



FEEDBACK

VOLUME 57 ISSUE 3

MARCH 2012

**MASSILLON AMATEUR
RADIO CLUB OFFICERS**

PRESIDENT

Byron Berger
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SECRETARY

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AC8GE
ac8ge@arrl.net

TREASURER

Gary Kline
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wc8w@sssnet.com

**MRN NET Tue Thur & Sun
8:30 PM 3.60 MHz**

**WEST STARK INFO NET
FRIDAYS 8:00 PM
147.18 MHz
(except 1st Fri of month)**

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--- SHORT SKIP ---

A recent solar flare almost touched the North Pole. Check NASA.com. But somehow the lame street media missed the story. Perhaps solar flares and the ionosphere are topics way over their heads. (HI)

73 de WB80WM



MARCH MEETING

The meeting for the month of March will meet at the Senior Center on Friday, March 2nd 2012 at 8: 00 PM, in downtown Massillon.

At last month's meeting we introduced our 2011 Ham of the Year. Mr. Tom Gill , KC8QOD, was selected to be our Ham of the Year. Congratulations to him!

DUES ARE NOW DUE!

If you haven't paid your 2012 dues as yet, you will have only until the meeting night on the 2nd to do so. We have reached our cut-off date! Any member who hasn't paid will be deleted from the roster, UNLESS they have indicated otherwise. As of this writing there are 19 members who have not renewed as yet ! So Please while your thinking about it, plan on attending the meeting and take care of this all important task !

PROGRAM FOR MARCH

The program for the March meeting is a video called "THE LAST BIG FIELD DAY" which is a fun documentary of the W3AO - 50A Field Day operation held in 2004. Learn the trials and frustrations involved in creating one of the largest Field Day operations in the entire United States. And we thought our was tough !



**Our Ham Of The Year
for 2011 Mr. Tom Gill
KC8QOD**

MARC MINUTES

February 3, 2012

The Massillon Amateur Radio Club monthly meeting was held at the Massillon Senior Center on Friday, February 3, 2012 with 39 members and guests in attendance.

Mike KD8ENV, acting as President in Byron KF8UN's absence, called the meeting to order at 7:54 p.m., followed by the Pledge of Allegiance.

After the round of introductions, the regular meeting was postponed to follow the presentation by guest speaker E. Mike McCardel KC8YLD, the Affiliated Club Coordinator for the ARRL Ohio Section. His talk covered the importance of local club participation and the significance of ARRL membership at the club and individual membership levels.

A break for snacks was taken after the presentation. The meeting resumed at 8:50 p.m.

Steve KD8ACF, with a second by Ralph K8HSQ, made the motion to suspend the reading of the minutes and accept them as printed in the Feedback. Motion passed.

Gary WC8W gave the treasurer's report for both December 2011 and January 2012. It was noted that the club was overcharged on the electric service for the club repeater site. Perry W8AU and Gary WC8W are to work out the details.

VP's Report:

Mike KD8ENV read an ARRL Bulletin concerning the changes taking effect on March 5, 2012 to the 60m (5Mhz) amateur band.

Committees: none

Old Business:

Awards Banquet – Congratulations were given to two club members who were absent at the awards dinner.

- Ham of the Year – Tom Gill KC8QOD
- Club Trustee Appreciation – Don Finley W8DEF

New Business:

Jim WA8GXM announced that the club will be participating in the Clay's Park Safety Fest on June 2, 2012. He noted that the club was officially invited back after participating in the 2011 event.

Terry N8ATZ discussed plans for this year's hamfest. The date was set for Sunday, October 28, 2012. It was noted that this is the Sunday following the Massillon vs. Canton McKinley football game.

ARRL Special Service Club status was discussed. It was noted that an application for renewal needs to be completed considering the current status expires in March 2012.

Jim WA8GXM was sworn in as club trustee. He was absent from the January Awards Banquet.

Robert AC8GE announced that the club has been in existence for 85 years. He asked if there was any interest in celebrating the occasion with special club activities later this year. No action was taken.

Annual Budget – Gary WC8W presented the profit/loss statement of the 2011 year, followed by the projected 2012 numbers. After a brief discussion of the figures, Joe WD8BGW, with a second by Jim WA8GXM, made a motion to accept the budget as presented. Motion passed.

New Members: Thomas Fox KI4QQQ of Canal Fulton

50/50: Won by Robert AC8GE for \$17.

The meeting was adjourned at 9:52 p.m.

The Club station was opened for tour by guests after the meeting.

Respectfully submitted by Robert AC8GE

... SKYWARN SPOTTER TRAINING ...

In conjunction with the Cleveland National Weather Service, the Stark County Emergency Management Agency and the Stark County ARES, Severe Weather Awareness Training will once again be held at Stark State College of Technology on Thursday, March 12th beginning at 6:30 PM. Registration will begin at 6:00 PM to issue Skywarn Registration numbers to first time attendees although registration is not necessary to attend the training. The training is being presented as part of Ohio's Severe Weather Awareness Week March 25th to March 31th.

The training is hosted by Tim Warstler, Director of the Stark County EMA and will be taught by Cleveland Weather Coordinating Meteorologist Gary Garnet of the Cleveland National Weather Service (NWS).

The training will consist of an excellent powerpoint presentation covering the science of severe weather, how to recognize weather pattern and cloud formations and how to report your observations to the Cleveland NWS.

The training is free and open to the public. Area public safety officials, school staff, health & safety forces, hospital staff and amateur radio operators are all encouraged to attend this valuable training as we enter the 2012 severe storm season.

Contact local Skywarn Coordinator Terry Russ, N8ATZ for questions or additional information at (330) 837-3091 or by email to truss@sssnet.com. M & K Engraving will also be on hand, our exclusive supplier of Skywan ID Badges and additional items.

The Statewide Tornado Drill will then be held on Wednesday, March 28th at 9:50 AM for the purpose of testing local severe weather notification systems including Television, Radio, Cable and local neighborhood warning sirens. Stark County ARES will activate a severe weather net on the 147.12 Mhz ARES Repeater accepting check-ins for those stations hearing warning sirens.

... CLUB HAMFEST UPDATE ...

The club hamfest has again received ARRL Sponsorship thanks to approval by Great Lakes Director Jim Weaver, K8JE. Sponsorship includes listing of our event in QST Magazine and the League will provide several gift certificates to offer as door prizes.

Hamfest flyers have also been printed and are already being distributed at local hamfests. If you will be attending any upcoming hamfest, we would appreciate it if you would take some flyers to distribute for us. Most all hamfests have a table by the ticket drum where flyers can be placed.

We have already received inquires about our hamfest this year, several table vendors already have reserved their spots from last year which is a good sign. Again we hope to have Radio Sales & Service out of Ashland, Ohio. They are currently a distributor of the new Wouxun handheld radios. They were on display at the Mansfield Hamfest at a very attractive price and were sold out before the end of the day. We will look forward to having them join us again this year.

... ARES MEETING...

The next quarterly meeting of the Stark County ARES is scheduled for Thursday, March 1st beginning at 7:00 PM. The meeting will be held at the Stark County Emergency Management Agency on Route 62 in Canton. We normally monitor the Stark County ARES Repeater on 147.12 Mhz for directions and information.

The meeting agenda is currently being assembled but is expected to include a recap of last years public service activity, the agenda for this years Skywarn Spotter Training, current ARES News and a updated hospital report.

Stark County ARES members and those interested in public service are encouraged to attend. The meeting is expected to last approximately 2 hours. Contact Assistant EC Terry Russ, N8ATZ for additional information at truss@sssnet.com.

... FACEBOOK ...

Have you dropped us a message lately on the club's Facebook page ? We try to keep it updated with current club information, projects, meeting dates and club program notes. We enjoy seeing some of the posts and comments that people leave for us.

We are currently up over 100 friends and we can always use more ! Please drop us a line and let us know what you are doing, what projects are you building or how you did on a recent contest. We would love hearing from you ! You can find us at Massillon Amateur Radio Club on Facebook.

We are also trying to promote the club's Twitter Page. It seems that more people may be using Twitter than Facebook these day's. As soon as I can figure out how do post using my Smart phone, I hope to post a few quick news items on the account. Check it out, we are always looking to expand our message using new media. Look for us at W8NP on Twitter.

That's it for this month.

**73's
Terry – N8ATZ**

G1201

TAKE YOUR PICK

No Need for a Shovel !

Did you ever wonder about how many menu's there are in today's small electronic devices and the amount of information displayed on a LCD ?



Many of today's ham accessories incorporate a PIC or Microcontroller chip (**PIC is a registered trademark of Microchip Technology Inc**). The general name for this device is Microcontroller. This integrated circuit chip contains a microprocessor and many additional circuits that allow a wide variety of design choices along with inputs and outputs.

The Microcontroller manufacturer decides what goes into the chip from design engineers that reflect what the end user needs. Engineers and designers request to the Microcontroller manufactures their needs so they can build a device often using only one chip as the heart of the circuit. (There are additional components also needed external to the chip).

An example is the MFJ Antenna Analyzer. This instrument uses only 1 Microcontroller chip along with supporting circuitry and components. The chip is programmed at the factory to do a wide variety of functions. Internal to this Microcontroller is a microprocessor that does the computer functions by taking the information from the SWR measuring section and frequency and then performs the needed calculations. The outputs are the resistance meter and the LCD display.



Here is a general list of circuits inside of Microcontroller chips depending on the part number specified:

- Microprocessor section, Timers, Counters, Oscillators
- On-Off output lines, On-Off input lines
- USB or Serial communications ports, data ports
- Analog Input Signal ports and amplifiers, Analog Output Ports
- Read Only Memory, Random Access Memory
- Ability to accept a user program using the internal circuits

The typical chip is available from a 14 or 16 pin plug-in up to a 100 pin chip that is only 1/2 inch square. There are other choices in size and pin layout. The chips with a high number of pins require special soldering techniques but offer a lot more choices.



The personality of the chip depends on the software program written by the user. A programming module and programming software is necessary to work with Microcontroller chips. The chip is inserted into the programming module socket, the program is written, and the program is downloaded into the chip. The program can be changed at a later date. Some chips can be programmed without the programming module using a built-in USB port, but still need the programming software/compiler.

A good reference to PIC Microcontrollers is the company "Microchip" which can be found on the internet. The site lists choices in PIC Microcontrollers as well as software/compiler. <http://www.microchip.com/>

Another type of Microcontroller is called "The Basic Stamp" by "Parallax Inc." which can be found on the internet. This type of design is packaged with additional support on a module and a different type of programming language. <http://www.parallax.com/>

There are other companies that manufacture Microcontrollers and kits. There are other choices for programming languages. Additional information can be found on the internet, QST, and ARRL.



ARRL publishes a book "PIC Programming for Beginners" available directly or through the internet. ARRL also lists PIC kits and other information related to this subject.

<http://www.arrl.org/shop/ARRL-s-PIC-Programming-for-Beginners>

During the past few years, there have been many projects in QST using the Microcontrollers. Sometimes the author will make available the source code (file to download to the Microcontroller) via the internet.

Do your research and PICK your PIC or Microcontroller wisely.

73 DE MIKE WA8MKH

HISTORY OF THE CAR RADIO

Sometimes it is fun to find out how some of the many things that we take for granted actually came into being!

It all started with a woman

Seems like cars have always had radios, but they didn't. Here's the true story.*

SUNSET

One evening, in 1929, two young men named **William Lear and Elmer Wavering drove their girlfriends to a look-out point high above the Mississippi River town of Quincy, Illinois, to watch the sunset. It was a romantic night to be sure, but one of the women observed that it would be even nicer if they could listen to music in the car.

Lear and Wavering liked the idea. Both men had tinkered with radios (Lear had served as a radio operator in the U.S. Navy during World War I) and it wasn't long before they were taking apart a home radio and trying to get it to work in a car. But it wasn't as easy as it sounds: automobiles have ignition switches, generators, spark plugs, and other electrical equipment that generate noisy static interference, making it nearly impossible to listen to the radio when the engine was running.*

SIGNING ON

One by one, Lear and Wavering identified and eliminated each source of electrical interference. When they finally got their radio to work, they took it to a radio convention in Chicago.

There they met Paul Galvin, owner of Galvin Manufacturing Corporation. He made a product called a "battery eliminator" a device that allowed battery-powered radios to run on household AC current. But as more homes were wired for electricity, more radio manufacturers made AC-powered radios. Galvin needed a new product to manufacture. When he met Lear and Wavering at the radio convention, he found it. He believed that mass-produced, affordable car radios had the potential to become a huge business.*

Lear and Wavering set up shop in Galvin's factory, and when they perfected their first radio, they installed it in his Studebaker. Then Galvin went to a local banker to apply for a loan. Thinking it might sweeten the deal, he had his men install a radio in the **banker's** Packard. Good idea, but it didn't work — Half an hour after the installation, the banker's Packard caught on fire. (They didn't get the loan.) Galvin didn't give up. He drove his Studebaker nearly 800 miles to Atlantic City to show off the radio at the 1930 Radio Manufacturers Association convention. Too broke to afford a booth, he parked the car outside the convention hall and

cranked up the radio so that passing conventioners could hear it. That idea worked — He got enough orders to put the radio into production.*

WHAT'S IN A NAME

That first production model was called the 5T71. Galvin decided he needed to come up with something a little catchier. In those days many companies in the phonograph and radio businesses used the suffix "ola" for their names — Radiola, Columbiola, and Victrola were three of the biggest. Galvin decided to do the same thing, and since his radio was intended for use in a motor vehicle, he decided to call it the Motorola.

But even with the name change, the radio still had problems: When Motorola went on sale in 1930, it cost about \$110 uninstalled, at a time when you could buy a brand-new car for \$650, and the country was sliding into the Great Depression. (By that measure, a radio for a new car would cost about \$3,000 today.) In 1930 it took two men several days to put in a car radio — The dashboard had to be taken apart so that the receiver and a single speaker could be installed, and the ceiling had to be cut open to install the antenna. These early radios ran on their own batteries, not on the car battery, so holes had to be cut into the floorboard to accommodate them. The installation manual had eight complete diagrams and 28 pages of instructions.

HIT THE ROAD

Selling complicated car radios that cost 20 percent of the price of a brand-new car wouldn't have been easy in the best of times, let alone during the Great Depression — Galvin lost money in 1930 and struggled for a couple of years after that. But things picked up in 1933 when Ford began offering Motorola's pre-installed at the factory. In 1934 they got another boost when Galvin struck a deal with B.F. Goodrich tire company to sell and install them in its chain of tire stores.

By then the price of the radio, installation included, had dropped to \$55. The Motorola car radio was off and running. (The name of the company would be officially changed from Galvin Manufacturing to "Motorola" in 1947.) In the meantime, Galvin continued to develop new uses for car radios. In 1936, the same year that it introduced push-button tuning, it also introduced the Motorola Police Cruiser, a standard car radio that was factory preset to a single frequency to pick up police broadcasts. In 1940 he developed with the first hand held two-way radio — The Handie Talkie — for the U. S. Army.

A lot of the communications technologies that we take for granted today were born in Motorola labs in the years that followed World War II. In 1947 they came out with the first television to sell under \$200. In 1956 the company introduced to the world

the world's first pager; in 1969 it supplied the radio and television equipment that was used to televise Neil Armstrong's first steps on the Moon. In 1973 it invented the world's first hand held cellular phone. Today Motorola is one of the largest cell phone manufacturer in the world — And it all started with the car radio.

WHATEVER HAPPENED TO

The two men who installed the first radio in Paul Galvin's car, Elmer Wavering and William Lear, ended up taking very different paths in life. Wavering stayed with Motorola. In the 1950's he helped change the automobile experience again when he developed the first automotive alternator, replacing inefficient and unreliable generators. The invention lead to such luxuries as power windows, power seats, and, eventually, air-conditioning.*

Lear also continued inventing. He holds more than 150 patents. Remember eight-track tape players? Lear invented that. But what he's really famous for are his contributions to the field of aviation. He invented radio direction finders for planes, aided in the invention of the autopilot, designed the first fully automatic aircraft landing system, and in 1963 introduced his most famous invention of all, the Lear Jet, the world's first mass-produced, affordable business jet. (Not bad for a guy who dropped out of school after the eighth grade.)

(Thanks to Dennis N8UDL for sending us this very fine article !)

CLUB EVENTS

Our Secretary, Robert AC8GE, informs us that the club meetings and the Friday night West Stark Info Net will be listed on the ARRL's Ohio Section Google Calendar, located at: <http://www.arrl-ohio.org/g-calendar/default.html>.

Robert also plans on listing Club Events and other Activities, Public Service Events such as Safety Fest, Field Day and etc.

The webmaster, Scott Yonally N8SY, says that the website sees about 150000 hits per month, with 35000 for the calender alone. Now that is some exposure !



ARRL NEWS

Ohio House Bill 158 Is Approved By Senate Committee, Moves To Full Senate Vote

Date: Thursday, February 16, 2012 10:19 AM

House Bill 158 (aka "PRB-1 for Ohio"), the legislation that will codify federal restrictions on local zoning of amateur station antenna structures, passed the Senate's State and Local Government and Veterans Affairs Committee yesterday, after the 6th hearing for this Bill.

The Bill is now given a green light to proceed to the Ohio Senate Floor for a full vote of the Senate. The Ohio Senate is not expected to convene for any voting for the next three weeks.

This is the furthest we have ever moved such legislation through the State House. I would like to thank Nick Pittner, K8NAP, State Government Liaison, and his team for their time and support in seeing this legislation progress through its stages.

As the time draws closer to the Senate meeting for vote, we will let all the Amateur Radio Operators in Ohio know how to contact their State Senator to ask for their support when the vote is called.

73,

Frank Piper, KI8GW

ARRL Ohio Section
Section Manager: Frank Piper, KI8GW
ki8gw@arrl.org

Now I'm off to prepare the box, which will contain the Binding posts, and coaxial connector. **Baluun Article by Charlie Scherger KB8STV**

This is an article about what modern Hams can build.

The equipment that Hams purchase and use today are technological orders of magnitude over what was available in the 1960's or 1970's. However, today's HAM has few choices available if they wish to design or build something from scratch on their own.

Yes, there are some fantastic kits on the market, and these are really good choices if one wants to melt some solder. As I write this article I recently read that Heath Kits was going to bring out some Kits on the market. This hasn't happen yet, but keeps looking.

MFJ and others have a line of kits that are a great starting point if one wants to "Melt Some Solder".

I recently purchased a Baluun kit, OK 2 years ago, at the Dayton HAMVENTION.

I decided to build a 9 to 1 and 4 to 1 Baluun. Attached is the description of this endeavor.

I started with the Amidon 200 kit which constituted of a Core and a hunk of wire.

No schematic or directions were included. This is not too much of a problem as the Internet contains many sites with schematics, descriptions and there are even u-Tube sites showing how it's done.

However, I just wanted to do it myself, hey what else can you do in Ohio's Dreary Winter Weather anyway. Hope you enjoy the process.

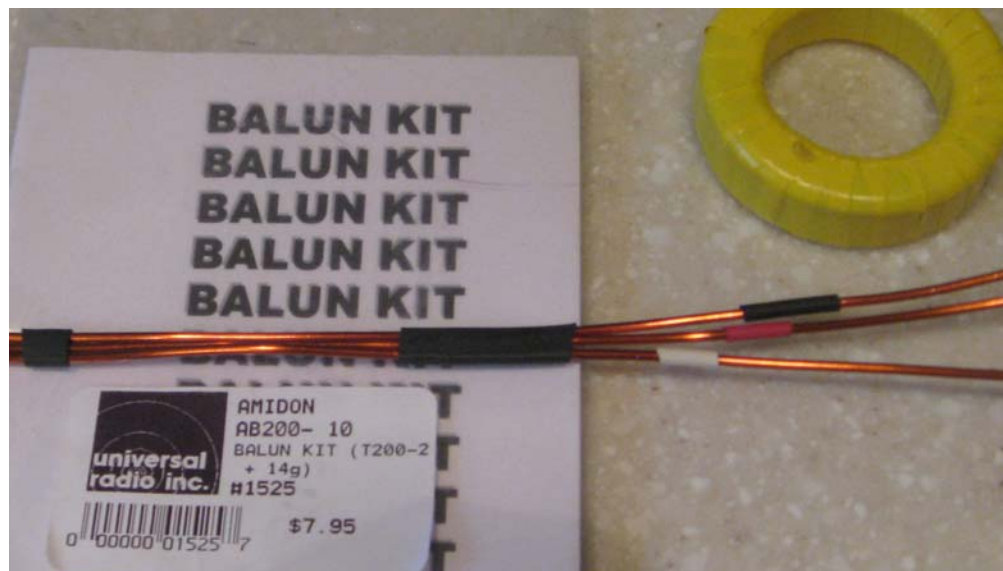


Photo of the Amidon Baluun kit. Kit consists of a AB 200-10 core and about 10 feet of

Number 14 enameled wire. I found the wire to be quite stiff and had to use care in winding the coil. I wrapped the coil with one layer of scotch brand yellow tape. The core's color is red. The Photo also shows the wire preparation. I used small pieces of heat shrink to group the wires together for ease of winding the coil. I also used three color coded pieces of heat shrink to make the ends of each wire group. Care must be used to visually verify the connections of the baluun as a DC continuity check will not give you an indication of a wiring mistake.

(Editor Note: This article is only half here. I am currently undergoing a computer change. The new computer has windows # 7 and to say the least I'm not too used to it as yet. Try as I may I could not get the other page to cut & past correctly, with the old computer! All I got was out of focus gibberish. So I will try again next month to print this article-- with the new computer !Plus Charlie has sent me two more articles along the same subject. Thanks de WC8W, MARC EDITOR)

March 2012

W8NP Monthly Planner

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																											
Upcoming Events: 4/14 - Saturday - Cuyahoga Falls ARC Hamfest 4/28 - Saturday - MS Walk				<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 150px;"> <p style="text-align: center; margin: 0;">Apr 2012</p> <table style="width: 100%; border-collapse: collapse; margin: 0;"> <thead> <tr style="border-top: 1px solid black; border-bottom: 1px solid black;"> <th style="width: 12.5%; text-align: center;">S</th> <th style="width: 12.5%; text-align: center;">M</th> <th style="width: 12.5%; text-align: center;">T</th> <th style="width: 12.5%; text-align: center;">W</th> <th style="width: 12.5%; text-align: center;">T</th> <th style="width: 12.5%; text-align: center;">F</th> <th style="width: 12.5%; text-align: center;">S</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">1</td><td style="text-align: center;">2</td><td style="text-align: center;">3</td><td style="text-align: center;">4</td><td style="text-align: center;">5</td><td style="text-align: center;">6</td><td style="text-align: center;">7</td></tr> <tr><td style="text-align: center;">8</td><td style="text-align: center;">9</td><td style="text-align: center;">10</td><td style="text-align: center;">11</td><td style="text-align: center;">12</td><td style="text-align: center;">13</td><td style="text-align: center;">14</td></tr> <tr><td style="text-align: center;">15</td><td style="text-align: center;">16</td><td style="text-align: center;">17</td><td style="text-align: center;">18</td><td style="text-align: center;">19</td><td style="text-align: center;">20</td><td style="text-align: center;">21</td></tr> <tr><td style="text-align: center;">22</td><td style="text-align: center;">23</td><td style="text-align: center;">24</td><td style="text-align: center;">25</td><td style="text-align: center;">26</td><td style="text-align: center;">27</td><td style="text-align: center;">28</td></tr> <tr><td style="text-align: center;">29</td><td style="text-align: center;">30</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> </div>	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">1</div> <p style="margin: 5px 0;">Massillon Radio Net - 3599.5, 1930</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">2</div> <p style="margin: 5px 0;">Massillon Amateur Radio Club Meeting, Senior Center, Massillon, 2000</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">3</div> <p style="margin: 5px 0;">BD KC8RPE</p>
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<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">4</div> <p style="margin: 5px 0;">Massillon Radio Net - 3599.5, 1930</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">5</div>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">6</div> <p style="margin: 5px 0;">Massillon Radio Net - 3599.5, 1930</p> <p style="margin: 10px 0;">Stark County ARES Net on 147.12 at 7:00 PM</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">7</div>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">8</div> <p style="margin: 5px 0;">Massillon Radio Net - 3599.5, 1930</p> <p style="margin: 10px 0;">VE Test Session, Cuyahoga Falls ARC, 1900, Bruce, 330-929-2766, Stow-Monroe Falls Public Library</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">9</div> <p style="margin: 5px 0;">West Stark Info Net - 147.180 at 2000</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">10</div> <p style="margin: 5px 0;">BD N8FEB MOVARC Hamfest, Gallopolis, OH, Ctc: Lester, KD8ZU, 740-256-1312</p>																																											
<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">11</div> <p style="margin: 5px 0;">BD WB8OWM Daylight Savings Time Begins</p> <p style="margin: 10px 0;">Massillon Radio Net - 3599.5, 1930</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">12</div>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">13</div> <p style="margin: 5px 0;">Massillon Radio Net - 3599.5, 1930</p> <p style="margin: 10px 0;">Stark County ARES Net on 147.12 at 7:00 PM</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">14</div>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">15</div> <p style="margin: 5px 0;">BD WA8GXM Massillon Radio Net - 3599.5, 1930</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">16</div> <p style="margin: 5px 0;">West Stark Info Net - 147.180 at 2000</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">17</div> <p style="margin: 5px 0;">Charleston (WV) Area Hamfest & Computer Show www.w8gk.org</p> <p style="margin: 10px 0; color: red; font-weight: bold;">St. Patrick's Day</p>																																											
<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">18</div> <p style="margin: 5px 0;">Massillon Radio Net - 3599.5, 1930</p> <p style="margin: 10px 0;">Toledo Mobile Radio Assoc. Hamfest, Ctc: Brian, WD8MXR, 419-385-5624</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">19</div> <p style="margin: 5px 0;">BD W8DEA</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">20</div> <p style="margin: 5px 0;">Massillon Radio Net - 3599.5, 1930</p> <p style="margin: 10px 0;">Stark County ARES Net on 147.12 at 7:00 PM</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">21</div>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">22</div> <p style="margin: 5px 0;">Massillon Radio Net - 3599.5, 1930</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">23</div> <p style="margin: 5px 0;">West Stark Info Net - 147.180 at 2000</p>	<div style="text-align: center; color: #800080; font-weight: bold; font-size: 1.2em;">24</div> <p style="margin: 5px 0;">BD K8KIP</p>																																											
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Please contact K8INN for updates, changes, or additions.

MASSILLON AMATEUR RADIO CLUB
P.O. BOX 73
MASSILLON, OHIO 44648

FIRST CLASS MAIL

TO:



75 Years in existence 1927-2002



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