



The Wave Bender

January 2016



WRARC PREZ SEZ

2016 Officers:

President: Bob Mitzel, N8RCM n8rcm@wrarc.net
VP: Joe Wojtowicz W0JO w0jo@wrarc.net
Secretary: Jo Wilms, KD8SNW kd8snw@wrarc
Treasurer: Rose Marko, KD8TII kd8tii@wrarc.net
Past President: Roy Haren, KD8IJF kd8ijf@wrarc.net

Trustees:

Harry Harker, KD8PQK kd8pqk@wrarc.net
 Russ Williams NR8W nr8w@wrarc.net
 Darrin Cannon, N8DMC n8dmc@wrarc.net

Appointed Positions:

Social: Maureen Stein, KD8NXS kd8nxs@wrarc.net
Publicity: Joe Wojtowicz, W0JO w0jo@wrarc.net
Nets: Steve Fabry, KC8SOY kc8soy@wrarc.net
Class Liaison & Database Mgr.
 Al Avnet ab8aa@wrarc.net
Newsletter/Web: Jane Avnet K8JAA k8jaa@wrarc.net
Facebook/Badges/logo Design:
 John Fabry, KC8SPF kc8spf@wrarc.net
Historian: Terri Mitzel, KD8YYE kd8yye@wrarc.net

Officer's Meeting:

January 5, 2016, 7:00 P.M. At Eat 'n Park,
 8051 Market St.,,
 Boardman - All members welcome

Annual Meeting:

January 10, Davidsons
 3636 Canfield Rd., Cornersburgh

<http://www.wrarc.net/>



Holiday Greetings to all our old members, welcome and Holiday Greetings to all our new and prospective members. We come to the end of another year and the beginning of a new one. I wish to express my heartfelt thanks to all

our departing officers and trustees, and say Welcome to all the new ones. I look forward to serving all the members of our great club, and I know the incoming officers and trustees feel the same way. I hope to grow our club and increase activities for the membership during my term as your President, and I will only be able to achieve this with the help and support of the new officers and the members that make all we do possible.

It appears that we will have an Extra Class and a General Class running at the same time in January, both starting the 6th. If you know of anyone interested, please download a flyer from the website and give it to them. We are also planning on having a very basic electronics class on Jan 30, 2016 an email with all the details will be sent out shortly to all the members, and it will be announced on the upcoming nets also.

I look forward to seeing you all at the After the Holidays party, and again in closing, both Terri and I hope you all had a MERRY CHRISTMAS, AND WILL HAVE A SAFE, HEALTHY AND PROSPEROUS NEW YEAR.



73, Bob

A WORD FROM OUR VP

We capped off a great year for our club with our last monthly meeting. The room was full and our guest speaker was Tim Duffy, K3LR, and the Dayton Hamventions' "Amateur Radio Operator of The Year" for 2015. Tim had a great presentation talking about how amateur radio has successfully and positively affected his life over the last 43 years and we thank him for taking time from his very busy schedule as Chief Operating Officer of DX Engineering to come to speak to our members.



In June of 2014, Tim invited our club to tour his station located just off I-80 across the Ohio/Pennsylvania line in West Middlesex, PA. At the time, there was some road construction in the area that blocked the normal routes to get to his station and some of our members were not able to attend. Tim graciously offered to have us back again next year for another field trip to his station and possibly DX Engineering so stay-tuned to our newsletter and we will announce those dates in plenty of time for everyone to mark their calendars and join us for another field trip.

Many thanks to our members for your vote for me as Vice President of your club. It is greatly appreciated and I will work harder at trying to get different guest speakers for our meetings not only talking about amateur radio, but other topics of interest. We'll also try to find some other events in which we can participate and fulfill our community service. I look forward to working with our new incoming officers and trustee and thank our outgoing officers and trustee for their service.

Don't forget our next meeting will be our After the Holidays annual meeting that will be held at Davidson's Restaurant, 3636 Canfield Road, Canfield, OH 44406 on Sunday, January 10th, 2016 at 3:00pm EST when we'll be installing new officers and trustee. Remember, also, that we will not be having our regular monthly meeting on the third Tuesday in January. Our regular monthly meetings will resume on Tuesday, February 16th, 2016. We welcome all members and nonmembers (licensed amateurs or not) to all our monthly meetings. Until then, I am wishing all our members a very happy, healthy and prosperous new year.

73, Joe, W0JO
VP/WRARC

A man can fail many times, but he isn't a failure until he begins to blame somebody else.
John Burroughs



CONTACT WRARC ELMERS WITH YOUR QUESTIONS - QUESTIONS@WRARC.NET

Avnet, Allan AB8AA

Antennas, radio setup, mobile, grounding, classes, anything anything

ab8aa@arrl.net

Beatty, Dave KC8WY
Fabry, Steve KC8SOY
Haren, Roy KD8IJF
Williams, Russ NR8W
Wojtowicz, Joe W0JO

Yaesu FT8900, FT8800, Mobile ???
Electrician, tele-data, Amateur Extra
ICOM radios, D-Star

kc8wy@zoominternet.net
kc8soy@yahoo.com
harens@juno.com
rwilliams@neo.rr.com
w0jo@arrl.net



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He who is afraid of asking, is afraid of learning

Articles from members for the Wave Bender are encouraged. They must be received by the editor one week before the end of the month. Please send your articles to: k8jaa@arrl.net, and put WRARC on the subject line of your email. You may also send your articles to the editor: Jane Avnet, 2050 E. South Range Rd., New Springfield, OH 44443

WHAT'S COMMING UP?

- Jan. 5 Board meeting- Boardman
Board meetings are open to all interested members
- Jan. 6 Extra Class & General Classes Start
- Jan. 10 After the Holidays Annual Dinner meeting.
- Jan. 19 NO REGULAR MEETING
- Jan. 30 TEST EQUIPMENT WORKSHOP

- Feb. 09 Board Meeting new location
- Feb. 16 Meeting at Davidson;s
- Feb. 17 Testing at ITT

- March 2 Testing at ITT
- March 14 Board Meeting
- March 21 Meeting at Davidson;s

- June 24-26 Field Day Weekend - Elser Airport



Amateur Radio Operator "Amateur means we're simply professional volunteers" ARRL reflector

Club Equipment for members use.
 The WRARC now has an antenna analyzer that members can borrow. It is available for use by any member for a period of one week at a time. If the batteries are low or dead it is your responsibility to put in a new set. Take care of it as if it is your own. Read the enclosed manual before use.
 Contact AB8AA to use the analyzer.

**After the Holidays Annual Meeting &
 Installation of Officers
 Sunday, January 10, 2016
 3:00 P.M.
 Davidson's in Cornersburgh
 Order from the Menu
 Guests Welcome**

Join us for the WRARC Friday night Net 9:00 P.M.

145.270, PL -110.9

Upcoming Net Control Operators

Jan. 1	Bob N8RCM
Jan. 8	Mike, KC8WUX
Jan. 15	Terri, KD8YYE
Jan. 22	Frank, KD8YZE
Jan. 29	Dave, KC8WY
Feb. 5	Rose, KD8TII
Feb. 12	Darrin, N8DMC
Feb. 19	Allan, AB8AA
Feb. 26	Jane, K8JAA
Mar. 4	Dennis, KA8DJM
Mar. 11	Joe, W0JO
Mar. 18	This could be YOU
Mar. 25	Roy, KD8IJF

Contact Steve, KC8SOY to take a turn at Net Control
330-774-6346

WRARC Simplex Frequency 146.565



Mahoning County ARES® Nets

1st Monday 8.30 PM ET W8QLY Repeater - 146.745 (PL 110.9)

&

3rd Monday 8.30 PM ET W8QLY Repeater - 146.745 (PL 110.9)

We thank MVARA for the use of their repeater

W8SGT is facilitating The Ohio HF net every Tuesday - 7:00 PM

The net is run from the State of Ohio EOC on the

Ohio ARES Admin frequency 3875 kHz LSB

moves to 7240 Khz after 20-min.

All are welcome to check in.



The Ohio ARES/OES Digital Emergency Net held every Tuesday at 8:00PM.
held on 3585 kHz USB.

Please note all digital communications are Upper Side Band.

<http://www.http://ohden.org/> for net details. Net Manager Gary NJ8BB

COLUMBIANA COUNTY DIGITAL NET

Wednesdays 8:30 pm - 9:30 pm

145.510 MHZ SIMPLEX

NBEMS/FLDIGI is being used training on message handling capabilities of FLDIGI/FLMSG. Start with BPSK-125 other modes may be used for testing

First Wednesday of the Month Mahoning County Skywarn Net

is held on the W8QLY repeater 146.745 (-) at 8:30P.M.

Thanks & 73

All of our members (and others) look forward (hopefully) to getting this newsletter every month, so keep sending those articles, jokes, and suggestions!

Thanks goes out to this month's contributors; KA8DJM, W6UMH, KB8Y, N8SY, W5YI, the ARRL and the World-Wide Web.

NEW SCAM

Very Clever Credit Card Scam! This scam is actually very clever. Just when you thought you'd heard it all. Be very careful out there!

Beware of people bearing gifts. The following is a recounting of the incident from the victim: Wednesday a week ago, I had a phone call from someone saying that he was from some outfit called: "Express Couriers, "(The name could be any courier company) He asked if I was going to be home because there was a package for me that required a signature.

The caller said that the delivery would arrive at my home in roughly an hour. Sure enough, about an hour later, a uniformed delivery man turned up with a beautiful basket of flowers and a bottle of wine. I was very surprised since there was no special occasion or holiday, and I certainly didn't expect anything like it. Intrigued, I inquired as to who the sender was. The courier replied, "I don't know, I'm only delivering the package." Apparently, a card was being sent separately . . . (the card has never arrived!) There was also a consignment note with the gift.

He then went on to explain that because the gift contained alcohol, there was a \$3.50 "delivery/ verification charge," providing proof that he had actually delivered the package to an adult (of legal drinking age), and not just left it on the doorstep where it could be stolen or taken by anyone, especially a minor.

This sounded logical and I offered to pay him cash. He then said that the delivery company required payment to be by credit or debit card only, so that everything is properly accounted for, and this would help in keeping a legal record of the transaction. He added couriers don't carry cash to avoid loss or likely targets for robbery.

My husband, who by this time was standing beside me, pulled out his credit card, and 'John,' the "delivery man," asked him to swipe the card on a small mobile card machine with a small screen and keypad. Frank, my husband, was asked to enter his PIN number and a receipt was printed out. He was given a copy of the transaction. He guy said everything was in order, and wished us good day.

To our horrible surprise, between Thursday and the following Monday, \$4,000 had been charged/withdrawn from our credit/debit account at various ATM machines. Apparently the "mobile credit card machine," which the deliveryman carried now had all the info necessary to create a "dummy" card with all our card details including the PIN number.

Upon finding out about the illegal transactions on our card, we immediately notified the bank which issued us a new card, and our credit/debit account was closed. We also personally went to the Police, where it was confirmed that it is definitely a scam because several households had been similarly hit.

WARNING: Be wary of accepting any "surprise gift or package," which you neither expected nor personally ordered, especially if it involves any kind of payment as a condition of receiving the gift or package. Also, never accept anything if you do not personally know or there is no proper identification of who the sender is. Above all, the only time you should give out any personal credit/debit card information is when you yourself initiated the purchase or transaction!

<http://www.snopes.com/fraud/sales/express.asp>

Starting with the February 2016 Board meeting, they will be held at the Eat 'n Park in Austintown, it is on Mahoning Ave. just about 50 yds. east of Rt. 46 on the south side of the road, just past the Sheetz on the corner of 46 and Mahoning. Times will remain the same.

Our Board meetings are open to all interested Members.

**Austintown Eat 'n Park
5451 Mahoning Ave
Austintown, Ohio**

SWAP 'N SHOP



Items for sale some from SK estate

Kachina 505DSP In great shape, original DSP SDR radio,	\$400
Heathkit SA2060 Tuner, good condition	\$100
Icom 271H, 2 Mtr All Mode, used in original box	\$100
Kenwood TS-711A, 2 Mtr All Mode, In original box with mike and manual	\$300
Kenwood TS-811A, 440 Mhz All Mode,	\$300
Kenwood TS-450SAT, HF All Mode,	\$350
Kenwood SP430 Spkr,	\$ 40
Astatic T-UG8-D104 with Heil HC-4 Microphone, Great shape,	\$100
Yaesu G-450A Rotator, Brand new,	\$100
Swan-250 6 Meter radio, or make offer	\$ 50
Gwinstek Function Generator,	\$ 25
Gwinstek Digital Multimeter,	\$ 25
Albia Power Supply Dual Variable +15 & -15,	\$ 25
EZ Oscilloscope 60MhZ Dual,	\$ 50
MFJ-4225, Switching PS, New,	\$ 85
Mosley CL-33-M 10, 15, 20 MTR BEAM antenna,	\$200
Nye Viking, MBI-001 Tuner,	\$100
Palstar, PM2000A Watt Meter 300/2KW, New,	\$100
broplex Bug,	\$ 50
Misc tower parts, lots	

If interested make offer. Contact me for information
 Allan 'Al' Avnet, AB8AA
 E-Mail ab8aa@arrl.net
 Voice 330-549-3051 Call or text 330-207-3296

FOR SALE: ICOM IC80AD DSTAR w/access.

ICOM IC-80AD Dual Band HT with D-Star Original Price:	\$ 439.99
ICOM HM 31 Mobile Microphone Original Price:	\$ 42.99
ICOM BC 139 Desktop Charger Original Price:	\$ 99.99
COMET CMHT-224 Antenna Original Price:	\$ 47.95
NIFTY Reference Manual Original Price:	\$ 24.25
 Total Original Price:	 \$655.17
Asking:	\$249.00

Must sell all. All in good condition. Hardly used.

Domestic US only.
 Accept credit/debit cards via PayPal
 No Returns

Contact Joe, WOJO
 Phone: (330) 544-5865
 Email: WOJO@arrl.net



GREETINGS FROM OUR TREASURER ELECT!

I would like to start by saying I have enjoyed being a part of the Western Reserve Amateur Radio club for the past three years, along with Dennis, I have enjoyed making acquaintances with as great a group of knowledgeable people as you are.

I feel I am ready to begin a new chapter in my life with this group as Treasurer-elect. Hope I will do as great a job as my predecessor, Maureen.

I look forward to becoming the new Treasurer when I and the rest of our new Board members are installed at our 2016 After the Holidays Annual meeting and party.

Until then, Dennis and I hope all of you had a very Merry Christmas and Happy New Year.

73, Rosemary KD8TII



Good resource for everything Ham <http://www.ac6v.com/>

<http://qrznow.com/emergency-antenna-platform-system-e-aps-wc2fd/>

<http://qrznow.com/amateur-radio-a-21st-century-hobby-video/>

Amatur Radio Exam Prep App

2016 CONTEST UNIVERSITY

I am proud to announce that student registration is now open for 2016 Dayton ConTest University "CTU") to be held all day on Thursday May 19, 2016 at the Crowne Plaza in Dayton, Ohio.
<http://contestuniversity.com>

Eight different countries have hosted CTUs over the years. USA, Australia, Russia, Germany, Italy, England, Brazil and Finland. Over 4500 students have attended these CTUs with more than 100 CTU Professors sharing their contesting experiences.

2016 will be the tenth year in a row for CTU Dayton. To give you an idea of the quality of the CTU content and activities, the 2015 CTU topics (last year) are listed on the CTU web site at <http://contestuniversity.com>

The 2016 CTU Professor line up will be outstanding and is being finalized. Check the CTU website often for the 2016 Professor updates.

Registration information is on the CTU web site <http://contestuniversity.com>

Important - as we did last year - if you want to sign up for CTU 2016 Dayton and you have given (or will give one by Dayton 2016) a talk about Amateur Radio Contesting to any club, Hamfest or group since May 17, 2015 - you qualify for a \$10.00 registration fee discount. Please choose the "Registration w/Discount" option to get the \$10.00 discount. Spreading the word about contesting is lots of fun and can save you money at CTU!

Thanks to all of the CTU sponsors including Icom America, DX Engineering and CQ Magazine for making CTU possible. Thanks to K8MNJ and K1SO for all of their help with CTU. Special thanks to Scott, KA9FOX from QTH.com for hosting and constructing the CTU headquarters web site.



CU at CTU,
Tim, K3LR
Contest University Chairman

WRARC TEST EQUIPMENT WORKSHOP

Saturday, January 30, 2016, Al AB8AA, Bob N8RCM, and Dave KD8NZF, will lead a workshop on using electronic test equipment. The workshop will start at 9:30am at ITT Tech on Meridian Rd. We will cover using DMMs, Signal Generators, and Oscilloscopes and the emphasis will be on using the equipment for troubleshooting. Time permitting we will also roll out a Spectrum Analyzer and peek at the output of a HT – bring yours if you want to see it displayed on the analyzer.



The workshop will make use of a solderless breadboard that will be provided. No fees to use it during the workshop - if you want to keep it there is a \$5 fee. You don't need to own test equipment to participate, but if you own a DMM or other equipment and want to bring it along you can use it during the workshop. Also, please bring a pair of needle nose pliers and side cutters.

Space is limited so we need to hear from you ASAP if you are interested. Please email Al at ab8aa@wrarc.net to reserve a spot.

73, Dave KD8NZF



<http://spaceweather.com>

Space Weather News for Dec. 28, 2015

<http://spaceweather.com>

SOLAR FLARE AND CME: Big sunspot AR2473 erupted on Dec. 28th, producing an M1.9-class solar flare, a minor radio blackout in the southern hemisphere, and a coronal mass ejection (CME) that appears to be heading directly for Earth. This explosion sets the stage for possible geomagnetic storms later this week when the CME reaches our planet. Visit Spaceweather.com (<http://spaceweather.com>) for more information.

POLAR STRATOSPHERIC CLOUDS: For the second time this month, Arctic sky watchers are reporting a rare outbreak of super-colorful polar stratospheric clouds (PSCs). Photos and observing tips are featured on today's edition of Spaceweather.com (<http://spaceweather.com>)



**Portage County Amateur
Radio Service, Inc.
PCARS - K8BF
Eleventh Annual
"Freeze Your Acorns Off"
(FYAO) Special Event**



**When: Saturday - Feb. 13, 2016
Operating Time: 10am - 4pm EST**

<http://www.portcars.org/wp/wp-content/uploads/2015/12/FYAO2016-Rules.pdf>

ARES VHF SIMPLEX CONTEST

Announcing!
The Ohio ARES VHF Contest
January 9, 2016

The SET in Ohio, grid-down power outage, involved a lot of simplex work. In order to capitalize on that activity, Ohio ARES has launched the first annual "ARES VHF Simplex Contest". It's simple, direct, and follows a civilized time frame.

Even something as simple as a temporary loss of power could necessitate using 2-meter/70-centimeter simplex as the main mode of local communication. We hope to both stimulate interest in the simplex modes along with data, and to create a fun atmosphere in which antenna performance and coverage can be determined – very helpful for a real communications emergency!



The contest is open to all, and we hope to stir up a lot of simplex activity. **Now for the Rules..**

Purpose ARES is tasked with being able to provide communications "When all else fails." Local communication is critical and typically takes place on the VHF or UHF amateur band. In order to improve our ability to perform on these bands, Ohio Section ARES is sponsoring the ARES VHF Contest (Yeah, we know, but calling it the Ohio VHF / UHF Contest got a little long-winded). Participants in the contest are encouraged to make as many contacts as possible within the time frame of the contest, with as many different geographical locations as the bands permit. The contest is open to all amateur operators, ARES members are strongly encouraged to participate. How else are you going to win the 'bragging rights' session of your next ARES meeting?

When did you say it was? The contest is January 9, 2016. The start time is (for those of us who sleep in) 10 AM through 6 PM Eastern. Yeah, a civilized time frame that doesn't rob sleep, and allows time with the family. Why, you can even watch a few cartoons in the morning!

Where you gonna be? You may operate this contest from anywhere. There are certain benefits for venturing out from your warm, comfortable home station. EOC stations can gain extra points. Portable stations can gain even MORE extra points – that is, if your frozen fingers will still be able to operate a keyboard. Portable stations MUST use portable antennas, nothing permanently attached...kind of like Field Day on ice. We are not going with any mobile operation this time. The image of a bunch of vehicles running around with portable towers, 150 pounds of antenna hardware and an occasional grounding anchor is best left to the ARRL contesters.

Da Bands – a la' Mode Because local emergency communication takes place primarily on the two meter and 70 centimeter bands, the contest is limited to those two bands. Within each band, we will have these modes: FM Simplex, "Everything else" Simplex; DIGITAL simplex contacts will make up a third mode on each band. Contacts with a station count once per mode- if you can talk the other guy into abandoning "his frequency" and meeting you on SSB or CW, more power to ya! NO REPEATER CONTACTS WILL COUNT. If you get bored, you certainly are welcome to chat amongst yourselves on repeaters, or simplex, or cell phones, or smoke signals.

Da Contacts The goal is to contact as many different stations in as many different counties as possible. You can make as many overall contacts as you like, they will then be multiplied by the number of counties you've reached. Extra points will be available for contacting an EC, AEC, DEC or ADEC or SEC. Pretty simple- any more complex and we'll confuse the scorekeepers.

Da Score

Each FM Simplex contact counts as 1 point.

Each non- FM simplex contact counts as 1 point.

Each digital simplex contact counts as 1 point. (Detect a pattern here?)

Contact with EC, AEC, DEC, ADEC, or SEC adds 5 points.

Contact with an EOC or with a portable station adds 5 points.

Continued page 10

ARES VHF SIMPLEX CONTEST- CONTINUED FROM PAGE 9

Operation from an EOC add 50 points to your total contact score.

Operation from a portable location add 100 points to your total contact score.

Total contact score (all bands/modes added together) will be multiplied by the total number of counties you contacted.

Da Logs Please use any of the appropriate computer logging programs, paper dupe sheets, a well worn slide rule or rusty abacus. Just keep all that to yourself, we can't find anyone with the time to go through all the detail contacts. Submit an email to contest@delares.org with the following:

Your name:

Group name:

Location: (City, county)

FM Simplex Contacts:

"Everything else" Simplex Contacts:

Digital Simplex Contacts:

EOC bonus:

Portable bonus:

Total Contact Score (Add above together, but you figured that out already):

Multiply by total number of counties contacted (include your own!):

Bask in the glory of a well thought out, well executed effort!



ARRL Ohio Section

Section Manager: Scott D Yonally, N8SY

n8sy@arrl.org

USE OF AMATEUR BANDS FOR NON-AMATEUR SATELLITES

QST de W1AW

ARRL Bulletin 37 ARLB037

From ARRL Headquarters

Newington CT December 8, 2015

To all radio amateurs

IARU Praises Favorable WRC-15 Result Regarding Use of Amateur Bands for Non-Amateur Satellites

The International Amateur Radio Union (IARU) has welcomed the exclusion from consideration of all existing Amateur and Amateur-Satellite frequency allocations for potential use by non-amateur satellites. World Radiocommunication Conference 2015 (WRC-15) last month in Geneva recommended an agenda item for the next WRC in 2019 involving spectrum studies for short-mission satellites that removes from consideration the Amateur-Satellite allocations at 2 meters and 70 centimeters.

"This is an excellent result for the amateur services and clearly shows that non-amateur satellite constructors need to consider spectrum other than the very limited and congested segments that are available for amateur satellites at 144 MHz and 435 MHz," said IARU President Tim Ellam, VE6SH/G4HUA.

WRC-19 Agenda Item 1.7 calls on delegates "to study the spectrum needs for telemetry, tracking and command in the space operation service for non-GSO satellites with short duration missions, to assess the suitability of existing allocations to the space operation service and, if necessary, to consider new allocations, in accordance with Resolution COM6/19 (WRC-15)."

Resolution COM6/19 specifies 150.05-174 MHz and 400.15-420 MHz as the frequency ranges that may be considered for possible new allocations.

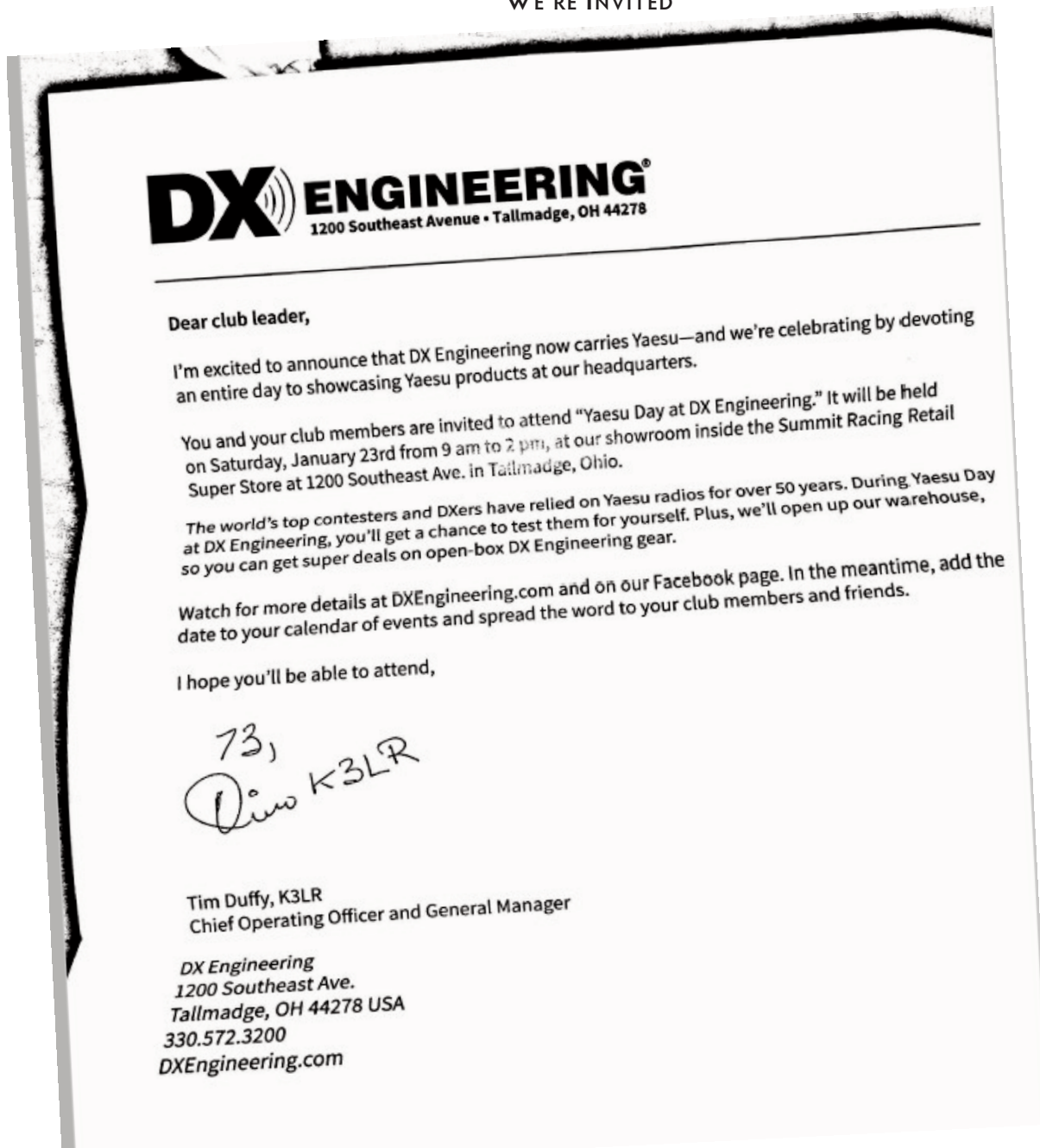
One factor the conference considered in deciding on those particular frequency ranges was that, *Continued page 11*

"USE OF AMATEUR BANDS - CONTINUED FROM PAGE 10

contrary to the provisions of the ITU Radio Regulations defining the Amateur and Amateur-Satellite services, "some non-amateur satellites have used frequencies for telemetry, tracking and command in the frequency bands 144-146 MHz and 435-438 MHz which are allocated to the Amateur-Satellite Service."

NNNN
/EX

WE'RE INVITED



Life's too short to wake up in the morning with regrets, so.....
'Love the people who treat you right. Pray for the ones who don't.'

AN ONLINE SOFTWARE DEFINED RADIO TRAINING COURSE

An Online Software Defined Radio Training Course

qrznow.com - We've recently found what looks to be a new online video based course that uses the RTL-SDR to teach basic software defined radio topics. The course is not free, but costs only \$1.99 and the first three videos are free. Judging from the first three videos the content appears to be quite basic, but is presented in a very clear way that may be useful for beginners. Currently the lessons include:



clear way that may be useful for beginners. Currently the lessons include:

- 1.Course Overview Welcome to the exciting world of Software Defined Radio. In this video, we'll discuss what SDR is, and why it's such a hot button topic right now.
- 2.Setting up the environmentIn this module, we'll setup our environment for development. If you're already very comfortable with Ubuntu, you might want to just follow the guide below.
- 3.Browsing the spectrum
In this module, we'll cut our teeth on GRQX, and learn a little about the radio spectrum.
- 4.Signals IntelligenceIn this module, we'll learn how to find transmissions in the frequency domain, and capture them to disk for offline analysis.
- 5.ModulationsIn this module, we'll learn how to identify two types of basic digital transmissions, and talk a little about the history of radio.
- 6.Demodulation – Part 1In this module, we'll practice capturing signals in the wild, identifying the modulation, and demodulating the signal with GNU Radio.
- 7.Demodulation – Part 2In this module, we'll learn about clock recovery. And we'll pull out packets from the garage door remote.

It also appears that they plan to have some live classes in the future.

We note that there are also alternative SDR training courses available such as Micheal Ossmanns lessons at greatscottgadgets.com/sdr.

There's a New Ham in the House!

ARRLWeb - US Rep Steve Pearce (R-NM-2) has become the third Amateur Radio licensee in the Congress. Pearce recently became KG5KIQ. He joins his House colleague, Rep Daniel Benishek, KB8TOW (R-MI), and Rep Greg Walden, W7EQI (R-OR). Pearce had reached out earlier this year to ARRL Rocky Mountain Division Director Brian Milesosky, N5ZGT, and New Mexico Section Manager Ed James, KA8JMW, to find out more about ham radio.

<http://qrznow.com/an-online-software-defined-radio-training-course/>

AmateurLogic's Ham College <http://www.hamcollege.tv/>
Ham College 'The Pilot' Episode November 27, 2014



BIRTHDAYS THIS MONTH



W0JO Joe Wojtowicz
KD8YMI Candy Davis
NR8W Russ Williams
KD8YZE Frank Crozier
KA8DJM Dennis Marko

KD8PBW Ted Baylog
KC8WY Dave Beaty Sr.
KD8DWV Liz Beaty
KC8WUX Mike Austin

DALE'S TALES FOR DECEMBER 2015

KRAMER GOES ROGUE: Not Seinfeld's Kramer, but our own: Harold Kramer WJ1B! It seems Harold and a team of operators have decided to strike out on their own to commemorate QST's founding 100 years ago this December as they will be operating a commemorative Special Event station W1Q. The plan to be on the air from December 1-15. The first QST was published in December 1915. ARRL Chief Operating Officer Harold Kramer WJ1B and the volunteer operators will man W1Q. This is not an "official" ARRL operation, and Harold will handle all QSL cards and LoTW entries. He will post additional information on his QRZ.com page under WJ1B. Let's keep them all busy! What a great way to celebrate the founding of our official journal.

SPECIAL EVENT: National Parks on the Air will be a key event in 2016. I hope you all will be able to take advantage of getting some On-the-Air-Time to operate and have some great fun contacting stations in our National Parks and actually doing some serious operating from the parks. Be sure to check out the full details at <https://npota.arrl.org/>. There are actually 20 qualified National Park Service Units within the Great Lakes Division, and plenty of opportunities to put them all on the air over the next 12 months. Be sure to check out the current "On the Air" list of scheduled events on the web page. Not surprisingly, many dates are already booked.

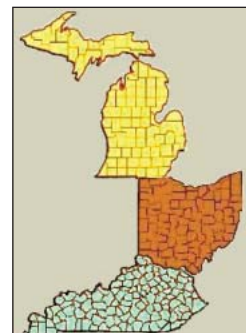
ON THE AIR: Are you? Maybe it is time to check! After the experience of operating last year's great Centennial Points Challenge, like many ops, I have experienced some serious withdrawal symptoms. So for 2015, I've given myself another challenge and made it a point to try to get on for a while every day and get some QSOs in the log outside of nets and contests. An all-too-often brief QSO with a foreign ham brings a new friendship and new interests. Certainly, my knowledge of this Earth's geography is improving as I frequently squeeze in some research on the country I have contacted. Of course, some time is spent searching for "rare ones", but I like the time spent for even a brief contact. This is not to say I am neglecting contesting. Operating contests is great for honing skills, and I note I seem to be able to copy everyone a little better after finishing a contest; with that little experience, copying DX through the noise and QRM truly becomes an easier task. Of course operating on a few nets keeps up the traffic handling skills and builds camaraderie. We have so many diverse aspects of this hobby, but one - actually getting on the air - is what it is all about. Let's all really DO IT!

TOM'S COMMENTS: Our Vice Director, Tom W8WTD is on a well-deserved hiatus this month. He will return in January all refreshed for the upcoming year.

UPDATE for AMATEUR RADIO PARITY ACT: The Senate version of the measure passed through committee during November. The package will now go to the full Senate for a vote. NOW is the time to contact your Senator in Washington and encourage his/her support for the measure. When you do this, please reference the Bill Number S 1685. Please be sure to route your letters through ARRL Headquarters for personal delivery: ARRL, Attn: Amateur Radio Parity Act grassroots campaign, 225 Main St., Newington, CT 06111. You can find more information at <http://www.arrl.org/amateur-radio-parity-act>.

HAMFESTING: Here is the current Great Lakes Division ARRL Sanctioned Hamfest Schedule for the next few weeks. These swaps have received their sanctioning approval from ARRL HQ at the time of this publication.

Dec 5 - Fulton County Winterfest - Delta, OH
 Dec 6 - L'Anse Creuse - Harrison Township, MI
 Jan 17 - SCARF - Nelsonville, OH
 Jan 24 - Tusco - Strausburg, OH
 Jan 24 - Hazel Park - Madison Hgts, MI
 Feb 13 - Cherryland - Traverse City, MI
 Feb 21 - Mansfield - Mansfield, OH
 Feb 21 - Livonia - Livonia, MI
 Mar 5 - Cave City - Cave City, KY
 Mar 6 - Crossroads - Kalamazoo, MI



HAMFEST OFFICIALS: It is never too early to register your hamfest for ARRL Sanctioning. Be sure to invite your ARRL Officials as soon as your date is set. Help avoid date conflicts, do it early!

WISHES: It is still early in December, but as we enter this holiday season, Judy and I wish to extend the very best wishes for Peace and Prosperity in the coming year.

73, see you on the bands.
 Dale Williams WA8EFK
 Director Great Lakes Division

ARES - 2015 YOUNGSTOWN HOLIDAY PARADE



Members from all three Mahoning Valley Amateur Radio Clubs were part of the ARES team that provided communications for the 2015 Holiday Parade and Christmas tree lighting Friday, December 4 held in Youngstown.

The net came up at 4:30 to conduct net business, and to get the Tactical assignments. There were 43 units in the parade. Santa and his sleigh, was pulled by two horses, were last. Primary Frequency used was 147.570 simplex, Secondary Frequency was 146.550 simplex. The parade started at 5:30 P.M. and was over at 6:30 P.M. There were no problems reported during the parade this year.

Net control was in the offices of Youngstown City Scape, located 2nd Floor, 15 Federal Plaza Central, again this year. Nancy, KD8QNY, and Dave, KD8NZF, Brett coordinated the Amateur Radio Operators for the event. Doug, KB8TPG acted as NCO. Assisting him at net control were Nancy, KD8QNY, backup NCO, and Jane, K8JAA, scribe. The other Hams who volunteered were AB8AA-stage, K8PRR, KA8WMF, KA8YTS, KB3WPD, KC8RJS, KC8SYF, KD8NZF, KD8YHD, KE8ADY, KD8IJF, NR8W, W0JO, W8IZC, W8YSU.

AMATEUR RADIO CLASS SET TO BEGIN JANUARY 6



The Western Reserve Amateur Radio Club (WRARC) is sponsoring an Extra Class and a General Class for anyone interested in upgrading his or her Amateur Radio license.

These courses will be held at ITT Tech, 1030 N. Meridian Rd., Youngstown, OH, on Wednesday evenings 7 to 9:00 P.M., starting January 6, 2016. The Extra Class will run for eight-weeks. Testing will be the following week on the second of March. Obtaining the book ahead of time and self-study is vital to you attending this class.

The Extra class will be taught by Allan Avnet, AB8AA, Registered Licensing Instructor, and Em-Comm Field Instructor.

The General Class, which starts the same day, will be taught by Bob Mitzel, N8RCM. This class will run for six weeks, test on the seventh week, February seventeenth.

These two Hams and other WRARC Elmers, will be able to mentor students on all aspects of the hobby, including setting up their own station, equipment purchases, antenna design, and so on.

For more information or to purchase books, contact Allan Avnet AB8AA at 330-549-3051 or by email ab8aa@arrl.net.

DECEMBER TEST SESSION

We had six Hams testing at our December Test Session . Amanda Farone, KC3GFU; Bret Maples, KE8CWJ; Charles Newsom, KE8CWI; Candace Pryor, KE8CWH; Thomas Stine, KE8CWG - All passed their Technician licenses. Congratulations to you all.



Those VEs who came to help with ARRL testing, Al Avnet, AB8AA, contact VE; Dave Beatty, KC8WY; Roy Haren, KD8IJF; Pete, N8XOE; Darrin, N8DMC; Jane, K8JAA; Dave, KD8NZF; Nancy, KD8QNY. Thanks for your help.

WE NEED YOUR HELP!



Dear ARRL Member-

We need your help! TODAY! - For the past year, ARRL has been working in both houses of Congress to promote the Amateur Radio Parity Act. This is legislation that would provide some relief on antenna restrictions for Amateurs living in deed-restricted communities. The bills are H.R. 1301 in the House of Representatives and S 1685 in the Senate. Complete information on the legislation is available here www.arrl.org/amateur-radio-parity-act

We believe that H.R. 1301 will be scheduled for a hearing before the House Energy and Commerce Committee in the near future. Your Congressional representative is a member of that committee.

We need you to contact them and ask for their support of this legislation of vital importance to the future of Amateur Radio.

ARRL has set up a website that makes contacting your Representative an easy task. Please follow the link to <https://arrl.rallycongress.net/ctas/urge-congress-to-support-amateur-radio-parity-act>

When you visit that page, enter your Zip code and your information (name, address, etc.). An editable draft letter will be created. Once you make any desired edits, click the "send" button and your letter will be on its way. If you prefer to contact your Representative by phone, the site provides that information for you as well.

We are now at a crucial stage in our effort to get the Amateur Radio Parity Act successfully through Congress. The bill cleared the Senate Committee on Commerce, Science and Transportation on November 18th. We need your help NOW to insure that the bill successfully moves through the House Committee on Energy and Commerce.

WE CAN ONLY SUCCEED WITH YOUR HELP! Please take a few minutes to let your Representative know this legislation is important to you and all the other Amateurs in your District.

Thank you for your help at this critical juncture. Let's get this done!
 Kay Craigie, N3KN, President
 ARRL, the national association for Amateur Radio

What is the Most Powerful Material in the World Today?
A newly invented pure form of Carbon is the next big step in technology.
It's harder than diamonds, yet it is flexible, and it's thinner than paper .
click here: <https://www.youtube.com/embed/-AUMoajzuOY>

Beijing, Dec 20 (IANS) Chinese scientists have successfully developed a super capacitor with better energy capacity using nitrogen and graphene-like carbon.

"We are able to make carbon a much better super capacitor," Xinhua quoted Huang Fuqiang, a material chemist at the the Shanghai Institute of Ceramics, as saying on Saturday.

The new material will enable electric vehicles travel 35 km after charging for just seven seconds, said the research team from the institute.

Details of the research were published in the latest issue of the journal Science.

THE FUTURE OF THE WRARC

The Future of the WRARC is in the hands of the membership and the board. The board can only do so much. They can find events to work, classes, and things to build.

However, it is the members that make the club successful. The board needs to know what you want to do, what you want to learn, and what you want to build. Our club has a group of hams that act as Elmer's and are here to help you with any problems that you have. Be it a radio, a tower, or something you want to build. All you have to do is ask one of the Elmer's or someone on the board.

How much you get out of your time with WRARC depends only on you. The Elmer's and the board cannot help you out if you do not ask for help. If there is something interesting that you do, does not have to be ham radio related, offer to do a presentation. If you have any complaints or any ideas, contact the President of the board and voice your complaint.

What I think most people do not know is that we are considered a service by the Government. We are required to do public service events. There are a lot of big money people that go to the Government and wave lots of money to try and take our frequencies away. We need to use them and treat them with respect, or in the long run we will lose them.



73
AB8AA

HOW DID I GET INTERESTED



How did I get interested in becoming a Ham? I think it was when I was a child staying for the summer with my Dad's mom, Grandma Jackson, in a suburb of Chicago. I was, hmm, can't remember, but I know it was in the late thirties. Yes, 1930 something. I was exploring in my Grandma's two story attic. I don't think she knew where I was. Anyway, I came across an old radio. Short Wave? Don't ask what kind, just know it wasn't like the one Grandma had in her parlor. That room was reserved for grownup company. The radio must have been plugged in, because I was able to turn it on. I heard voices, but didn't understand what they were saying. Then there was a funny sound, Dots and dashes. CW was sure a mystery!

Let's skip a decade or three. Al and I had just moved to Southern California. We got talking and decided we'd take the Amateur Radio class that was advertised in the local paper, and learn to become Hams. That was 1992. I think Al made Extra in about a year and a half. At the time that meant Tech. Tech+, General, Advanced, Extra, and 20 wpm Code. Me? I got stuck a Tech., I just couldn't learn the code. I was told it was easy for women to learn, because it was so musical. Yeah! Sure! I finally learned enough code to become a Tech+, 5wpm. I finally upgraded to Extra in 2002 just before we moved back to OH. By that time all I needed was General. No More Code! I took the first Extra class Gordon West, WB6NOA, gave. I passed!

Public Service was what I loved to do. But, I hated having to get on the air, tho. One day our friend Joe Fahey, asked me to temporarily take the job of Public Service Events Coordinator for the club we belonged to at that time. He was going to Florida to participate in Children's Miracle Network. When he came back, he got too busy to take that temporary job back. That was in the middle '90s. I still had the job when we left SoCal in 2002. When I left, I found out I was considered the Public Service Events Coordinator for the Orange Section. That's the way the job was advertised when they tried to fill my position after we left.

We've met some wonderful Hams over the years. Some, in SoCal I still hear from. Amateur Radio has been fun for me, but I still have major mic fright. When I asked Tim, K3LR, how to handle mic fright, after the last meeting, he said "The more you do it – the less mic fright you will have!"

Now, if you have mic fright like I do, contact Steve, KC8SOY, and do a club net. It's fun and it will help you get over your mic fright.

73, Jane
ye editor

Take time to laugh for it's the music of the soul -- From an old English prayer

In a Bangkok Temple:

IT IS FORBIDDEN TO ENTER A WOMAN, EVEN A FOREIGNER, IF DRESSED AS A MAN

Cocktail Lounge, Norway:

LADIES ARE REQUESTED NOT TO HAVE CHILDREN IN THE BAR.

Doctor's Office, Rome:

SPECIALIST IN WOMEN AND OTHER DISEASES.

Dry Cleaners, Bangkok:

DROP YOUR TROUSERS HERE FOR THE BEST RESULTS.

A Nairobi Restaurant:

CUSTOMERS WHO FIND OUR WAITRESSES RUDE, OUGHT TO SEE THE MANAGER.

On the main road to Mombasa, leaving Nairobi:

TAKE NOTICE:WHEN THIS SIGN IS UNDER WATER, THIS ROAD IS IMPASSABLE.

On a poster at Kencom:

ARE YOU AN ADULT THAT CANNOT READ? IF SO, WE CAN HELP.

In a City restaurant:

OPEN SEVEN DAYS A WEEK AND WEEKENDS.

In a Cemetery:

PERSONS ARE PROHIBITED FROM PICKING FLOWERS, FROM ANY BUT THEIR OWN GRAVES.

Tokyo hotel's rules and regulations:

GUESTS ARE REQUESTED NOT TO SMOKE, OR DO OTHER DISGUSTING BEHAVIOURS, IN BED.

On the menu of a Swiss Restaurant:

OUR WINES LEAVE YOU NOTHING TO HOPE FOR.

In a Tokyo Bar:

SPECIAL COCKTAILS FOR THE LADIES WITH NUTS.

Hotel, Yugoslavia:

THE FLATTENING OF UNDERWEAR WITH PLEASURE, IS THE JOB OF THE CHAMBERMAID.

Hotel, Japan:

YOU ARE INVITED TO TAKE ADVANTAGE OF THE CHAMBERMAID.

In the lobby of a Moscow Hotel, across from a Russian Orthodox Monastery:

YOU ARE WELCOME TO VISIT THE CEMETERY, WHERE FAMOUS RUSSIAN AND SOVIET COMPOSERS, ARTISTS AND WRITERS ARE BURIED DAILY, EXCEPT THURSDAY.

A sign posted in Germany's Black Forest:

IT IS STRICTLY FORBIDDEN ON OUR BLACK FOREST CAMPING SITE, THAT PEOPLE OF DIFFERENT SEX, FOR INSTANCE, MEN AND WOMEN, LIVE TOGETHER IN ONE TENT, UNLESS THEY ARE MARRIED WITH EACH OTHER FOR THIS PURPOSE.

Hotel, Zurich:

BECAUSE OF THE IMPROPRIETY OF ENTERTAINING GUESTS OF THE OPPOSITE SEX IN THE BEDROOM, IT IS SUGGESTED THAT THE LOBBY BE USED FOR THIS PURPOSE.

Advertisement for donkey rides, Thailand:

WOULD YOU LIKE TO RIDE ON YOUR OWN ASS?

Airline ticket office, Copenhagen:

WE TAKE YOUR BAGS AND SEND THEM IN ALL DIRECTIONS.



January 2016



PREPAREDNESS LEADS TO READINESS - MATT W8DEC

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				Happy New Year! 	1 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	2
DUES ARE DUE, PAYABLE BY JANUARY 31, 2016						
3	4	5 Board Meeting Eat'n Park Boardman 7:00 P.M.	6 Skywarn Net 8:30 P.M. 146.745 Classes Start	7 Orthodox Christmas 	8 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	9
10 After the Holidays Dinner/ Meeting/ Installation	11 ARES Net 8:30 PM 146.745 PL 110.9	12 Eat'n Park Boardman 8:30 A.M. Ham Community Breakfast	13 Gen & Extra Classes 7 PM ITT	14	15 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	16 National Nothing Day
17	18	19 WRARC Meeting 7:00 P.M.	20 Gen & Extra Classes 7 PM ITT	21 WaveBender Articles Due	22 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	23 National Pie Day
24 	25 ARES Net 8:30 PM 146.745 PL 110.9	26 Eat'n Park Boardman 8:30 A.M. Ham Community Breakfast	27 Gen & Extra Classes 7 PM ITT	28	29 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	30
31						