



## Upcoming Swap & Shops

**March 15, Saturday** Michigan Crossroads Hamfest.  
Marshall ARC, Marshall, MI Contact: John N8BGM  
616-781-4540 n8bgm@aol.com

**March 16, Sunday** Toledo Mobile Radio Association  
<http://www.tmrahamradio.org> **Contact:** Brian Har-  
rington, WD8MXR 4463 Holly Hill Drive Toledo, OH  
43614 Phone: 419-385-5624  
Email: wd8mxr@arri.net

**March 22, Saturday** Michigan City, IN Contact Ron  
N9TPC 219-325-9089 rstahoviak@adsnet.com

**April 5, Saturday** Milford ARC, Milford, MI  
Contact: Rose Mary Moore, KC8NQJ  
1383 Sylvan Drive Hartland, MI 48353  
Phone: 810-632-5174

**May 16-19** Dayton Hamvention [www.hamvention.org](http://www.hamvention.org)

## TECHNICAL & TECHNIQUE

This issue's T&T section is packed full of good information and ideas from the denizens of the owerTalk reflector (available via <http://www.contesting.com>).

For the climbers...

- o Two tool pouches (bolt bags) on your belt - one for tools and the other for parts and hardware
- o Use two lanyards on your climbing belt so that one can always be attached to the tower.
- o Always take along a roll of electrical tape...even if the job doesn't require it, there is always at least one thing on the way down that can always use a quick wrap or two.

- o Have an HT, cell phone, or FRS radio for communications to the ground crew or to call for help
- o Carabiners and slings are good for lifting just about anything and are also useful for temporary holds
- o Always bring up extra fasteners for the job
- o Hold a safety meeting before work commences
- o Go to the bathroom before you go up the tower.
- o You were born tied off, stay tied off.

For the ground crew...

- o Have the ground crew wear hard hats -- always.
- o Learn how to tie a bowline
- o When using tape to hold stuff together to go "up the tower", fold the end of the tape over in a "flag" so that the tower workers can just grab and pull the tape off.
- o Mate the tower sections on the ground (rotating for best/easiest fit) before they go up in the air and mark the legs so that the rope/cable is attached to the correct leg.

From *ARRL Contest Rate Sheet for February 26, 2003*

## The Beginner's Guide to Working the ISS on Packet

*By Josh Long, N8CFS*

*This is the first in a series of articles...* Perhaps you are a new ham operator ready to explore the frontier of space communications; perhaps you are a veteran operator, looking to expand your operating experience into a new direction. In either case, amateur radio satellites are a fascinating and fun part of the hobby. One satellite that is easy to work is the International Space Station (ISS).

Shortly after its launch into orbit, the ISS had amateur radio equipment installed onboard to provide the crew with an alternate method of communication and of recreation. Currently, equipment for the two meter band is onboard the station. The present configuration includes an FM voice station and packet station (including a digipeater or packet repeater!). The downlink frequency—that's where earth stations (that's us) listen for the satellite's signal—for both

*(Continued on page 4)*

## Support Amateur Radio

Join the Lapeer County Amateur Radio Association and the American Radio Relay League. Have your voice heard both locally and nationally.



Annual Tornado Spotter class is being held on Wednesday, March 19, 2003 from 7-9:00 pm at Lapeer East High School

**Lapeer County Amateur  
Radio Association**

P.O. Box 12  
Hadley, MI 48440-0012

**Officers**

President, Ken Kelch, AB8PM.....810-245-3907  
Vice-President, Josh Long, N8CFS...810-724-6790  
Secretary, Therese Long, KC8PEZ..810-724-6790  
Treasurer, Bill Miller, KD8VP.....810-797-5329

**Committees & Etc.**

Club Founder.....Hollis Hayes, W8ACD  
Club Call Trustee W8LAP.....Jim Boyer, KD8YX  
VE Coordinator.....Al Wilson, N8NPR  
Swap & Shop Chairpersons.....Ken Kelch, AB8PM  
Field Day Chairman.....Bill Miller, KD8VP  
Meeting Refreshments.....Bill Miller, KD8VP  
Two Meter Net Mgr.....Jim Boyer, KD8YX  
Newsletter Editor.....Hank Kohl, .K8DD  
Club Historian.....Fred Church, N8ABR

**ARES Repeater Nets**

Monday at 9:00 PM on 146.620-  
Thursday at 9:00 PM on 442.750+  
Mon—Sat at 9:30 PM on 147.300+

**Meetings**

LCARA meetings are held on the second  
Tuesday of each month in the  
Lapeer County Sheriff's 911 center,  
2332 W. Genesee St, Lapeer MI  
at 7:30 p.m. local time

**Newsletter**

Items for the newsletter may be called to the  
Editor at 721-0708, sent by U.S. Mail (Box 88,  
Attica, MI 48412), or as an ASCII file, Word file  
or hand-written to k8dd@arrl.net

The deadline for submissions is the 20th of each  
month.

**Show your club colors**

The following items, all with the LCARA logo, are available  
to members. Your name and callsign could be included at  
no extra charge.

Tee shirts.....\$15.00  
Sweat shirts, hooded.....\$30.00  
Sweat shirts, long sleeve without hood.....\$18.00  
Golf shirts, grey, yellow or white.....\$19.00  
Nylon jacket, windbreaker.....\$35.00  
Heavier poplin jacket, flannel lined, quilted.....\$85.00

Sizes available to XXL at the prices listed above.

For each "X" above XL, add \$2.00.

Call Flo Haack, KC8CAB , or contact her at any club meeting  
to place your order.

**LCARA's Video Library**

The club has a number of video tapes available for  
use by members at no charge. If you would like to  
borrow one or more of the tapes, contact Ken  
AB8PM, at any club meeting.

Titles presently available:

Getting Started in Ham Radio  
Getting Started in DXing  
Getting Started in Packet Radio  
Getting Started in Amateur Satellites  
Getting Started in Contesting

Tapes may be retained by the borrower for one  
month and must be returned at the following  
month's meeting.

**Board of Directors Meeting**

The Directors' monthly meetings are held on the  
first Tuesday of each month at the BK Lounge at  
7:30PM as needed (announced on the W8LAP  
repeaters). **All club members are urged to  
attend.**

**Contributors to this newsletter:**

Josh N8CFS    Therese KC8PEZ  
Mark NU8Z    Mary Stikeleather

**Your call should be here!**

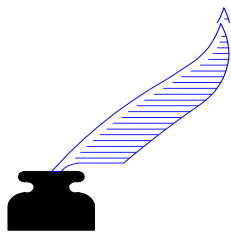


While in Imlay City, support your local Radio Shack store



**LCARA Site Sponcer:**  
Hillcraft Electronics  
1831 S. Cedar Street  
Imlay City, MI 48444  
Phone: 810-721-8030

**Minutes of the  
February Meeting  
911 E. Central Dispatch,  
Lapeer, MI**



The meeting was opened at 7:35PM by Ken AB8PM with the pledge of allegiance and introductions of visitors: Joel Carpenter, John KC8VOW, Dan Conley KC8JQT and Josh Elston. A memorial service for Charlie Conley N8RVG was held Friday, February 7. Dale KB8WKQ is reported to be improving after his automobile accident. Under Awards/Upgrades: Ken AB8PM received his ARRL VE certification; John KC8VOW received his callsign.

President's Report: given by Ken AB8PM. The Echolink program will be discussed at the March meeting.

VP report: given by Therese KC8PEZ for Josh N8CFS. Anyone wishing information on MARS, the Military Amateur Radio Service, should contact Josh N8CFS.

Secretary's report: read by Therese KC8PEZ. Minutes accepted as read.

Treasurer's report: read by Bill KD8VP. Accepted as read.

PIO/Historian's report: Bill KC8SHI had nothing new to report.

EC's report: given by Jim KD8YX. The repeater now has back-up batteries and a charger for them. Jim is working on the RACES cards. The Michigan State Police will run a routine background check on all people wishing to join RACES. Jim talked about having occasional ARES tests on the repeater to test Lapeer County ARES members' emergency preparedness. He also let everyone hear the 1000hz tone used on the repeater for emergencies.

The club talked about the recent Columbia space shuttle disaster. Three hams were on board the shuttle. Hams in Texas in ARES/RACES have been working with local officials to find shuttle debris. They have been able to provide the only reliable form of communications in these areas. Approximately 25 hams have been volunteering each day.

Old Business: none

New Business: There are 2 possible sites for towers. Jim will look at those sites later this week. Several members had questions about Echolink, so much of March's club meeting will be devoted to explaining and discussing Echolink on the repeater.

The 50/50 raffle was won by Ed KC8EGR.

The meeting was adjourned at 9:05PM by Ken AB8PM.

*Submitted by Therese Long, KC8PEZ, secretary*

**The Michigan QSO Party** now has its own Web site at <http://www.miqp.org>. It has quite a list of features and functions, so stop by! The Michigan QSO Party occurs on the third Saturday in April. For the year 2003, the contest will start on Saturday, April 19, 2003. See Page 6 for details!

**- QUOTE OF THE DAY -**

"I'd rather be a 'could be' if I cannot be an 'are,' because a could-be is a maybe who is reaching for a star. I'd rather be a has-been than a 'might-have-been,' by far; for a might-have-been has never been, but a 'has' was once an are." - Milton Berle

**Be RadioActive—  
Participate!**

**HOLLINGSWORTH PREACHES COURTESY,  
COMMON SENSE**

FCC Special Counsel Riley Hollingsworth told those attending his forum at the Richmond, Virginia, Frostfest February 9 that Amateur Radio enforcement still has a long way to go, but that amateurs can do a lot through peer pressure to head off problems before they become enforcement issues.

"Enforcement is no substitute for courtesy and common sense," Hollingsworth declared. "More courtesy would go a long way. Hollingsworth again suggested that amateurs "operate so that listeners will be impressed with Amateur Radio," not offended or turned off by it. He said awareness of Amateur Radio is on the rise in the wake of media attention since September 11, 2001, and, more recently, with ham radio assistance in the search for debris from the shuttle Columbia. He pointed to 20 and 75 meters as the current enforcement hot spots as well as the bands where the least courteous operating practices are found--some of which he described as "a disgrace" to the Amateur Service.

Off-the-air peer pressure, he said, is an effective tool to provide guidance to amateurs who may be unaware of how they sound to others on the air. The reactions of some hams when they confront interference--or perceived interference--can be worse than the original interference--whether or not it's deliberate. "Don't overreact," Hollingsworth advised. "The best reaction is no reaction whatsoever." "You have to always be aware of your image and be willing to protect it," he told those gathered in the packed forum. "You can't shoot yourself in the foot." More than 1000 attended the Richmond Frostfest, sponsored by the Richmond Amateur Telecommunications Society <<http://www.rats.net/>>. The use of new technology and on-the-air experimentation also sometimes brings controversy to the amateur bands, Hollingsworth said, and may prompt an occasion for the FCC to revisit its current Part 97 Amateur Service rules.

*(Continued on page 4)*

Hollingsworth (Continued from page 3)

Hollingsworth pointed to the use of so-called "enhanced SSB," where experimenters have been attempting to achieve full-carrier AM-like high-fidelity audio in that mode. Hollingsworth said the presence of the enhanced SSB experimenters has led to complaints to the FCC--as many as 20 per week--that these signals are taking up excessive bandwidth. Hollingsworth told his Richmond audience that deliberately operating a wideband mode in a crowded spectrum is "shortsighted and rude," may be ignoring the "minimum bandwidth necessary" rule. If its use isn't accompanied by courtesy and common sense, he said, it will lead to pressure on the FCC to revise the Amateur Service rules. The "Emission Standards" section of Part 97--specifically §97.307(a) and (b)--requires amateur transmissions to not occupy "more bandwidth than necessary for the information rate and emission type being transmitted, in accordance with good amateur practice" and to "not cause splatter" on adjacent frequencies. Hollingsworth said the bandwidth of a given signal is not easily determined by the average amateur transceiver--even one equipped with a band scope of some sort. He pointed out that the problems with apparent splatter can be aggravated by the use of a noise blanker on the receiving end. "Just because it sounds wide doesn't mean it is wide," he said, adding that he'd prefer the amateur community come up a way to accommodate such experimentation, because "a government solution will be worse than the problem."

from *The ARRL Letter* Vol. 22, No. 07 February 14, 2003

(Continued from page 1)

voice and packet is 145.800 MHz. The uplink frequency--that's where we transmit to communicate with the ISS--is 145.990 MHz. The FM voice station is seldomly used lately, except with scheduled school contacts. However, in past months, the packet station has been active 24 hours a day. So, what kind of equipment is needed to work the ISS?

The first things that are needed are several basic pieces of equipment. The first is an appropriate antenna. Although complex directional arrays are sometimes used by the more experienced operator to work satellites, a simple horizontally-polarized antenna (like a J-pole made out of 300-ohm twinlead) will work reasonably well. I successfully used 5/8 wavelength magnet-mount antennas sitting on metal baking-sheets in my first satellite station setup. The second is a radio. A radio capable of working the 190 kHz split is ideal. In my first setup, I used two mobile radios. However, now I have a handheld radio which is capable of the appropriate split. I would recommend using a Radio Shack/Realistic HTX-202 HT or similar inexpensive model. The third thing is a terminal node controller (or TNC--a radio modem). Simple used TNCs (models like the Kantronics KPC and MFJ-1270 series) can be purchased for approximately \$50-75. Lastly, any computer with a terminal program is needed. Most PCs running Windows will have HyperTerminal already installed. I use this application for my present packet setup. Assuming that you have a computer, the total price for needed equipment to work the ISS packet station may be as low as \$100.

Next month's article will cover useful software to track the ISS and other satellites and operating procedures.

**If you have an e-mail address and would like the Waveguide via e-mail, let Ken AB8PM (ab8pm@arrl.net) know and it will happen. This can help save postage and printing for the club....And the pictures will look better!**

This space is where you could have submitted something. Tell us about:

- What DX did you work?
- What interesting QSO did you have recently?
- Did you try a different antenna?
- Did another ham you know do something to qualify for "here's your sign"? (the stoopid sign--and we won't publish your call or name!)
- Rumors

Most any format is fine--Text file, Word file, hand written, typed or verbal over the phone. See page 2 for Newsletter contact information!

Annual Tornado Spotter class is being held on Wednesday, March 19, 2003 from 7-9:00 pm at Lapeer East High School

## For Sale



This is a great place to sell what you don't need, give away what you don't need or look for what you can't live with out. Ads will be run for 2 months.

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**Wanted: Articles, stories, pictures, facts, fables, witticisms or what-have -you for the Wageguide. If you have something that you think will be of interest to the LCARC membership, please get it to the Editor. See Page 3 for contact information.**

**From the K8AGO estate** (via WA8UCS). A Mosley TA53M beam and a Rohn 40 ft. I do not have a phone #. Contact Elda Augustine 2730 Bowers rd, Lapeer Mi 48446.

**From: Gary Bower N8MJD** gwbower@hotmail.com] I have an Yaesu FT 50 (w/extras for somewhere around \$200).I need to sell. 810-678-3637

**From Paul, KC8MQV** Alinco DJ-G5TIE VHF/UHF twin band FM hand held transceiver, extra battery, battery charger, mag-mobile antenna, speaker/mike, telescoping antenna, ear speaker, plug-in car charger, desk stand. Used very little. All for \$250 MFJ-418 Pocket Morse Code Tutor. External speaker. Both for \$35 **Offers may be accepted!** 810-664-9742



Y V S K Y P Q F A R A D S M P Y  
M P R R A R E S O N A N C E A S  
H P H K E G W I P E S K Z X P H  
O I P I X T I K W C D X V M H Z  
S C V L N N E U C N A P A N O K  
R O L O A Z I M J A R S S I Q J  
E F S H Q Z A G C T A G T Z P W  
J A E E H V E M N S F H L L W C  
B R U R U E J T Y I O Y R Y O U  
J A Z T J O N V K S R J A K S V  
O D Z Z R H Z R A E C L X O T P  
U S T C U M O M Y R I H M Z T E  
L V R H E S L J Z S M K V V A U  
E B E C A P A C I T A N C E W B  
S F H W I C O N D U C T A N C E  
Y K Y G E C N A T C U D N I Q A

## THE RADIO SCRAMBLE

- ohms                      volts
- amps                     watts
- joules                    henrys
- farads                    microfarads
- picofarads              hertz
- kilohertz                meters
- inductance              capacitance
- resonance               resistance
- conductance            mhos

The key (solution) will be provided to one of the officers of the club!

### *From the Lapeer County Emergency Management Division.*

From Mary Stikeleather, Lapeer County EMD, regarding the State of Michigan requirements / criteria for RACES membership, which has come from James Wades Michigan State RACES Officer/ARRL Emergency Coordinator:

"The recommended process may be summarized as follows:

1) RACES members should be provided with a basic application for membership. This application should require a signature authorizing a background check. If a potential member refuses to sign the application, he should not be issued a RACES card.

2) Upon receipt of a signed application, a basic background check should be performed. If significant criminal history is discovered, it is recommended that membership be denied and the RACES card not be issued.

3) In the event that there is questionable background (significant misdemeanors, etc.), it is recommended that the candidate be interviewed by a board consisting of:

- Emergency Management Director
- RACES Officer
- A law enforcement representative

Ultimately, the Emergency Management Director has the final say on membership in the RACES program.

Obviously, in some cases, a criminal history may have occurred decades earlier in an individual's youth. Likewise, some minor incidents may not be adequate to deny membership. Again, this is ultimately a judgment call; therefore the recommendation for an interview under such circumstances.

4) Such issues as race, ethnicity, credit history, and so

forth may not be considered in the process.

It is our desire to facilitate mutual aid between RACES programs. In the event of a major national security threat, a local emergency manager should have a reasonable expectation that individual RACES members arriving from outside the area have been subjected to a reasonable screening process. Therefore, we recommend that all Emergency Management Programs implement this process as soon as practical."

#### **Then there is the Training section:**

"ARES/RACES members shall have a minimum amount of training in order to insure that they can conduct themselves properly on radio networks and in the field. The training minimums for basic ARES/RACES membership includes:

- FEMA IS-2, *Emergency Management USA*
- *Hazardous Materials Awareness Level Training*
- MSP-EMD *Introduction to Disaster Telecommunications*
- Basic Skywarn Training

ARES/RACES members shall attain the required training within a period of two years of having registered with the local program. This training will be necessary before the issuance of a State RACES Card. The State RACES Officer may make the above training available on videotape at his/her discretion.

Additional ARES/RACES training courses will be offered periodically through the Emergency Management Division. Attendance at these courses is encouraged for all ARES/RACES personnel."

*[This has been edited from four pages for brevity. One of the key words, in the first sentence, is **recommended** -Ed.]*

## How to Impress a Non-Ham with Your Handheld Radio

By Mike Dinelli, N9BOR

From the ARRL Website on 2/8/2003

Remember when a handheld and an autopatch would drop the jaw of an unsuspecting non-ham? You punched in a few DTMF tones, heard a dial tone and proceeded to call your spouse after a long day at the office. That, of course, was in the pre-cell phone/ Internet era. Today it's called "wireless," a popular buzzword for the in-crowd, but we still like to call it radio.

Some people see the excitement of ham radio as a thing of the past. How do we convey our love of radio to curious kids and technically savvy adults? We certainly can't compete with cell phones, and perhaps we don't want to, anyway. Amateur Radio should remain a technical pursuit. We must demonstrate some knowledge before we are even allowed to call our first CQ. After we obtain our tickets, the learning should not stop. For the curious, ham radio is an ideal vehicle for lifelong learning in multiple disciplines.

Take your old 2-meter handheld, punch in a few tones and talk to a ham in Glasgow, Scotland. Instead of talking to the same group every night on the local repeater, you could have Jimmy Khoo, 9W2HJ, from Malaysia stop by to say hello. Perhaps Kappy, W9CJ, is on his way to dinner in Florida and decides he wants to check in with his buddies in Chicago on the MAC repeater. Is this possible? Yes, and it's really quite simple and inexpensive.

There are several systems available, but one that is growing in popularity is called EchoLink--free software that allows Amateur Radio operators to communicate with each other over the Internet, using voice-over-IP (VoIP) technology. The program allows worldwide connections to be made between stations, from computer to station, or from computer to computer. You don't even need a radio to talk to other hams on the air—you can do it with your computer and an Internet connection. I downloaded EchoLink from their Web site (1.8 MB), installed it on my hard drive and filled out the registration form. In about an hour, my registration was confirmed. It was manually processed to ensure my Amateur Radio license status. I start EchoLink and it displays a list of participants. Some are shown as repeaters, some are simplex links and others are just individual hams like me.

I scan through the list, see a repeater in New York and doubleclick on it. In about two seconds I hear Go ahead N9BOR, this is WB2xxx. Now what do I do? I should have read the instructions! Again I hear my call sign coming from my computer speakers. N9BOR, are you there? This is WB2xxx. A quick look at the Echolink screen and a mad rush to grab my \$2.99 computer microphone and I'm in business. I say, WB2xxx this is N9BOR, Mike in Chicago and I don't know what I'm doing. Can you hear me? Al, a

mobile in New York says, Nice to meet you, Mike. You sound great! Soon I'm in a roundtable with another mobile station and a ham on a handheld in front of his house (in New York). The audio is crystal clear and I can't detect any delay or lost packets using my dial-up Internet account. I don't need an outdoor antenna or have to spend any money, yet I'm in Chicago and I'm talking to three hams in New York. Cool! This could even impress my 14-year old son.

To create a linked repeater, you need a simple interface, a boatanchor computer and an Internet connection. You can purchase an interface kit for less than \$50. Connections are made for audio in, audio out and push-to-talk. That's all the hardware you need to create an Internet linked repeater. Options are available to enhance operation (control receiver and compressor/limiter, for example).

So why aren't more repeaters taking advantage of this technology? Maybe we want to keep ham radio a secret. Or perhaps it's because of the gray area that links radio with the Internet. There is some debate by purists as whether it is really ham radio when you use wired (Internet) technologies to facilitate a QSO. Imagine walking your dog and talking to a ham in England on your handheld. A neighbor walks up and says, What are you doing? You say, I'm talking to my friend, Nigel in Manchester, England. He says it's bloody cold, but he's on his way to a rugby game anyway. This is how you impress a non-ham with your handheld.

Mike Dinelli, N9BOR, of Skokie, Illinois has been a ham since 1980. He is currently serving as Secretary of Metro Amateur Radio Club (MAC). His interests include boatanchors, contesting, DXing and CW ragchewing. You can reach Mike via e-mail at [n9bor@qsl.net](mailto:n9bor@qsl.net) or through his Web site. The author would like to thank Philip Lazar, K9PL, for his assistance in editing this article.

*Ed. Note: Nobody should be surprised that the EchoLink URL is: [www.EchoLink.org](http://www.EchoLink.org). This was tried and the package works. Enjoy.*

## 2003 MICHIGAN QSO PARTY

Make this a club activity!

Attention Michigan Amateurs. Spring is here and it's time for the Michigan QSO Party. This is a great opportunity to get on the HF bands, have some fun, and represent the great State of Michigan. The organizers

of this event would like to see as many Michigan stations on the air as possible. It is the activity of the Michigan stations that will make this event a success. This event, like other state QSO parties has seen an increase in activity in recent years. With your participation it has the potential to be one of the best QSO parties in the country.

As you can see from the rules listed below, this is only a 12 hour event.. Consider getting on the air for the whole

*(Continued on page 7)*

(Continued from page 6)

thing, or any portion of the 12 hour period. You can operate from home, portable, or mobile.

We again with the support of mobile stations plan on having some activity in all 83 counties. How about making this a club event? You can submit your individual or

multi-op scores under the name of the club and maybe bring home the club plaque. Hey, why not challenge another local area club or other groups within your club? Are there others in your club that would consider a mini expedition for a portable operation in one of the Michigan counties with minimal activity?? The name of the game is to have fun and make Michigan "Radio Active" on April 19th. Hope to hear you on the air!

**Hey, why not challenge another local area club or other groups within your club?**

**Date /Time:** Michigan QSO Party, sponsored by the Mad River Radio Club, from 1600Z April 19th until 0400Z April 20th. Stations may operate the full 12 hours. (12 noon to 12 midnight local Michigan time on April 19)

**Modes and Categories:** Phone and CW on 80/40/20/15/10 meters. Single-op, multi-op, and mobile categories. Single-op entries are categorized by output power, QRP (5W or less), Low Power (100W or less), and High Power (greater than 100W)

**Multipliers:** Work stations once per band and mode. Work other states and Michigan Stations. Work portables and mobiles again as they change county, state or province.

**Exchange:** Exchange QSO number and location (county for MI stations, state/province or "DX" for others).

Freqs: Suggested frequencies: CW-3545, 7045, 14045, 21045, 28045; Phone-3850, 7225, 14250, 21300, 28450.

**Scoring:** One point per phone QSO, two points per CW QSO. Count multipliers once per mode. Multipliers are MI counties for all entries, plus states & provinces for MI entries only. Final score is total QSO points times total multipliers.

**Log Submittal:** Mail logs no later than 30 days after the contest to: Mad River Radio Club, c/o Dave Pruett, 2727 Harris Road, Ypsilanti, MI 48198 or via e-mail to logs@miqp.org

More Information: For complete rules, along with free logging software, log and summary sheets, see <http://www.miqp.org> The information packet found on the web site may also be emailed.

Contact NU8Z cqnu8z@attbi.com

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### ==>FIELD DAY GETS A NEW ENTRY CLASS FOR 2003

Field Day will gain another entry class for the 2003 running of this highly popular operating event June 28-29. "Class F" stations will operate at emergency operations centers--or EOCs. The change renews the emphasis of Field Day's 1933 origins as an emergency preparedness exercise as opposed to a routine contest--what former ARRL Communications Manager F. E. Handy, W1BDI, called "a test of the emergency availability of portable stations and equipment." In Handy's view, Field Day would focus attention "on the subject of 'preparedness' for communications emergencies." ARRL Contest Branch Manager Dan Henderson, N1ND, says the League last year received a record 2110 Field Day entries from groups and individuals. That represented a total of almost 35,000 participants who joined in what Henderson called "a great tradition." Given the increased emphasis on emergency communications since September 11, 2001, Henderson says, the ARRL Board's Membership Services Committee asked that the Contest Branch come up with a way to accommodate stations wanting to operate from the local EOC. The new Class F station, operating from an EOC, is the result. "This is a major change," Henderson said. "Class F has been established to encourage groups to test and further their working relationships with established emergency operations centers." The updated rules and a list of frequently asked questions in the new 2003 Field Day Packet <<http://www.arrl.org/contests/forms>> spell out the details.

A Class F entry station must set up at an "established EOC" activated by a club or non-club group. An EOC is defined as a facility established by a federal, state, county, city or other civil governmental agency or administrative entity or by a chapter of a national or international served agency. The latter could include the American Red Cross or The Salvation Army, with which the Field Day group "has an established operating arrangement." Class F EOC operation must take place in cooperation with the EOC staff. Class F stations are eligible for the same bonus points as Class A stations. There's also been what Henderson called "some tweaking" in the rules for Field Day 2003. Among the highlights, the rules reduce from 400 to 100 the number of QSOs that the "Get On The Air" (GOTA) station needs to make to claim a 100-point bonus. "GOTA stations still may work up to a maximum of 400 QSOs to go towards the main station's score," Henderson said.

In addition, the 2003 rules enhance the bonus for having an invited official visit the Field Day site. There are now two separate bonus categories--100 points for the elected official and another 100 points for a visit by a representative of a served agency. Henderson reminds Field Day participants that stations do not get additional bonus points for contacting stations through additional satellites. As of the 2002 event, Field Day opened up to stations throughout the Americas, not just in the US and Canada. Henderson encourages participants to post their Field Day experiences and photographs to the Field Day Online soapbox <<http://www.arrl.org/contests/soapbox/>>. *From The ARRL Letter, Vol 22, No 06*

## Antennas for 160 Meters

160 meters can be a great band, but as you can imagine the antennas are twice as big as your basic 80 meter antenna! The half wave dipole for 160 would be about 260 feet long—you need a BIG back yard for that! And the 1/4 wave vertical would be about 130 ft long (or high, in the case of a vertical).

A good alternative would be a double sized G5RV. Since a G5RV basically is a non-resonant antenna, you will need a tuner. The 80M—10M G5RV is a 102 foot dipole center fed with 31' of 450 ohm balanced feedline and then most any length of coax to the tuner. The 160M-10M G5RV is 240 feet long and center fed with 65' of 450 ohm balanced feedline.

Another option would be an inverted-L antenna. The vertical portion can be as short as 50 feet and then horizontal for up to 200 feet. You can hang the vertical portion from a tree or any available support. If you use a tower, I'd keep at least 5 feet away from the tower. You can feed it with coax and put a tuner in a tupper-ware box at the base or feed it with either coax or balanced line and tune it from the shack, although that will probably not work as well. See the NU8Z 160/80M inverted-L drawing to the right.

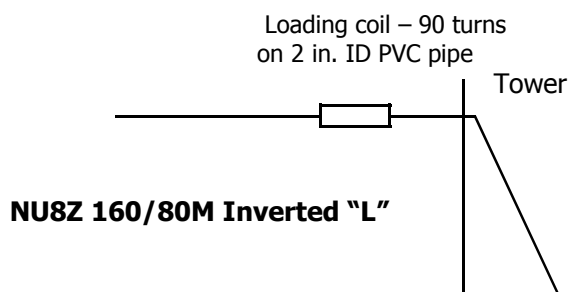
If you have a 50+ ft. tower, you can shunt feed the tower using TV cable hardline for the gamma match.

With any 160M antenna that has a vertical component (Inverted-L or shunt fed tower) you should put as many 1/4 wave radials (or as long as you can get them) as you can afford!

Receiving antennas are another story! There have been

a lot of articles and books written about them (The *Beverage Handbook* by W1WCR and the *Low Band Dxing* by ON4UN).

Some of the better receiving antennas I have been lucky to use have been beverage receiving antennas in excess of 700 feet in length, and Europeans sounded like they were off shore from the East Coast! There are also Flag, Pennant and EWE antennas (they have been written up in QST), which are physically much smaller (a -30db antenna), but they hear very well when used with a good low noise pre-amp. *Hank Kohl K8DD*



1. Wire attached to tower at 30 ft
2. I use a 2 ft stand-off to keep wire away from tower
3. Wire is fed against ground (8 ft rod) with 50 ohm coax
4. I have 3 radials
5. It's approx 66 ft from the feed point to coil (trim for 80M resonance)
6. It's about 25 ft of wire from coil to end (trim for 160M resonance)
7. I use #14 solid copper wire for the coil
8. Antenna loads well on 160 and 80 meters

## March 2003

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 <i>ARES Nett</i> 146.62—9 PM	4	5	6 <i>ARES Net</i> 442.570—9 PM	7	8
9	10 <i>ARES Nett</i> 146.62—9 PM	11 <i>LCARA Club</i> <i>Meeting 7:30 PM</i>	12	13 <i>ARES Net</i> 442.570—9 PM	14	15 <i>Marshall Swap</i> <i>&amp; Shop</i>
16	17 <i>ARES Nett</i> 146.62—9 PM	18	19	20 <i>ARES Net</i> 442.570—9 PM	21	22
23	24 <i>ARES Nett</i> 146.62—9 PM	25	26	27 <i>ARES Net</i> 442.570—9 PM	28	29 <i>Volunteer</i> <i>Exam</i>
30	31 <i>ARES Nett</i> 146.62—9 PM					





## DX PacketCluster—What's that?

Awhile back in the minutes there was a reference to a DX PacketCluster. We would expect that most everyone knows that DX means different things to different hams. On HF DX is anything that is NOT in the US, and more commonly, it means anything outside of US and Canada. And to most DX'ers it is outside of North America! On VHF, DX is anything that is not local—past the horizon.

So how does one find DX stations? You can sit in front of the radio and tune and tune and tune and tune. Or you can find a DX PacketCluster. Either by 2M packet (in Arcadia township 144.970 and connect to WA8DX) or telnet (go to [www.ve9dx.com/telnet/sites.html](http://www.ve9dx.com/telnet/sites.html) and pick one) and sit back and watch. In the past 31 days there have been 32300 (that's 32 thousand) HF DX spots and 600 VHF/UHF spots on the WA8DX PacketCluster. Most of the VHF/UHF spots were on 6 and 2 meters. There were 14,523 DX spots on Mar 1 and 2 during the ARRL DX SSB contest.

## DX in the Caribbean

Your editor took a vacation. Not just any old vacation, but we went to the Leeward Islands in the Caribbean. And since neither of us (AC8W from Port Huron) could go where the wind chill in February is 79+ degrees without our wives, we took them along. Besides, that doubled the number of carry-on bags we could take with us! Packed in the clothes were an Elecraft K2/100, an Icom IC-746, power supplies, and several antennas.

Due to what is called "island time" (very slow time) on the island of St Kitts, it took about three hours in the Radio Officer's office, but we ended up with V47DD for K8DD and AC8W got V47WW. Nine days later after about 6000 QSO's, a slight sunburn, 8 rolls of film and 300 pictures on the digital camera, we made it back to Michigan. And a day later six inches or so of snow—I'm ready to go back!

Box 88 has been filling up with QSL requests—a couple hundred so far from several countries. Hank Kohl K8DD V47DD

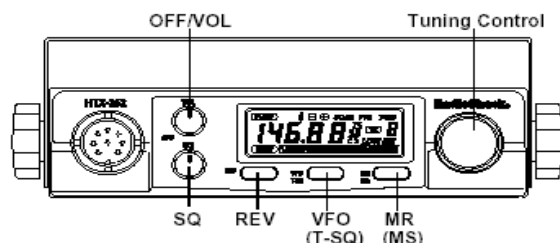
HillCraft Electronics 888-520-2002

Just North of I-69 on Van Dyke (M-53)  
In the Farmer Jack Plaza

Dealer



**2-Meter FM Mobile Transceiver is a compact and versatile transceiver, for your vehicle or in your home.**



## HTX-252

### Features:

- High (25 Watt) and Low (10 Watt) Power Settings
- 10-Memory Channels and 1 Call Channel
- Frequency Range of 144-148 MHz (TX) and 136-174 MHz coverage. You can also extend the transmit (RX)
- Channel Up/Down and 16-Key DTMF on the Mic
- CTCSS (Continuous Tone Coded Squelch System)
- Programmable frequency step
- Signal Strength Indicator
- Compact - 1.25" x 5.12" x 5.5" (HWD) & 1.54 lbs

**\$159.99**

**Compact Dual-Band 144/440MHz Transceiver with Built-In NOAA Weather Alert and 8-Point Compass**



**\$269.99**

**As reviewed in the February 2003 CQ**

**HTX-200**  
**2M / 70CM 200 mW**  
handheld transceiver.  
Closeout  
**\$99.00**

## HTX-200

### Features:

- Dual-frequency display dual band, 2M/70cm, 5 watt amateur radio HT
- Broadband receiver 108-174 and 420-512MHz with 100-channel memory
- Radio includes electronic compass and is compatible with Weather Receive and SAME Weather Alert
- CTCSS encode/decode
- Illuminated 16-key DTFM
- Multiple scan modes
- Power-out 5W on 2M, 4.5W on 70cm with external 13.8VDC or 4.2W on 2M, 3.2W on 70cm with 1200mAh lithium-ion battery pack (included) H/M/L power settings, battery voltage meter, 7
- Includes empty battery shell; accepts 4 "AA" batteries

Annual Tornado Spotter class is being held on Wednesday, March 19, 2003 from 7-9:00 pm at Lapeer East

## 2002-2003 L.C.A.R.A. MEMBERSHIP APPLICATION

PLEASE PRINT:

CALL SIGN: \_\_\_\_\_ NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY ,STATE, AND ZIP: \_\_\_\_\_

PHONE : \_\_\_\_\_ LICENSE CLASS: \_\_\_\_\_

SKYWARN NO.: \_\_\_\_\_ RACES NO: \_\_\_\_\_

ARES MEMBER YES\_\_\_ NO\_\_\_ E-MAIL ADD.: \_\_\_\_\_

ARE YOU AN A.R.R.L. MEMBER: YES\_\_\_ NO\_\_\_

L.C.A.R.A. MEMBERSHIP IS \$12.00 PER YEAR, RENEWABLE EACH YEAR ON OCTOBER. 1ST. FAMILY MEMBERSHIP \$20.00. ASSOCIATE MEMBERSHIP \$4.00. IF YOU WISH AN AUTODIAL NUMBER FOR THE REPEATER THERE IS AN ADDITIONAL \$3.00 CHARGE.

### **Lapeer County Amateur Radio Association**

P.O. Box 12

Hadley, MI 48440-0012