



The
Wave Bender
March 2013

PRESIDENT'S QST

Here it is March already. The first quarter of the year means that Field Day will be happening in just three more months. For the last three years we have had the distinction of being in last place in our category in the Section. How about let's work harder this year and try to do a better job. Roy and Steve, our co-captains, will be working hard to put FD together. Why don't you tell them what you are willing to do this year? We need to have a good CW person. Will you, or do you know of someone that would be willing to come out and help us this year?

So far I have not heard from anyone about what they want to do for workshops, classes or speakers. Looks like everyone is happy with doing nothing!!! This is your club; it will only be as good as you are willing to make it. If no one is willing to pitch in and help then what do you really want from the club? As I have said before, "this is your club not mine." Everyone that is a member is responsible for what happens to the club. Sit back and do nothing and the club will fail. All the best clubs I have seen or been a part of, have had a lot of very active members. Give it some thought.

I am also looking for someone to step up and take the Presidents position and the Secretary's position for next term. By the bylaw we cannot run again. Give it some thought and let me know so that they can come to the board meetings and see how things are run. Anyone who wants to speak to me, I am always available - 330-549-3051.



73, AB8AA

March 14 is National Pi Day- Why? Because 3.14, the value of Pi.



Officer's Meeting: March 17, 7:00 P.M. At the Avnet's (330-549-3051)

Regular Meeting: March 19, 7:00 P.M. Davidson's, 3636 Canfield Rd. in Cornersburgh

Speaker: Wes Boyd - Mahoning County EC

Topic: Field Day Antennas, and some Show & Tell

2013 Officers:

President:	Al Avnet, AB8AA	ab8aa@arrl.net
VP:	Robert Webster, KD8OXJ	rswebster@mail.com
Secretary:	Jane Avnet, K8JAA	k8jaa@arrl.net
Treasurer:	Maureen Stein, KD8NXS	mfstein@zoominternet.net
Trustees:	Ted Filmer, KD8IJE	efilmer@aol.com
	Roy Haren, KD8IJF	harens@juno.com
	Fabry, KC8SOY	kc8soy@yahoo.com

Appointed Positions:

Social:	Maureen Stein, KD8NXS	mfstein@zoominternet.net
Publicity:	Robert Webster, KD8OXJ	rswebster@mail.com
Newsletter/Web:	Jane Avnet K8JAA	k8jaa@arrl.net
Badges::	John Fabry, KC8SPF	jonnyjukebox@sbcglobal.net

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

SOMETHING OLD – SOMETHING NEW – SOMETHING BORROWED . . .



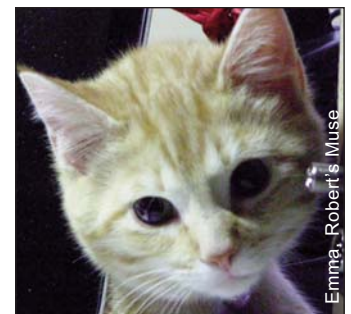
27 January 2013 – In my stack of “overdue” documents for reading this week was the March edition of QST. Since I became a ham, the annual antenna issue of QST has drawn my interest. This entire fixation with things that radiate or capture RF began in my early teens growing up in one of Jamestown New York’s west side neighborhoods. Much to the chagrin of my mother, I had installed an array of thin wire dipoles in the tops of some very tall trees, climbing the trees rather than using a ladder, around our duplex. The most shocking point of this was her discovery of them one winter when the leaves had dropped...and the fact they had been up for over a year. The experimentation I did with them had taught me just how critical antenna length, material size, and positioning were in picking up the “shortwave” stations I regularly listened to and enjoyed. This learning was further enhanced during my stint in the US military forces working primarily in aviation.

Here we are in 2013. Our radio technology is generally better in many ways than it has ever been. We don’t have to tinker with our rigs as much as previous generations of hams did. But then...there is the lowly antenna. If I were speaking to a non-ham about our antennas, I would place their importance as equal to the ignition system in an automobile. If it doesn’t work properly...you don’t “go” anywhere.

Home built antennas are one of the last bastions of fairly affordable, and relatively “easy” means of, experimentation hams have. It is a well-known fact that some simple, well-tuned, pieces of wire perform equally as well as antennas that could cost you a month’s income. Ask anyone who successfully runs QRP and owns numerous QSL cards or reports from places quite far away. A lot of sophisticated tools aren’t really needed, save for an available antenna analyzer, to get an antenna built, installed, and tuned.

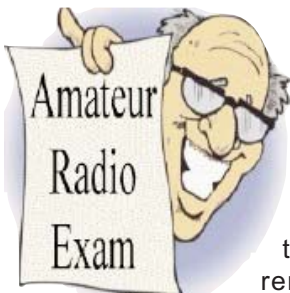
Reading some of the older ham radio literature it is also apparent the technology of antennas hasn’t changed that drastically since the mid twentieth century. It is true there are some better materials and more complex configurations...but at the end of the day glitz and complexity really don’t matter, performance does. It reminds me of the saying, “something old, something new, something borrowed...” The principles that drive RF transmission and reception have been around for a long time. The materials and configurations we have are new to some degree. We really do borrow a lot, related to antennas, from each other and those who have come before us.

In this day and time many things in the hobby are pre-built for us. Having real antenna building skills, knowing what the antenna “does,” how it performs in its configuration, and how it “shakes hands” with your equipment are golden nuggets. Those simple pieces of wire hung between trees or masts, or run up a pole are really remarkable, and vitally important, pieces of gear.



-73- Robert (KD8OXJ)

FEBRUARY, 2013, TEST SESSION



The February test session for any Ham who wanted to test was held February 20. Hams who were at the test session that evening were: Michael Roberts KD8UCZ, who is now a Technician; Rich Potts AC8NM, who upgraded to Extra!; Kenneth Miller N8VTI who upgraded to General. Congratulations to the new Tech, and new General, and to the new Extra!

Rich came to us for his Technician test which he passed, then ‘tried’ the General, passed again, so we gave him the Extra so he could see what he would need to study. He PASSED that test too! Needless to say, WOW, and this is a very rare occurrence. Oh yes, I think he said he has a handheld.

The VEs, who graded the W5YI test session, were Al Avnet, AB8AA, contact VE; Dave Beaty, KC8WY; Jane Avnet, K8JAA; Jim Jickess, KB8QDZ; Robert Webster KD8OXJ; Roy Haren, KD8IJF; Wes Boyd, W8IZC. Thanks to everyone for all your help.

I would rather attempt something great and fail, than attempt to do nothing and succeed.

UPCOMING WRARC EVENTS

- Home & Garden Show - March 22, 23, & 24
- Field Day - June 22 & 23 Setup June 21
- TOV July 12 & 13
- Club Picnic July 16
- Diabetes Walk October 20

SHOW YOUR SUPPORT, PARTICIPATE

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; AB8AA, KD8OXJ, KD8SNA, KB8UUZ, N6ISY, W8IZC, W8DEC, WA8MKH/WA8WHP, N8SY, W5YI, the ARRL and the World-Wide Web.

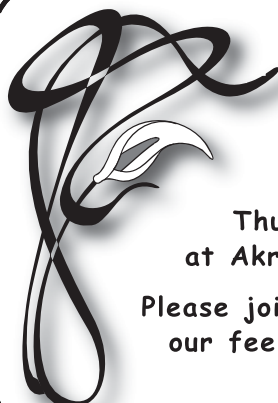
BUS TRIP TO HAMVENTIUON

Bus Trip to Hamvention® 2013

The best deal at the Dayton Hamvention® is in Akron, Ohio! On Saturday, May 18th, the Pioneer Amateur Radio Fellowship is again offering a day trip to the Dayton Hamvention®. Just \$65 gets you a trip down, and back, and your Hamvention® ticket as well! Bus leaves at 5:30 AM, from the Akron Baptist Temple, and will pull up to the Hara around 9:00 AM. After a fun-filled day at the Hamvention®, we stop at the Golden Corral in Columbus for dinner, then arrive back in Akron shortly after dark. For more information, and a sign-up form: <http://w8lky.org/wp-content/uploads/2013/01/Dayton-Bus-Trip1.pdf>



73, John, KD8MQ
From the PCARS Newsletter, "The Radiogram."



Members Leon, N8GLK,
and Mary jo, KD8GGZ,
Loveland

Leon's grandson
Nick Reed, 20, passed
Thursday, Jan. 31, 2013,
at Akron Children's Hospital

Please join me and Al in expressing
our feelings of sadness at their
loss.

Join us for the WRARC
Friday night Net 9:00 P.M.
145.270, PL -110.9

This is our weekly net, with
all interested members
taking a turn at
Net Control
Contact Steve, KC8SOY
to take a turn
330-774-6346

Upcoming Net Control Operators

- 3/1 Darrin N8DMC
- 3/8 Chris KD8ELY
- 3/15 Sam W8SDD
- 3/22 Dave KD8NZF
- 3/29 Robert KD8OXJ
- 4/5 Dennis KD8SNA
- 4/12 Joe KD8RCC
- 4/19 Jane K8JAA
- 4/26 Steve KC8SOY

Ask The Elmer Net
Right after the Friday Night Net
KC8SOY Moderator

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 the
message handling capabilities of
FLDIGI/FLMSG. Start with BPSK-125 other
modes may be used for testing

State Wide Tornado Drill
9:50 A.M. March 6
3875 KHz



GREATER YOUNGSTOWN HOME & GARDEN SHOW 2013

IT IS CONFIRMED, WRARC WILL BE AT THE AUSTINTOWN SHOW - FREE OF CHARGE - Greater Youngstown Home & Garden Show 2013 is one of the most important event related to the Home Renovation, Landscaping & Garden sector in United States Of America. This leading event will start on 22 March 2013 and it will end on 24 March 2013. Greater Youngstown Home & Garden Show 2013 will take place at Austintown Exposition Center in the city of Austintown, OH. This important trade event is being organized by Special Event Coordinators Inc. Fri. 12pm-9pm. Sat. 10am-9pm, Sun.10am-5pm

THANKS TO Johnny Jukebox, KC8SPF, for sponsoring the booth. We will need volunteers to help work the booth. Please help if you are able.

<http://www.tradeshows.com/trade-event-detail/greater-youngstown-home-and-garden-show.html>

+++ Ohio Member Appointed to ARRL Committee +++

John (Jack) Sovik KB8WPZ of Youngstown, OH has been appointed to the ad hoc ARRL Public Relations Committee. The appointment was made by ARRL President Kay Craigie, N3KN following consultation with your Director.

As Committee member, John will help provide guidance to the ARRL Pubic Relations staff in its effort to promote Amateur Radio as well as to assist in developing and enhancing the programs of public information officers (PIO) of local clubs. Congratulations, Jack.



THE OFFICIAL SPONSOR OF BIRTHDAYS.®

AMERICAN CANCER SOCIETY SEVENTH ANNUAL

Pan Ohio Hope Ride

328 miles >> Cleveland >> Columbus >> Cincinnati

JULY 25-28



2013

The American Cancer Society Pan Ohio Hope Ride (POHR) is looking for amateur radio volunteers. This event is a 328 mile bicycle ride from Cleveland to Cincinnati spanning 12 counties in four days. I am looking at this event as a "all hands on deck" type of event. Amateur radio plays a key role in event logistics and safety communications. With approximately 500 cyclists out traveling the back roads and bike trails of Ohio, we really could use all the help we can get. We're primarily looking for Net Control Stations and operators to be stationed at start, finish, water stops, and strategic locations throughout the course. The Pan Ohio Hope Ride committee is very grateful for the efforts, experience, and expertise many hams bring to the table. Visit the ARES page on the Ohio Section website www.arrl-ohio.org for amateur radio details. Check out www.panohiperide.org for ride details.

http://main.acsevents.org/site/TR?fr_id=53354&pg=entry

73 de Matt W8DEC

Check this site out:

HamSphere Newsletter! http://www.hamsphere.com/23_21904_read.html



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

Avnet, Allan AB8AA	Antennas, radio setup, mobile, grounding, classes, anything	ab8aa@arrl.net
Beatty, Dave KC8WY	anything	kc8wy@zoominternet.net
Fabry, Steve KC8SOY	Yaesu FT8900, FT8800, Mobile	kc8soy@yahoo.com
Haren, Roy KD8IJF	???	harens@juno.com
Webster, Robert KD8OXJ	erecting antennas	rswebster@mail.com
Williams, Russ NR8W	Electrician, tele-data, Amateur Extra	russellwhoknew69@aol.com

Articles from members for the Wave Bender are encouraged. They must be received by the editor three days 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

2013 FIELD DAY



It's never too early to start thinking of ARRL Field Day. Unfamiliar with Field Day? It's a 24 hour nationwide exercise always held the fourth full weekend in June. This year it will be held June 22nd and 23rd. ARRL Field Day is the single most popular on-the-air event held annually in the US and Canada. More than 35,000 radio amateurs gather with their clubs, groups or simply with friends to operate from remote locations. The 2013 Field Day packet is available for download from the ARRL website www.arrl.org.

Fun fact. According to http://www.independentsector.org/volunteer_time, the estimated value of volunteer time in 2011 is \$21.79 per hour. Check out the website to see how they came up with that number.

Some people think volunteering is on the decline. Here is some information I found to refute that statement. According to http://www.volunteeringinamerica.gov/,

In 2011, the number of volunteers reached its highest level in five years, as 64.3 million Americans volunteered through an organization, an increase of 1.5 million from 2010. Americans volunteered a total of almost 8 billion hours, an estimated economic value of roughly \$171 billion. A majority of Americans assisted their neighbors in some way and more than a third actively participated in a civic, religious, or school group. Americans overwhelmingly volunteered in schools or with other youth organizations, working to advance the lives of young people. Nearly three out of five volunteers aged 25-54 are parents to children who are under 18. These parents volunteered well above the national average, focusing on helping fill local needs while also serving as role models—showing their children that community involvement is a critical choice and habit that can improve lives.

In final, there is no right or wrong answer when it comes to your arsenal of communications. It's all about what works for you. When it comes to emergencies and disasters, being prepared will lead you to being ready. Being ready will help make you a part of the solution and not part of the problem. That's all for this month. As always, I thank you for everything you do for amateur radio.

73 de Matt W8DEC

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

FIELD DAY 2013

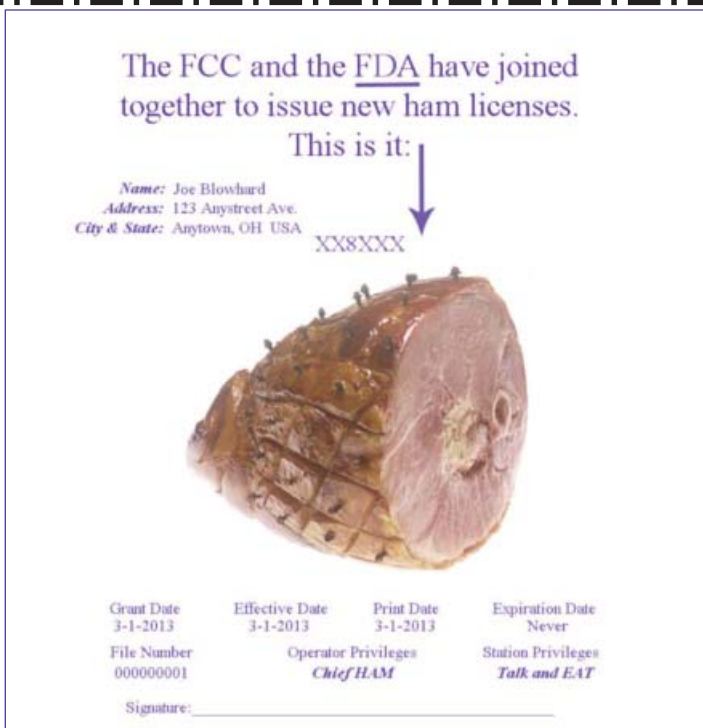


Our Field Day co-captains, Roy & Steve, have two objectives for WRARC 2013 Field day.

The first objective is to conduct a Field Day event that everyone can enjoy whether you are operating, helping out, or just visiting. Second is to be as competitive as we can in Class 7A, or what ever

class we will be, and generate as many contacts and points as we can. We really want to come up from last place in the Ohio Section, where we have been for the last two years.

For those that are interested, the ARRL has made the 2013 Field Day package available on its web site, <http://www.arrl.org/field-day>. The Field Day Team is already partially staffed, have you volunteered?



NOTES FROM MATT

Ohio Section ARES Summary.

Out of 88 counties in Ohio, there are 67 counties with an Emergency Coordinator or ARES program. 21 vacant counties. We have one Section Emergency Coordinator, one Assistant Section Emergency Coordinator. We have 10 District Emergency Coordinators and 5 Assistant District Emergency Coordinators. We have 67 Emergency Coordinators. This brings us to a total of 84 volunteer ARES appointments.

Please review the ARES page on the Ohio Section website www.arrl-ohio.org for a complete listing of vacant counties. Anyone wishing to become an Emergency Coordinator in one of the vacant counties should contact the District Emergency Coordinator of the district in which the county is in.

I wanted to take a moment to discuss the SKYWARN™ program. Especially considering SKYWARN training started this month in some parts of Ohio. Contact your Emergency Coordinator or SKYWARN Coordinator to find a spotter training near you.

SKYWARN is a program sponsored by the National Weather Service. The program is not just for amateur radio operators as it's open to all who wish to become SKYWARN spotters. However, we as amateur radio operators, have an important role in the SKYWARN program. We use our equipment and training to properly report severe weather reports directly to the National Weather Service Forecast Office. How cool is that! Despite popular belief, it's a well known fact that ARES® is not SKYWARN. Let me explain.

As stated many times before, the Amateur Radio Emergency Service is part of the ARRL Field Organization. The ARRL encourages amateur radio operators to volunteer along side other programs like SKYWARN, RACES, REACT, etc. However, in Ohio many ARES teams take on or incorporate the SKYWARN aspect into their county ARES program. First off, there is absolutely nothing wrong with that. Why? Because let's face it...we just do not have enough volunteers to maintain two separate and completely different programs. Besides, many ARES volunteers are SKYWARN spotters anyhow.

Regardless if your ARES team does SKYWARN or not, keep in mind ARES is ARES and SKYWARN is SKYWARN. Let me further say, if your ARES team does SKYWARN, all of that time counts on the monthly EC report. It's amateur radio benefiting the community and a served agency. Why shouldn't it count? But a line needs to be drawn somewhere.

If you ARES team does not do SKYWARN, meaning there is a SKYWARN group and a separate ARES team, then please do not include that time. I do not wish to report time of another group. Feel free to contact your Emergency Coordinator should you have any questions.

Training. Basic Deployment Checklist. From page 10 of the ARES Field Resources Manual. This manual is a free download available in PDF from <http://www.arrl.org/files/file/ARESFieldResourcesManual.pdf>

When responding to an emergency event, or even a training exercise [or public service event], there is a minimum set of equipment and personal gear you should bring with you to get the job done. Basic items include:

- 2-meter hand-held transceiver
- 2-meter magnet mount antenna and coax
- Earphone [and/or speaker mic]
- Paper and pencil
- ARES ID card
- Extra batteries
- Appropriate clothing Food and water



The majority of these items should be kept in a "Ready Kit." Similar to the one pictured. Just pick it up on your way out the door for deployment.

73 de Matt W8DEC

These notes will also be available on the ARES page at www.arrl-ohio.org



Matthew Welch W8DEC
Ohio Section Emergency Coordinator
ARRL - The National Association for Amateur Radio™
w8dec@arrl.net
440-585-7388

Preparedness Leads to Readiness

He who is afraid of asking, is afraid of learning

OHIO SECTION YOUTH AND EDUCATIONAL OUTREACH PROGRAM ANNOUNCED



During the ARRL forum held at the Mansfield Mid-Winter Hamfest on Sunday, February 17, 2013. Ohio Section Manager Frank J. Piper, KI8GW announced the formation of a new program in the Ohio Section, "Youth and Educational Outreach". The goal of this program is to assist Schools, Youth Organizations, and Amateur Radio Clubs in educating our youth about Amateur Radio.

There are many programs and grants the ARRL offers to teachers and schools, which may go unnoticed simply because they are just not aware of how the science and technology of Amateur Radio can be brought into the classroom. There are many Boy/Girl Scout events which demonstrate Amateur Radio, and then the kids simply go back to their home councils, and never have the chance to research the hobby further. And, many Amateur Radio Clubs wish to develop younger members, but simply do not know where to gather resources to start a prosperous Elmer program. That is where this new program will come in.

The Educational Outreach program will be headed up by E. Mike McCardel, KC8YLD, who will vacate his Affiliated Club Coordinator position to assume an Assistant Section Manager (ASM), Youth and Educational Outreach appointment, heading up a team of three other Assistant Section Managers, each with a responsibility for various aspects for this program. Those new ASM positions will be:

- ASM Radio Scouting
- ASM Youth Outreach
- ASM Educational Outreach

We are looking for applicants to fill these three roles. Applications should submit their qualifications to the Section Manager no later than 11:59pm local time, Thursday, February 28, 2013. After applications are submitted, selected candidates will be interviewed by E. Mike McCardel and the Section Manager. Appointments will be announced no later than March 20, 2013.

If sounds like something that interests you, go to http://arrl-ohio.org/sm/Section_News.html to read the descriptions and requirements for each ASM position:

We look forward to hearing from all potential applicants for these positions. This is an exciting project that the Ohio Section is undertaking. We need passionate and talented people to make this project a success.

This will not be an easy program, and those volunteering may reach alot of dead ends. But I'm one of those people who say "Throw thespaghetti on the wall, and see what sticks". Any win from thisprogram is a huge win for the youth of Ohio.

As with E.Mike, I ask all the clubs in the Ohio Section, look into yourfuture plans, do they include a Youth Outreach? Has our club put on a demonstration, or made a contribution of materials to your local library? When your ARES group is providing help at a public service event, are you hidden in the shadows? Get visible and get active.

Let's show the public what Amateur Radio can do these days. I look forward to seeing you at future Hamfest visits and club meetings!

73, Frank J. Piper, KI8GW
Ohio Section Manager
ki8gw@arrl.org

KIND WORDS FROM THE ACC

Western Reserve ARC holds an After the Holidays party in lieu of a January meeting. The meeting had another purpose, to present Mike Austin of Warren with long range ham equipment that speaks. Austin is visually impaired and just passed his test to be a General class operator. Unfortunately, he was sick but the club had nothing but good things to say about his contributions. "He's a very, very key radio operator here in the Valley because he's, for someone whose visually impaired, he's (acted as) the Network Control Operator, he is there and he's available and this piece of equipment that we want to present him with today would extend his reach beyond just the Valley," said Vice President of the Western Reserve Amateur Radio Club, Robert Webster. The club spent about a year raising the money to buy the equipment. During the event they were visited by local TV stations.

Remember - Get out of Meeting Mode!

73, E.Mike McCardel, KC8YLD
Ohio Section Affiliated Club Coordinator (interim)
kc8yld@arrl.net

ANTENNA ANALYZER BASICS

There are several manufacturers of antenna analyzers. The following instruments, MFJ 259, 259B, and 269 were available to use as examples.



The model 259 is the oldest of the three. The manual, copyrighted 1998, lists the available functions. Direct readings include Frequency, and Analog SWR and Resistance. The model 259 readings (plus a calculator), allow advanced functions listed in the manual: Measuring capacitance & inductance, Testing Baluns & RF transformers, Testing RF chokes, Velocity Factor of Transmission Lines, Impedance of Transmission Lines, Estimating transmission line loss, and adjusting tuners. Read the manual for more information. Of the three models, the Model 259 (even though it is older) has the highest resolution and accuracy of the frequency counters. The counter displays to 1 Hz and is internally adjustable for accurate calibration.



The model 259B is the next of the three. The manual is copyrighted 1998. The inside printed circuit board is dated 2002. Direct readings include Frequency, Analog and Digital reading of SWR, Impedance, and more in the advanced modes. The manual lists the same functions as the model 259 although now with built-in display as well as advanced functions such as: Magnitude of Impedance, Return Loss and Reflection Coefficient mode, Distance to Fault, Resonance, and Percentage Transmitted Power. Read the manual for more information. The frequency counter does not appear to be adjustable and only has a resolution to the nearest 100 Hz. Calibration specification elsewhere on the web states that this counter is within 5 KHz. To obtain more accuracy, a suggestion is to compare this counter with an accurate counter at 2 meters such as 146.520 and note the difference. Determine a number to multiply the Model 259B readings to obtain a final accurate value. Then place a label with this multiplier on the case for future reference. This model contains a newer type of detector diodes that can be easily damaged if the instructions are not carefully followed.

this multiplier on the case for future reference. This model contains a newer type of detector diodes that can be easily damaged if the instructions are not carefully followed.



The model 269 is the latest of the three. The manual is copyrighted 2002. The inside printed circuit board is dated 2002. Direct readings include Frequency, Analog and Digital reading of SWR, Impedance, and more in the advanced modes. The manual lists similar functions as the Models 259 & 259B. An addition to this model is the 415 to 470 MHz range. The frequency counter does not appear to be adjustable and only has a resolution to the nearest 100 Hz. Calibration specification elsewhere on the web states that this counter is within 5 KHz. To obtain more accuracy, a suggestion is to compare this counter with an accurate counter at 2 meters such as 146.520 and note the difference. Determine a number to multiply the Model 259B readings to obtain a final accurate value. Then place a label with this multiplier on the case for future reference. The manual notes that this model contains a newer type of detector diodes that can be easily damaged if the instructions are not carefully followed. In addition, the manual lists (many times) the procedure before pressing the UHF switch to the on position. The

owner installed a label next to the UHF switch to notify of the proper procedure.

The analyzers can be easily damaged if instructions are not followed. Here are some important guidelines:

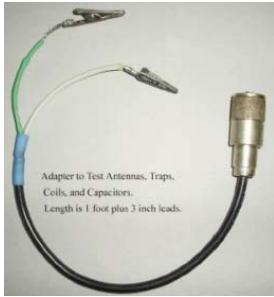
- Antenna leads should be momentarily shorted together to remove static charge before connecting to the analyzer. When strong wind is blowing or when there is a storm, charges can build up on an antenna especially in low humidity environments. Do not use the analyzer during these conditions.
- Do not connect the analyzer to any antenna when there is a transmitter operating nearby, such as field day. Make all antenna adjustments before allowing transmitting equipment to be operated.
- Never apply any voltage to the input to the analyzers since the diodes can be very easily damaged.
- Remove batteries when analyzer is in storage. If in doubt when the analyzer will next be used, remove the batteries. When batteries are installed, store the meter with the back down, so if for some reason there is a battery leak; it will fall onto the back instead of onto the PC board.
- The older 259 battery side holding clips, made of metal, can short the battery pack. Install insulating paper between the battery and the metal clips.
- An AC adapter is recommended in place of batteries when possible

Continued page 9

ANTENNA ANALYZER BASICS - CONTINUED FROM PAGE 8

Homebrew Accessories:

A homemade adapter for checking antennas as well as traps and resonant circuits.



Use the type of RG58 that has a stranded center conductor. The overall length is approximately 1 foot but not critical. Suggest about 3 inch leads.

The clips can be connected to the antenna or parallel connected coil/capacitor combination.

Use heat-shrink tubing to insulate the shield.

The adapter in use checking a 20 meter trap. The clips are connected together, forming a loop.

Start with the lowest frequency. Slowly tune the analyzer for a dip in the SWR meter. Move the loop away from the coil about 1/2 inch at a time and repeat the procedure until the dip covers about 1/2 of the SWR meter red section. Read the frequency on the analyzer. This is the resonant frequency.

The adapter may work on other analyzers but has not been tested. The adapter simulates the function of the older grid-dip meters with reasonable results.

Careful study of the manual will help to protect your investment for many years.

The items covered in this article do not constitute endorsement of the products mentioned or the exclusion of items not mentioned.



73 de Mike, WA8MKH, Via email.

Forwarded by Frank Sanor, WA8WHP, Alliance, OH 44601

Check out Where Is This Mind-Blowing Antique Transforming Desk Hiding Its Autobot Logo?
<http://gizmodo.com/5967661/where-is-this-mind-blowing-antique-transforming-desk-hiding-its-autobot-logo>

From: N8DUQ



Local 2013 SkyWarn Training SESSIONS

Mahoning Skywarn
 Wednesday, March 20, 2013
 Austintown Fitch High School, Auditorium - 4560 Falcon Drive,
 Austintown, OH 44515
 Doors open/check in 5:15pm, Class starts 6:00pm

Trumbull Skywarn
 Tuesday, March 19, 2013
 Warren, OH, Trumbull County 6:30 pm
 Kent State Branch, Technology Building, Room 117
 4314 Mahoning Ave., Warren, OH 44483








Portage Skywarn
 Wednesday, March 3, 2013
 Maplewood Career Center, 6:30 pm
 7075 State Route 88, Ravenna, Ohio 44266

Columbiana County Skywarn
 Tuesday, March 19, 2013
 Columbiana County Career and Technical Center (CCCTC).
 Registration at 6:30PM, training at 7:00PM.
 Call the Columbiana County EMA to pre-register at 330-424-9725

March 2013



PREPAREDNESS LEADS TO READINESS

					<p>1</p> <p>WRARC Net 9:00PM 145.270</p>	<p>2</p>
<p>Ratio of an igloo's circumference to its diameter = Eskimo Pi</p>						
<p>3</p>	<p>4</p> <p>Happy Birthday KD8QQR </p>	<p>5</p>	<p>6</p> <p>Skywarn Net 8:30 P.M. 146.745</p>	<p>7</p>	<p>8</p> <p>WRARC Net 9:00PM 145.270</p>	<p>9</p>
<p>10</p> <p>Daylight Savings time starts 2:00 A.M.</p> 	<p>11</p>	<p>12</p> <p>Eat'n Park Boardman 8:30 A.M. Ham Community Breakfast</p>	<p>13</p>	<p>14</p>	<p>15</p> <p>WRARC Net 9:00PM 145.270</p> <p>Ides of March</p>	<p>16</p>
<p>17</p> <p>WRARC Board Meeting 7:00P.M.</p>  <p>Saint Pat's Day</p>	<p>18</p>	<p>19</p> <p>WRARC Meeting 7:00P.M Davidson's</p>	<p>20</p> <p>Spring Begins 7:02 A.M.</p>  <p>SkyWarn Training</p>	<p>21</p>	<p>22</p> <p>WRARC Net 9:00PM 145.270</p>	<p>23</p>
<p>24</p> <p>31</p> <p>HAPPY EASTER</p>	<p>25</p>	<p>26</p> <p>Eat'n Park Boardman 8:30 A.M. Ham Community Breakfast</p>	<p>27</p>  <p>Wave Bender Articles Due</p>	<p>28</p>	<p>29</p> <p>WRARC Net 9:00PM 145.270</p> <p>Happy Birthday WB8LCD </p>	<p>30</p> <p>Happy Birthday KD8NFD </p>