacts.

Here are the details for the PCH special event: Starting at 0800 UTC December 19, 1998, and continuing through 0800 UTC December 20, PA6PCH will operate on 75 meters, 3687 kHz, as well as on 2 meters, 144.315 MHz, SSB.

In addition, for stations whose countries authorize such operation: PCH will operate from 1500 UTC on December 19 until 0700 UTC on December 20 making crossband CW contacts with amateurs on the following PCH transmit/receive pairs (plus or minus QRM on the amateur bands): 4250/3525 kHz; 8622/7025 kHz; 12799.5/14050 kHz; 17198.9/18085 kHz.

This event has been approved by the Dutch Radiocommunications Agency for participation by hams in the Netherlands. However, it has not been approved by the FCC for participation by US amateurs, and such operation may be similarly prohibited in other countries as well.—Scheveningen Radio/PCH news release

EDUCATORS "GO THE GRANT ROUTE" TO FUND SCHOOL HAM STATIONS, PROGRAMS

Three educators have received grants to set up ham radio stations in their classrooms. The biggest grant—a whopping \$12,000—was garnered by electronics teacher Fred Usherson, N2EGQ, of Floral Park, New York. In his grant proposal to the World of Knowledge Foundation, Usherson cited the need to create an Amateur Radio program so that his Queens Vocational Technical High School students could handle emergency messages and gain marketable electronics skills. "Amateur Radio will be integrated into our electronics curriculum," he said. "I want to get all students in my classes as licensed hams."

Teacher Sarah Cowan isn't even a ham yet, but she still managed to get a \$1,500 grant through Los Alamos National Laboratory to set up an Amateur Radio station at Pajaro Middle School in Santa Cruz, California. The grant, from the US Department of Energy's Teacher Opportunities to Promote Science (TOPS) program, will allow students to learn about technology in general and radio waves in particular, study for their ham licenses, and take field trips to see scientists at work. The project is tied into scientific work at Los Alamos. Cowan's mentor there is Don Casperson, AA5PA, an ARRL Life Member who has volunteered his technical expertise. The Santa Cruz Amateur Radio Club also is assisting. Cowan says the community could benefit from having more youthful ham operators to help with emergency communications, since Pajaro is near an earthquake zone.

This year's ARRL Professional Teacher of the Year, Bob Lavin, K6BOB, of Calabasas, California, got \$3,000 from his school's parent-teacher organization earlier this year to purchase a ham radio station. He has integrated ham radio into his classes, and 30 students and teachers now hold Technician or Tech Plus tickets.

For those who wish their school had a ham radio station and activities for kids, ARRL Educational Activities Manager Rosalie White, WA1STO, offers some suggestions. "Ask around to learn who're the innovative teachers in your district, and offer a hands-on geography or science lesson," she suggests. "Or get yourself invited to help students take part in the School Club Roundup (see January QST)."

White says hams also might check with their employers or with other local industries to learn if funding for educational projects is available. "Companies prefer to see funding go toward training their potential future employees," she said. "You can also do an Internet search on foundations and grants, and read QST's 'At the Foundation' for occasional stories about school-garnered mini-grants."

Getting grant money from various sources to fund Amateur Radio activities in the school is not a new idea, but it's one White says more teachers should explore. In 1995, four different grants gave teacher Sheila Perry, NOUOP, \$155,000 for her school district. The money funded curriculum development, Amateur Radio equipment, electronic kits, a computer lab and other items.

Teachers interested in learning more about how to write grant proposals should read "A Trip Through the Teaching Universe," by Connie Dunn, KB5LES, QST, June 1995, p 44 or visit ARRLWeb, http://www.arrl.org/ead/teacher/perry.html. ARRL 12/11/98 Newsletter

Another bust coming

The FCC may be getting ready to bust yet another source of malicious interference — this time on the VHF bands. While the commission is not divulging any of its plans, rumors are circulating on the air. They indicate the Compliance and Information Bureau may soon take action against one or more hams involved in the jamming of repeater communications.

While nobody is sure as to where the next enforcement action might occur, it is known that hams in New York City, Miami and Chicago have been requesting assistance. In some localities the hams believe that they are fighting what appears to be organized repeater jamming and they want the FCC to step in to make it go away. From "Newsline"



More National Ham News

Is Malicious Interference Protected?

And as the government tightens its enforcement noose around the necks of more and ham radio rules violators, a growing number are claiming that they actually have the right under the law to harass others. They say that to try to stop them is to violate their constitutionally protected right to freely express their views.

But one expert in that area of the law says no. Jammers have no such protection under the law. Bill Burnett, KT4SB, has more: Malicious interference. Something our Elmer told us never to take part in. There was a question on our first license exam relating to this term and it's specifically defined in the rules and regulations of amateur radio. Those who participate in this illegal activity are referred to as "jammers" and as we all know, they're out there.

The FCC is cracking its amateur enforcement whip and catching some of these individuals, but "jammers" are using a common defense when they appear in court. Sandra Wolkov is a Miami attorney who specializes in this type of litigation: "It's primarily their defense would be that their right to free speech on the radio shouldn't be hampered by the government interfering with that right.

One of the problems with that is that the airwaves are public

resources. They have been mandated as a public resource. And so the government does have the right currently to regulate who and when to speak and say what on the radio via the licensing and regulatory scheme." Sandra Wolkov; Wolkov says regulating the airwaves began during the early part of this century and the sinking of the Titanic played a major role.

"Yea, that is actually and interesting issue. The very reasons for government having control of the airwaves actually originated in the early part of the century with the Titanic where amateur radio broadcasters were interfering with the Titanics signal. In fact causing, not causing but contributing to the sinking of the Titanic. And that was actually what prompted the government to take control, the emergency control of the airwaves. So that would support the governments justification for suing these people jamming the signals." Wolkov

However, was this malicious or done unknowingly? Remember...these were the early days of two-way radio communications.

In Miami, I'm Bill Burnett-KT4SB reporting. The bottom line. While its yet to be tested, claiming constitutional protection as a way of avoiding punishment for jamming others will probably not hold up in a court of law. (Newsline)

HAM RADIO HERO HONORED

Ham hero Lonnie McVaigh, KB9LUN, of Decatur, Illinois, has been honored as the latest recipient of the prestigious Samuel I. Keene Memorial Service Award from the Disaster Preparedness-Emergency Response Association. McVaigh received the award November 19. It carries a \$1000 honorarium,

McVaigh was seriously injured while on storm-spotter duty. "Instead of simply reporting the location and movement of the funnel

cloud that threatened Decatur on April 19, 1996, Mr. McVaigh warned people to get off the street and into shelters as the tornado bore down on them," a DERA statement said. As time ran out, McVaigh took refuge with a family in their basement as the twister hit their house. He was seriously injured when the storm toppled the chimney into the basement.

McVaigh's wife, Melissa, KB9MDF, had stayed in contact with him via Amateur Radio as the storm hit. As a result, she was able to alert the rescue squad, which promptly located McVaigh and got him to the hospital.

McVaigh suffered a broken pelvis and nerve damage in his legs. He has had to endure several operations and a lengthy and difficult rehabilitation program. Because of his injuries, McVaigh can no longer work at his job and has had to rely on public assistance, Social Security, and help from friends and his church. The McVaighs have three children of their own plus five foster children. His slow recovery continues.

DERA Executive Director Bascombe "Jay" Wilson, WOAIR, said the organization picked McVaigh from among candidates representing every continent. "The heroism and continued courage of Lonnie McVaigh serve as an inspiration for us all," Wilson said. *ARRL Newsletter 12/11/98*



Lonnie McVaigh, KB9LUN (right), receives the 1998 Samuel I. Keene Memorial Award for Heroic Disaster Service from DERA trustee Steve Keene, Samuel Keene's brother. "Lonnie McVaigh represents the courage, commitment, and dedication for which this award was intended," said Steve Keene. [DERA photo]

More National Ham News

LEAGUE FILES "RESTRUCTURING" COMMENTS WITH FCC

The ARRL has filed formal comments in response to the FCC's proposed streamlining of the Amateur Radio rules. The League delivered its comments to the FCC December 1, the final day for comments in the FCC's Notice of Proposed Rulemaking in WT Docket 98-143.

The League's filing promotes the ARRL Board of Directors' restructuring positions, adopted last July and fine-tuned at a special meeting in October. It also takes the FCC to task on a few points. The ARRL said the FCC's NPRM failed to contain "a comprehensive license restructuring proposal or even an overall review of license restructuring" and generally "missed the mark."

The League called on the FCC to adopt the ARRL Board's restructuring plans as the centerpiece of its streamlining efforts. Among other things, the League plan calls for eliminating the Novice and Tech Plus licenses to reduce the number of license classes from six to four. The ARRL plan automatically upgrades current Novice and Tech Plus licensees to General. The General license would become the entry-level ticket to HF. Existing Novice and Tech Plus HF CW bands would be "refarmed" to provide additional phone spectrum for General, Advanced, and Extra class licensees.

The FCC also proposed a four-tier license structure, eliminating the Novice ticket and melding existing Technician and Tech Plus licensees into a common database while allowing current Novices and Tech Pluses to retain their current operating privileges. The ARRL said the FCC was on "the right track" in proposing to eliminate the Novice ticket. But the League said its "instant upgrade" plan for Novice and Tech Plus operators is a better approach because it permits "refarming" the underutilized Novice HF subbands. The League called refarming "critical to any comprehensive license restructuring proposal."

The FCC's NPRM sought comments on the issue of Morse code testing and requirements but offered no specific proposals. The ARRL called for a reduction in the number of Morse code examination tiers from three to two—5 and 12 WPM—and changes in the written examinations to make them more relevant and with greater emphasis on current operating prac-

tices and newer digital technologies. The League also recommended that the number of written exam questions "increase incrementally" for all license classes above Technician.

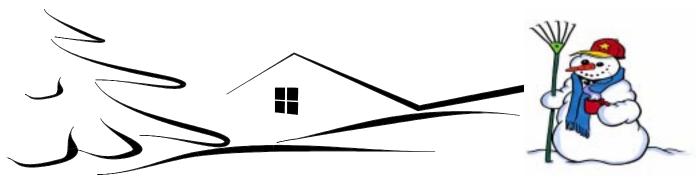
The League said that Morse code should not be overemphasized in the licensing process, but should be continued as a licensing requirement above the entry level. It has proposed that General class applicants pass a 5 WPM code test, while Advanced and Extra applicants pass the 12 WPM code test. Subsequent to release of its original restructuring plan, the ARRL Board also decided to ask the FCC to permit Technician operators to use Morse code on the General class HF CW segments without passing a specific code examination.

The ARRL said acknowledged abuses of the CW disability exemption process were an enforcement, not a testing, issue. For those claiming a disability waiver for the higher-speed CW test, the League urged testing accommodations as a preferable alternative. The League also urged an end to multiple-choice CW exams and rules specifying that a passing grade for a Morse examination be either 70 percent correct answers to 10 fill-in questions or one minute out of five of solid copy.

The League also praised the "new dawn" in amateur enforcement undertaken within the Compliance and Information Bureau by Riley Hollingsworth, K4ZDH. The ARRL suggested that it would be "reasonable to withhold any further [rulemaking] action on amateur enforcement" for now and let the CIB continue its work.

The ARRL's comments stressed the value of increasing participation in the hobby and making it available to more people. "By increased participation, Amateur Radio can provide even more service to the United States than it does currently, with a simpler licensing structure," the League asserted.

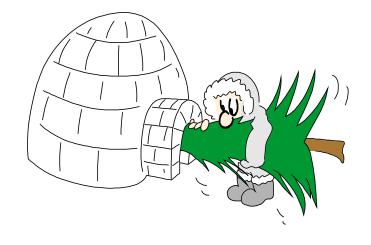
A complete copy of the ARRL's comments in WT Docket 98-143 is available on ARRLWeb at http://www.arrl.org/news/restructuring/ (see "ARRL's Comments to the FCC on WT Docket 98-143"). Reply comments on the FCC's rulemaking proposals are due January 15, 1999. The FCC is not expected to take action on restructuring at least until sometime next spring. *ARRL Newsletter* 12/11/98



IN BRIEF:

- * This weekend on the radio: The ARRL 10-Meter Contest and the Great Colorado Snowshoe Run are the weekend of December 12-13. Just ahead: The Croatian CW Contest is December 19-20; the Stew Perry Topband Distance Challenge and the RAC Winter Contest are December 26-27.
- * Vanity update: The FCC in Gettysburg reports it has processed vanity call sign applications received through November 20. In the most recent run, December 9, the FCC granted 213 applications while another 187 landed in the work-in-process (WIPs) stack for further processing.—FCC
- * Mary Lou Brown, NM7N, memorial service set: A brief memorial service for the late ARRL Northwestern Division Director Mary Lou Brown, NM7N, will be held Thursday, December 17, at 2 PM PST, at Guemes Island Road Community Church. Among those expressing sadness at the sudden death of Director Brown on December 3 was Radio Amateurs of Canada President J. Farrell "Hoppy" Hopwood, VE7RD, who called her "a special friend of Radio Amateurs of Canada" who was "always most generous in assisting RAC."—thanks to W7AGQ and VE7RD
- * Sugrue named Wireless chief: Thomas J. Sugrue has been named chief of the FCC's Wireless Telecommunications Bureau, effective January 19. The WTB oversees Amateur Radio at the FCC. A communications lawyer in private practice since 1995, Sugrue has previous FCC experience as chief of the Policy and Program Planning Division in the FCC's Common Carrier Bureau and as special council for competitive policies. He later spent six years as deputy assistant secretary of Commerce in the National Telecommunications and Information Administration and twice served as acting NTIA administrator. Sugrue replaces Dan Phythyon as WTB chief. He's a graduate of Harvard Law School and also holds a master's in public policy from Harvard and a BS in physics from Boston College.—FCC
- * CW in the cinema: Several ham-moviegoers have alerted ARRL HQ that the movie "Enemy of the State" contains a snatch of CW. In scenes depicting a spy satellite, the sound track includes a little Morse code: The satellite calls CQ! "As though pictures were sent from satellites by Morse," said Tom Bradbury, NU4G, who saw the movie in November with his daughter, Elizabeth, KE4IWN. "I broke out laughing, no doubt to the puzzlement of those around me," he said. "Somewhere in moviedom is a chuckling ham, I guess." Steve Kaufman, VE2SKA/KB2SPH, says that characters in the movie also use what appears to be a Yaesu HF transceiver to break into police frequencies. "The frequency shown is in the 40-meter band," he says, "but they do speak to the police dispatcher." The movie stars Will Smith and Gene Hackman.—thanks to

- Daniel Coates, N9XJF, Steve Kaufman, VE2SKA/KB2SPH, and Tom Bradbury, NU4G
- *Strange signal: ARRL HQ received a number of complaints during November—mostly from hams in Maine—about a very strong pulse-type signal between 3910-3950 kHz. The signal, which was S9+ at W1AW, was reported to the FCC, which listened for it for more than two weeks from their monitoring facility in Columbia, Maryland. The FCC also heard the pulse-type interference faintly on several days, but only well enough to determine the signal was coming from the north. The FCC heard nothing from November 28 to December 6 and then closed the case. The ARRL has not received any more complaints, but the FCC said it would be glad to reopen the case if the interference resurfaces.—thanks to John Hennessee, N1KB
- * Sputnik telemetry software: Hank Riley, N1LTV, has written a compact Windows-based program called Sputnik Telemetry Assistant that interprets audio frequencies measured from the Sputnik-41 transmissions and uses it to calculate the satellite's onboard temperature. The program is only 8 kB and runs under Windows 3.x and higher. See the High Altitude Balloon Launch Information Center Web site, http://www.geocities.com/capecanaveral/3161/hablic.htm and look for it in the "Download Special" section near the end of the home page. Riley welcomes comments at h1riley@umassd.edu.—AMSAT News Service
- * ARRL Members Only Web Site a hit: Since it went on-line earlier this fall, the ARRL Members Only Web Site (http://www.arrl.org/members/) has topped the 30,000 mark for members registered to use it. During the last 10 days of November, nearly 7000 members visited the Web site. The site provides access to The ARRLWeb Extra, a new Web publication that contains current news and Amateur Radio features, as well as to past QST product reviews and other services and information. ARRL members also may sign up for free e-mail delivery of The ARRL Letter and W1AW bulletins and update their name, address, and call sign information with the League via the Members Only Web Site. *ARRL Newsletter* 12/11/98



Local & Special Interest News

SOLAR UPDATE

Propagation prognosticator Tad Cook, K7VVV Seattle, Washington, reports: Solar activity was lower this week, with both average solar flux and sunspot numbers down about 10 points each when compared to the previous week. Average solar flux for the previous 90 days was 131, and solar flux was above this value on every day, indicating a good general upward trend.

Solar flux peaked at 162 on December 8, and the trend now is downward. For the ARRL 10-Meter Contest, look for a solar flux of 132, 128 and 122 December 11-13. Geomagnetic indices should be unsettled to active, with the planetary A index peaking around 15 on December 12.

It would be nice to have a higher solar flux for the ARRL 10-Meter Contest, but contesters can look forward to much better conditions than last year. Last year the Friday through Sunday solar flux for the 1997 ARRL 10-Meter Contest was 92.5, 89.3 and 90. This just wasn't enough for good propagation over most paths. Just plug the numbers into any popular propagation prediction program, and the predicted numbers for this weekend look great in comparison.

The general trend in solar activity has been up this year. Take a look at the chart at http://www.dxlc.com/solar/ or at http://www.wm7d.net/hamradio/solar and see the general upward trend. Beyond this weekend look for solar flux to drop to 120 or lower by December 16, then rise above 130 three days later and above 140 by December 22. Flux values are expected to peak above 150 around December 27.

NASA released an interesting story this week about solar wind squeezing ions out of the ionosphere. See the press release and images at http://www-spof.gsfc.nasa.gov/istp/news/9812.

Sunspot numbers for December 3 through 9 were 136, 109, 91, 106, 143, 158, and 132 with a mean of 125. The 10.7-cm flux was 153.1, 148.2, 142.4, 142.3, 153.2, 162, and 153.9, with a mean of 150.7. The estimated planetary A indices were 7, 7, 12, 7, 6, 5 and 5, with a mean of 7.

Here are some path projections for the ARRL 10-Meter Contest this weekend:

Look for Europe from the East Coast around 1530-1700 UTC, South America with strong signals around 1430-1930 UTC, South Pacific around 1800-2200 UTC, Hawaii around 1800-2030 UTC, and the West Coast from 1800-1930

UTC.

From the Central USA, look for Europe around 1600 UTC, South America from 1500-2100 UTC, South Pacific at 1730-2330 UTC, Hawaii from 1800-2300 UTC, Japan around 2200-2300 UTC, the East Coast around 1800-2000 UTC and the West Coast from 1700-2100 UTC.

From the West Coast, check South America around 1530-2330 UTC, South Pacific around 1830-0030 UTC, Hawaii around 2000-2100 UTC, and Japan around 2230-0000 UTC. *ARRL Newsletter 12/11/98*

The Antennas and Lines Instillation Story at WILX-TV in Onondaga

Or, in other terms, how installation went for the new 145.47 Mhz link repeater site at Onondaga, 6 miles West of Leslie, Michigan!

I've checked out the key for the transmitter building at the site, eight times since October 30, when Bob Benko and I opened the gate and Bob cut down the trees with his chain saw that has been growing inside for several years. Thanks Bob! That's N8TNT. The night before, Bill Mathews-KB8TTs and I drove the 7/8" heliax out to the site, with the help of Bill's pick-up truck. Thanks Bill!

And thanks to all who helped on the three days that we climbed. Bob-N8TNT came out whenever he could. Also we had ground crew help from Don Rickered-W8BQD, Mark Austin-N8VZR, Dennis Boone-KB8ZQZ, Roger Young-KC8CGH, Brent Kleinfelder-Boy Observer, Bob Strobel-KB8DQQ, Ken from St. Johns-KB8PHX, Brent Williams-KB8TRL.

I wrote down the names of those who helped, somewhere, so if I missed you, I apologize for the abscense of your name! I was at the site twice to see to it that holes were drilled in the concrete floor for the heliax. The first time we were able to work, it rained until early in the afternoon, this was November 8th. However it let up enough in the afternoon for Glen Walker, our insured and bonded tower

climber to hoist the 35' antenna to the 570 foot level, installing the antenna on the East leg of the tower, to give exposure to the North, East and South. We want to protect Benton Harbor as there is another link repeater there on 145.57 (with 100Hz PL). Checking out the antenna after installation showed it working very well; any repeater in The lower Michigan area were able to bring up with HT, no problem! It was too late for us to try and hoist the control antennas this day November 8th. The next time we showed up to mount antennas was Nevember 22nd, however high winds prevented us from doing any work, as with wind was out of the Northwest was blowing our line right out over the 14 KV power lines! No thanks! Thank you! So we were able to finish the job on November 28th when temperature was in the fifties, with very little wind. What a

Abe and I on December 6th, tried out the main antenna at the 570 foot level with a two meter filter in front of a FT50rd HT, to check for any co-channel (that's other users on 145.57 Mhz) and it checked out as very useful indeed. Abe used the filter to take out the NOAH transmitter at 162.40 which runs 500 watts out and would have swamped the HT.

beautiful day and the control antennas

were secured at around the 400 foot level

and checked out beautifully!

Thanks again to all who helped! Respectfully,

Dan Harger-W8BCI

P.S. Happy and Joyous Season to all from Marlene and I



From The CMARC Prez:

Recently, a Minnesota newspaper published an "unbiased" view of the Amateur Radio hobby, painting a rather unfavorable view of it. Pardon my jaded view of big business, but how can we trust a newspaper of all things, to provide an unbiased view of anything involving a hobby it actually knows little about? They're clearly not unbiased in any way. Oh, they made good use of some slanted, readily available data, citing an aging group of Hams (now averaging 60 years of age) and the over-abundance of infighting over use of the Morse Code, but what does this publication really know about Amateur Radio? Perhaps this newspaper was right in some of its observations (especially the infighting part), but here in Lansing, Michigan, we are turning the tide, as it were.

The Central Michigan Amateur Radio Club has posted an increase in its membership, somewhat due to the fact that we are not afraid to do something "outrageous" to stir up interest in our hobby. In fact, as I enter my second term as President, I do so with renewed hope for a very productive 1999. I am also honored to be on the CMARC Board, with my colleagues, as we enter the new millennium, so this is a double shot of good fortune for us.

"The 1998 Tutu Incident" allowed me to enjoy seeing our Club at its finest. I'm proud to be a part of CMARC, but there is something more than simple pride here. I am pleased to see an interest by newer, younger Amateurs (our future Amateur Radio leaders) and it is not out of the question to think we could see 300 members in our ranks, by 2000. What a goal! What an opportunity! Why not? We can show the Ham community what the Central Michigan Amateur Radio Club is all about. We have a chance to prove this hobby is not on the ropes, but rebounding in grand fashion-and we can be on the leading edge of this movement. Why can't we make the pages of QST? Why can't we be leaders in this effort and give The Central Michigan Amateur Radio Club of Lansing, Michigan the credit it deserves? The next question is, "how?"

I think I have a couple of the answers, thanks to some resourceful members who've bent my ear these last 12 months. These suggestions come free of charge and they are easy to complete. All we need is a couple volunteers....NEW volunteers....and it's a done deal. Now is that easy, or what? And, based on my observations, the new volunteers are already here, waiting in the wings...waiting for "their turn" and chompin' at the bit to make their mark.

The first idea is a monthly (or even bi-weekly) get together with some new Amateur Ops, held in the homes of our new Hams and those of our volunteers, perhaps on a Saturday. It would entail 2-4 hours per month and the topics you could cover could be such things as antenna construction, foxhunting, small electronic projects, etc. Additionally, you might consider a preparatory class for prospective Amateurs, covering theory and, yes, maybe even the 5wpm code requirement. Talk about opening all kinds of doors for new membership. It is my understanding that many clubs around us have seen 20-30 new people show up for the classes. This alone is reason enough to get a class together, isn't it? The only limit is your imagination. You could even make an occasional "Shack Attack" part of your plans. It's my hope that this one can become reality in early 1999.

Next, how about considering (as we are currently) a regional meeting of Club Presidents, Vice Presidents and Board members, for the express purpose of discussing ideas like these. You know the old saying, "Two heads are better than one". You can get several Clubs together and, at the same time, garner some potentially valuable ideas, designed to "create excitement" among your members. We hope to make this a quarterly meeting, but as with all things, it will depend upon participation. We cannot afford to drive a dying horse...but can it hurt to TRY?

Finally, we at The Central Michigan Amateur Radio Club are getting out and recruiting licensed Hams who are not already affiliated with our Clubs. We have a comprehensive list of Amateurs in the Greater Lansing area and we are preparing a mailing for them, inviting them to a CMARC and LCDRA meeting. The numbers are staggering! It is our hope that we can see a good response from them in the coming months and, ultimately, add to our membership.

Well, there ya have it. A few good ideas and a ton more where that came from. And we haven't even scratched the surface with the youth of our Club yet! The Central Michigan Amateur Radio Club CAN lead the charge and get Amateurs excited again. We have such diversity at our fingertips that it boggles the mind. From the code to the myriad of digital choices and everywhere between, there is NO chance that even a Technician could fully explore his or her privileges fully. And, as the 20th century draws to a close, we have to offer something more than just a repeater if we are to survive. I believe we have what it takes, how about you?

Central Michigan Amateur Radio Club Treasurer's Report

Account Balances as of December 4, 1998

ASSETS:

Cash & Bank Accounts

Mich. Nat'l Bank Checking
USPS Postal Deposit

TOTAL Cash & Bank Accounts

\$431.43

\$138.71

TOTAL Cash & Bank Accounts

Other Assets

Comerica Bank CD \$1,232.34

TOTAL ASSETS:

\$1,802.48

LIABILITIES:

\$0.00

TOTAL NET WORTH:

\$1.802.48

Income & Expenses: Nov. 6th - Dec. 4th, 1998

INCOME

Coffee Fund \$14.65
Dues \$75.00
Sale of Directories \$14.50
TOTAL INCOME: \$104.15

EXPENSES:

SCOPE Mailing (2 months) \$108.85 C. Britten - Supplies \$27.55 Service Charge \$0.00

TOTAL EXPENSES \$136.40 TOTAL NET INCOME (\$32.25)

> Respectfully Submitted, Joseph Denomme-N8VYS, Treasurer

CMARC Board Meeting December 4, 1998

Pres. Erv/W8ERV brought the meeting to order at 7:39 p.m. All Board members were present except for Jaymes/KC8DJH, who was excused. Also present were Don/WB8NUS and Don/W8BQD.

The only item for discussion was the Special Board meeting that was held on Sun., Nov. 22, 1998. Dave/N8WTH made the statement that this Special Board meeting was not held in accordance with CMARC's ByLaws. He went on to say that Article VI, Section 7 had been violated because when the Board members were asked to attend, not all were told why the Special meeting was being called. He made the following motion which was submitted for entry into the permanent record:

"Central Michigan Amateur Radio Club"

BYLAWS (excerpt)

ARTICLE VI - Board of Directors

Section 7 - Special Board meetings may be held at the call of the President, or two (2) members of the Board, providing notice of the time, place and purpose of the meeting is given to **each member** of the Board.

Regarding the Special Board Meeting held on Sunday, Nov. 22, 1998; the following provision of the CMARC Constitutional BYLAWS, Article VI, Section 7 was violated:

The accurate and truthful primary **PURPOSE OF THE MEETING**; that being an incident pursuant to ongoing negotiations between the Central Michigan Amateur Radio Club and the Ingham County Sheriff Department was **NOT GIVEN TO EACH MEMBER OF THE BOARD**.

Based on this fact, it is hereby moved that the Board declare the Special Board meeting of Nov. 22, 1998 to be in violation of Article VI, Section 7 of the ByLaws of the Central Michigan Amateur Radio Club and is thereby declared null and void, and all written and taped minutes including any and all other documents related to actions taken at the meeting shall be destroyed and not entered into permanent record.

The action taken under this motion will, if seconded, require a roll call vote to be taken and recorded by the Board Secretary. Furthermore, this entire motion, including the ByLaws excerpt referenced above, shall be recorded verbatim in the Board minutes and printed in the next issue of the Scope. The roll call vote will be reproduced in the minutes as recorded by the Sec. Respectfully, David S. Humphreys/N8WTH."

Dave asked for a second to his motion and reiterated that by seconding the motion, we were just agreeing that the Special Board meeting of Nov. 22 was unconstitutional, only because all Board members were not told prior to the meeting the purpose for which it was called. Dave also stated that he was aware that we still have things to work out (regarding the original purpose for calling the Special Board meeting). The motion was then seconded by Joe/N8VYS. Dave asked for a Roll Call vote per Robert's Rules of Order. Pres. Erv said a "yes" vote only meant approval of the motion and acceptance for its reprinting in the Scope. The Secretary read the Roll: Pres. W8ERV - Yes: V. Pres. KC8EHR - Yes: Treas. N8VYS -Yes; Sec. KB8ZXR - Yes; Dir. KB8RAD - Yes; Dir. N8WTH - Yes; Under 22 - excused absence. The motion was passed. We briefly discussed the problem that had made a Special Board meeting necessary in the first place and were told that the problem would not occur again. We also decided that as a Board, we will handle things differently when and if a similar problem arises in the future. It was agreed that the matter be dropped and to proceed with the more pressing events at hand such as the elections, Christmas party and the unveiling of President Erv in his TUTU!!!

A motion was made by Don/KB8RAD to adjourn. It was seconded by Dave/N8WTH and approved. The Board meeting adjourned at 8:08 p.m.



CMARC Meeting Dec. 4, 1998

V. Pres. Clint/KC8EHR brought the meeting to order at 8:15 p.m. with 80 in attendance. There were 58 members and 22 visitors which made this the best turnout in the past 3 years.

Our visitors were: Davidson Russell; Paul Gundersen; Scott and Deborah Terry and their three girls - Amber, Tiffany and Misty; Buddy and Gretchen Wasper and daughter Cassi; Ted and Darlena/KB8YYM McDaniel; Laurie, Amanda, and 7-week old baby Michelle "Mickey" Bates (the Prez's wife and two daughters); Margaret Mathews (Bill/KB8TTS's wife); Jim Hill/KC8ALI; Jim/W8NBC and wife Dolly/N8DOL; Joe/KC8GTZ; Gene/KC8HTF; and last but certainly not least, Jeff/KB8SXK. NEW LICENSES, UPGRADES: There were none. VANITY CALLS: Mike Shanblatt who was KC8JZV is now

CARDS AND FLOWERS REPORT: The Sec. sent Hal/WA8LAY a "get well" card as he recently had back surgery. **ANNOUNCEMENTS:** Currin/W8FSZ told us that a dear member, George Wood/K8GHX, was having open-heart surgery on Monday, Dec. 7th. Our prayers and thoughts will be with him.

K8MAS.

The next CMARC meeting will be on Friday, Jan. 8, 1999. Hope to see you there!

OLD BUSINESS: Pam/KB8PSF reported that December's QST listed Field Day results, and CMARC came out pretty well. Our W8MAA station operated under 3-Alpha this year and we placed 81 out of 333. We were in the top quarter of the 3-Alpha category, and placed second in Michigan!

A motion was made by Currin/W8FSZ to accept the Secretary's report as written in the Scope. It was seconded by Troy/KA8BMM and approved. A motion was made by Currin to accept the Treasurer's reports as written in the Scope. It was seconded by Cary/KC8JKA and approved.

Cary then made a motion to postpone the rest of the regular business meeting (until after the "floor show" -Sec.). It was seconded and unanimously (and loudly) approved by all with shouts of "We want Erv, we want Erv"! It was finally time for Pres. Erv to fulfill his July 23rd promise of wearing a tutu if we had 200 members by the November meeting.

Then from the hallway, to the music of "Love Machine" and "Play That Funky Music White Boy", came the biggest "BUMBLE BEE" you have ever seen! The room then went wild with whistles, laughter, and clapping as Erv came into the room. He was wearing a yellow T-shirt that had 3 wide black stripes along the bottom edge and a black tutu that had little pig (i.e. "ham") shaped confetti all over the top layer. He also wore wings, and protruding from his backside was a big black stinger!! To "top" it all off, on his balding head he wore a head band with wobbly antennae that bobbed to and fro as he "buzzed" around the room and pollinated the audience with a little bag of glitter. Everyone loved it and two people even stuffed dollar bills into Erv's tutu.

Many people were taking pictures and video, which along with

audio recordings were being made for posterity. The Secretary announced that Bill Pasternak from Amatuer Radio Newsline was anxiously awaiting his audio copy of the event. He said it will appear on the program which airs Christmas week, starting Monday, December 21st.

Erv thanked Kim Carpenter for her truly outstanding job in making his Bumble Bee tutu ensemble and also thanked the membership for topping the 200 member goal.

He also threatened that next year, if we don't have 300 by November, he's coming nude!! Let's get busy working on

The CMARC Board

The SCOPE is published by the CENTRAL MICHIGAN AMA-TEUR RADIO CLUB in association with the LANSING CIVIL DEFENSE REPEATER ASSOCIATION.

Our CMARC Officers:

Pres: Jim "Erv" Bates-W8ERV ph: (517) 676-2710
Vice Pres: Clint Hannahs-KC8EHR ph: (517) 882-1799
Sec: Julie McLain-KB8ZXR ph: (517) 694-0812
Treasurer: Joe Denomme-N8VYS ph: (517) 589-5263
Dir: Don McLain-KB8RAD ph: (517) 694-0812
Dir: Dave Humphreys-N8WTH ph: (517) 626-2221
Under 22: Jaymes Kenyon-KC8DJH ph: (517) 646-0558
Cards & Flowers Chmn.: Rowena Elrod-KA8OBS ph: (517) 482-9650

Membership Chmn.: John Ingraham-NG8L

Meetings: 1st. Friday of every month at the Red Cross, Lansing Chapter, 1800 E. Grand River at 8pm.

Club Calls: W8MAA & W8PLP

QSL & Awards Mgr.: Don DeFeyter-KC8CY Scope Editor: Cary M. Britten-KC8JKA email: KC8JKA@att.net; ph: (517) 482-8048 Deadline for articles: 15th. of month.

The LCDRA Board

Our LCDRA Officers:

Pres: Clint Hannahs-KC8EHR ph: (517) 882-1799
Vice Pres: Don Rickerd-W8BQD ph: (517) 339-8496
Sec: Julie McLain-KB8ZXR ph: (517) 694-0812
Treasurer: Don Tillitson-WB8NUS ph: (517) 321-2004
Dir: Hal Bell-W8LAY ph: (517) 484-0962
Dir: Don McLain-KB8RAD ph: (517) 694-0812
Repeater Trustee: Dennis Boone-KB8ZQZ
LCDRA Call: WB8CQM
Meetings: Bi-Monthly on the 3rd. Thursday at 7:30pm. at the Meridian Township Service Center, 2100 Gaylord C.

getting some more members to prevent this from happening... PLEASE!!

Smith Court: Okemos

NEW BUSINESS: Pam/KB8PSF announced that the Red Cross was in desperate need of financial assistance due to a year of some pretty severe weather. She said if you're interested in contributing, you can send your checks to the American Red Cross and earmark them for the "Mid-Michigan" or "Hurricane" Disaster Funds.

A. C. Stoddard/W8KLN brought in some old unassembled Heathkit equipment that he wanted to give to a good home. His only stipulation was that the new owner had to have it put together in three months and contact him on it, and that it couldn't be sold. He asked for a show of hands of those interested and talked with them during the break about it.

"KA80BS Memorial Extra Mile Awards": Pres. Erv passed out eight awards which went to: Jane/KC8FSK; Mary Lou Tillitson; Dan/W8BCI; Jaymes/KC8DJH; Clint/KC8EHR; Dave/N8WTH; Julie/KB8ZXR and Kim Carpenter.

NOMINATIONS AND ELECTIONS: A review of the November nominations showed that Don McLain/KB8RAD, Bill Mathews/KB8TTS, and Clint Hannahs/KC8EHR had been nominated for the three 2-year Director positions. Clint had said that since he was LCDRA'S President, he would rather not be elected to CMARC's Board, however, he'd still run if no

CMARC Meeting Con't

one else would.) For the Under 22 position, the nominees were Samuel Russell/KC8HGG and Judd Gundersen/KC8IRG.

Julie/KB8ZXR made a motion to open the floor for further nominations. It was seconded by Bill/KB8TTS and approved. Erv nominated John Crawford/N8LLC. Since there were no other nominations, Currin made a motion to close the nominations and get on with the election. It was seconded by Bernie/N8PVZ and approved. The ballots were passed out for the election, and were later collected so that Don/WB8NUS, Don/W8BQD and Don/N8XME could count them.

The new Directors for the next 2-years will be: Bill/KB8TTS, Don/KB8RAD, and John/N8LLC. The 1-year Under 22 position will now be filled by Judd/KC8IRG. Erv congratulated all those participating in the election and gave a special "Thank You" to Samuel/KC8HGG who also ran for the Under 22 position. A motion was made by Pam/KB8PSF to destroy the ballots. It was seconded by Chuck/W8CLK and approved.

At the break, all Board members (old and new) met to decide what offices they would hold. For 1999 the new Board is as follows: Pres.-Erv/W8ERV; V. Pres.-John/N8LLC; Treas.-Bill/KB8TTS; Sec.-Julie/KB8ZXR; Dir.-Don/KB8RAD; Dir.-Joe/N8VYS; and Under 22-Judd/KC8IRG. Judd also said he would be interested in having Samuel/KC8HGG (who also ran) assist him in his new position on a volunteer basis.

DRAWING WINNERS: Charlie Stahl/N8DWI; Kim Carpenter; Jim Crisp/WB8VIC; Mary Lou Tillitson; Margaret Mathews; Dave Wenger/K8HD; Rod Ball/KC8HGF; Joe Oranchak/WA4KPQ; and A.C. Stoddard/W8KLN all won prizes. (Everyone attending received a free drawing ticket.)

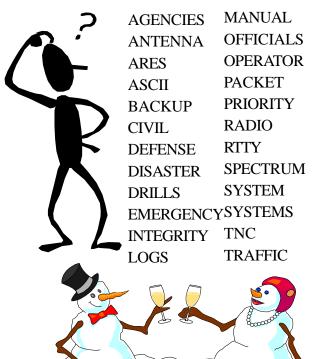
We took a nice long break during which we ate delicious food: homemade cookies, brownies, rice-crispy treats, veggies and dip, cheese ball with crackers; summer sausage and cheese, and some wonderful Divinity fudge made by Randy Stortz/KC8IHV and his Mother, who is 92 years young. Everyone was enjoying visiting with each other and at last a motion was made to adjourn. It was seconded and approved. Best wishes were made for Happy Holidays and a Good New Year. With that the December Election/TUTU party of 1998 came to a close at 10:32 p.m.

Julie McLain/KB8ZXR-Secretary

ANTENNA WORDS

BY WA8LAY

Word list



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"Events & Things To Remember"

Lansing V.E. Test Dates

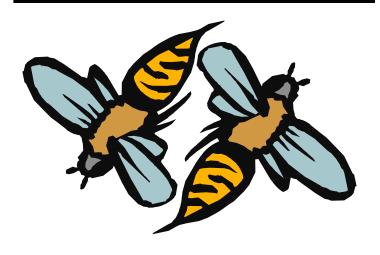
Larry Nordeen our new *CMARC* V.E. Coordinator
At the Lansing America Red Cross, in the Kropschot Room
Pre-registration starts at 9:30am and testing starts at 10:00am for the following dates: Jan 9,
Mar 13 and May 8, 1999

Contact Joe Denommee-N8VYS at (517) 589-5263

January 8th will be the CMARC meeting due to New Years.

April 9th will be the CMARC meeting due to Good Friday, this will also be a Skywarn Meeting.

March 28, 1999 thorough April 3, 1999 is Severe Weather Week



Corunna VE Testing

On the 4th Thursday of the month at the Red Cross in Corunna, MI (except for July, Nov. & Dec.) Call in frequency is 147.020 +

1999 CMARC MEETING DATES

January 8th, Febuary 5th, March 5th, April 9th - Sky Warn Class, May 7th - No meeting at the Red Cross. As usual, we will be holding the Ladies Night/Awards Banquet. June 4th - Field Day discussion, July 9th, August 6th, September 10th, October 1st, November 5th - Nominations, December 3rd - Election of officers

1999 Schedule of Events

ARRL Straight Key Night Thurs, Dec. 31, 7pm to Fri, Jan 1, 7pm This is a friendly meeting on the air using straight keys (Not a contest). Use SKN instead of RST. See December 1998 QST or CQ for rules.

1999 ARRL RTTY Roundup Sat, Jan 2, 1pm to Sun, Jan 3, 7pm (Jan 2, 1800 UTC to Jan 3, 2400 UTC) To make worldwide contact with other amateurs using digital modes Baudot RTTY, ASCII, AMTOR, and packet on 80, 40, 20, 15, & 10 meter bands. See December 1998 QST for rules.

CMARC Meeting Fri, Jan 8, 1999 at 8pm at the American Red Cross Building Grand River Ave, Lansing, MI 2nd Floor, A/B Room

South Bend Hamfest & Computer Expo Sun, Jan 10th, 1999 8am-3pm The Century Center, South Bend, IN US 33 North at Jefferson Blvd. TI 146.640 (100hz.pl)

1999 VHF Sweepstakes Sat, Jan 23, 2pm to Sun, Jan 24, 11pm (Jan 23, 2200 UTC to Jan, 23, 1900 UTC to Jan, 25 0400 UTC) To work as many grid squares as possible using frequencies above 50 MHz. See December 1998 QT for rules.

1999 CQ World-Wide 160 Meter DX Contest (CW) Fri, Jan, 29 5pm to Sun, Jan 31, 11am)Jan 29, 2200 UTC to Jan, 31, 1600 UTC) To work as many US States, Canadian provinces, and countries as possible on the 60 meter band. See December CQ for rules.

1999 ARRL International DX Contest (CW) Fri, Feb 19, & pm to Sun, Feb 21, 7pm (Feb 20, 0000 UTC to Feb 21, 2400 UTC) To work as many amateur stations in as many DXCC countries of the world as possible on 160, 80, 40, 20, 15, & 10 meter bands. See December QST for rules.

Classifieds & Special Announcements

For Sale

Tektronix 465B Dual trace Oscilliscope with probes. \$100.00

Heath HW16 plus HG10B VFO. Looks and works great. With all cables \$75.00

N.E.C. 286 Computer 40MB Hard Drive and color VGA Monitor. Great for a dedicated packet machine. With extra disks \$50.00.

Contact Gregg Mulder-WB8LZG 646-6257 after 5 p.m.

For Sale

- 1. Yaesu F.T.51R Dual Band plus a 106.95 LCD Display Speaker Microphone. This is New in the box \$380.00
- 2. Diamond K601 NMO Trunk mount New \$68.95 Sale \$30.00
- 3. Comet SBB 2m Dual for H.T. \$20.00 Call 517-764-1751 ask for Jim W8NBC or E-mail n8dol@voyager.net

For Sale

Allied S.S.B Transciever A2517, Speaker power supply A2518 & Remote VFO A2519

Realistic Navaho T.R.C. all channel CB Radio.

Selling as a package \$225.00

Call Don-WB8NUS 321-2004

For Sale

Biz Band Radios (461.750 Mhz range)

- 1 Kenwood UHF-FM TK-805
- 1 Midland 70-1526 B
- 1 Standard Radio?
- 2 Midland 70-526B
- 1 Standard Desk Mike
- 1 Kenwood KSC-1 Charger

For Pricing and other info call Dave Werner at Werner Landscaping (248) 437-9333

1998 DIRECTORY CORRECTIONS & ADDITIONS

E-MAIL ADDRESS:

1. Bill Schmidt/KB8ZRE schmid91@pilot.msu.edu

Congrats Mike!

You may not be acquainted with Mike Perez-N8OUN, but he has been a club member for several years and is an Assistant Emergency Coordinator for Ingham county. He has just been promoted and I will quote the article from the Journal:

Michael Perez has been promoted from deputy to sergeant in the Ingham County Sheriff's office. Perez was hired by the Ingham County Sheriff's Office in 1992 as a deputy/paramedic assigned to road patrol.

Perez has served in the Corrections Division, as a field training officer with the Underwater Dive Rescue Unit and as a paramedic with the Lansing police START Team.

From Hal Bell-WA8LAY

Jim "Erv"-W8ERV
has a "New" Web Site Address.
His new address is:
http://www.qsl.net/w8erv

January Birthday & Anniversaries

- 9 Brent Williams/WB8TRL's 44th Bday!
- 11 Ralph/N8YQJ and Char Riggs' 19th Anniv.!
- 20 Don Clark/N8XME's 42nd Bday!
- 21 Scott Waldron/WD8SDW's 41st Bday!
- 23 Mary Lou Tillitson's 71st Bday!
- 23 John Ingraham/NG8L's 50th Bday!
- 24 Pam Denomme/KB8PSF's Bday!
- 26 Dave Humphreys/N8WTH's Bday!
- 29 Forrest/N8PWD and Joyce Clark's 5th Anniv.!
- 31 Bob/W9NIP and Betty/KC8CPG Williams' Anniv.!

145.390 Net Format

| Preamble: Welcome to the Central Michigan Information Net. This net is held each Sunday evening at 8:30pm on this frequency and is held for the purpose of sharing information and to promote goodwill between Amateurs. This is, and I will be your Net Control |
|---|
| Operator for this evening. All Amateurs are welcome to join in and we ask that all comments and questions be directed to Net Control. Also, please bring your callsign slowly so we may accurately copy them. |
| At this time, we are accepting check-ins which are mobile or short time. Mobile and Short Timers, please call Net Control. (note calls here) |
| At this time, we are accepting all regular check-ins please call Net Control. (note calls here) |
| Announcements: * (check current Scope for announcements & QST for upcoming swaps, Contesting & Other Amateur interests. |
| |
| * Central Michigan Amateur Radio Club meetings are held the first Friday of each month at the Red Cross, located on Grand River in Lansing. If you need directions, contact any Club member on this repeater. *The 5.39 breakfast is held on the first Saturday of each month at Theio's on N. East St. at Lake Lansing Rd. in Lansing. Breakfast starts between 7:30am and 8am. * QCWA net is held on Tuesday evenings on the 146.700 machine, beginning at 8pm. and they hold |
| their breakfast on the last Saturday of each month at Theio's on N. East St. at Lake Lansing Rd. in Lansing, beginning at 8am. |
| Closing: At this time, we would like to thank all who took part in the Central Michigan Information Net and invite you back for the next week's as well. We will now return the repeater to general Amateur radio use and Good Night. This is now signing clear. |

Show Your Support in Amateur Radio And Join Today! CMARC & LCDRA

Join Today!

CENTRAL MICHIGAN AMATEUR RADIO CLUB, INC.

As a licensed Amateur, you can **sign up to-day** as a 'Full Member'. As a full member of 'CMARC', you will receive voting rights and yearly subscription to "The Scope"."The Scope" is filled with club news, special interests and events.

Sign up today as an 'Associate Member' your membership includes a yearly subscription to the "The Scope" (No voting rights as an 'Associate Member').

| Name: | | | Call: | |
|-----------|------------|-------|--------|--|
| Address: | | City: | State: | |
| Zip Code: | Phone No.: | | Class: | |

Full Membership* - \$10. per year Associate Membership - \$5. per year * You MUST be a licensed 'Amateur' to obtain 'Full Membership'

Mail your check or money order to: John Ingraham-NG8L, Membership Chairman 2807 Greenbrair Ave.; Lansing, MI 48912

Join Today!

Lansing Civil Defence Repeater Association

As a licensed Amateur, you can **sign up to-day** for only \$15. As a member of 'LCDRA', you will receive a yearly subscription to "The Scope"."The Scope" is filled with club news, special interests and events.

Sign up today! Use of the repeaters does not require a membership, but your support will be greatly appreciated.

| Name: | | | Call: | |
|-----------|---------------|--------------------------|--------|--|
| Address: | | City: | State: | |
| Zip Code: | Pho | one No.: | Class: | |
| ARRL: | Your Birthday | Your Wedding Anniversary | | |

LCDRA P.O. Box 80106; Lansing, MI 48908



Have A Happy &

Safe New Year From Everyone at CMARC!



Central Michigan Amateur Radio Club P.O. Box 27321 Lansing, Michigan 48909-7321

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Central Michigan Amateur Radio Club

THE SCOPE

Lansing Civil Defense Repeater Association

Serving Our Community Since 1927