



The  
**Wave Bender**  
July 2013

PRESIDENT'S QST

Field Day has come and gone. If you did not show up, it was your loss, you missed a great time. The food was good and the bands were OK, they could have been better. I want to thank Roy, KD8IJF, Steve, KC8SOY, and Maureen, KD8NXS for a job well done. I also want to thank all the operators and helpers that made this year's Field Day a success; we could not have done it without you.

This is a very important year for WRARC. This is the big election year. I need to have 2-3 members step up and run the nominating committee. We have to elect a President, Vice President, Secretary and a one Trustee. Start thinking about which position you would like to fill. If no one decides to run, it could be the end of WRARC. If you are interested in an office and want to know what it requires please contact me.

We have a good standing in the area. I have heard a lot of good things about where the club is going and what it is doing. Let's keep it going.

Classes will be starting in September, I would like it if anyone is interested in helping teach would contact me. Talk up the hobby and the club. See if you can get someone interested in becoming a HAM. Remember this is the best club in the valley, let's keep it that way.

**Communications Unit News**

The meeting last month was canceled because of Field Day. If you are a member, and do not want to continue, please contact me. If you would like to join us contact me. Anyone interested in the Rapid Response Team please contact me.

We are going to start an Fldigi round table in the near future. It will meet once a week or more as things progress.  
73, AB8AA



**Officer's Meeting: July 16, 7:00 P.M.** At the Avnet's (330-549-3051)

**Regular Meeting: July 18, 7:00 P.M. Club Picnic!** At Western Reserve United Methodist Church on Canfield Rd. Bring a covered Dish, and enjoy a lovely summer evening with friends. Family members welcome!

2013 Officers:

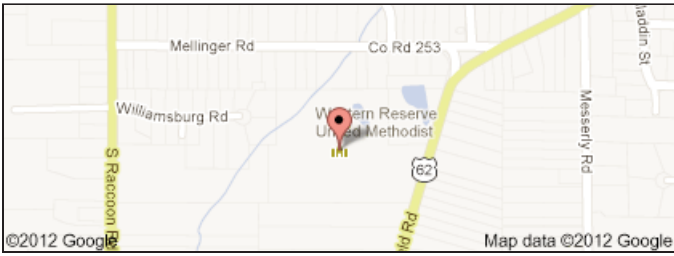
President:	Al Avnet, AB8AA	ab8aa@arrl.net
VP:	Robert Webster, WR8RW	wr8rw@arrl.net
Secretary:	Jane Avnet, K8JAA	k8jaa@arrl.net
Treasurer:	Maureen Stein, KD8NXS	mfstein@zoominternet.net
Trustees:	Ted Filmer, KD8IJE	efilmer@aol.com
	Roy Haren, KD8IJF	harens@juno.com
	Steve Fabry, KC8SOY	kc8soy@yahoo.com

Appointed Positions:

Social:	Maureen Stein, KD8NXS	mfstein@zoominternet.net
Publicity:	Joe Wojtowicz, KD8RCC	jtwojo@sbcglobal.net
Newsletter/Web:	Jane Avnet K8JAA	k8jaa@arrl.net
Badges::	John Fabry, KC8SPF	JohnnyJukebox@sbcglobal.net

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

2013 ANNUAL JULY CLUB PICNIC



It's hard to believe that we're almost half way through summer, and it is now time for our annual picnic in lieu of our regular meeting night. As has been in the past, the picnic will be held on our regular meeting night Tuesday, July 16, at 6:00 P.M. The location is also the same venue as the last two years, the Western Reserve United Methodist Church on Canfield Rd. (Rte. 62), a mile or so west of Davidson's. Many thanks go out to

the church for allowing us to use their very wonderful picnic grounds and to Ted Filmer KD8IJE for making the arrangements. We will be back at Davidson's for the regular meeting in August.

Unfortunately, my family and I will be away and won't be able to be there. Donna Haren has graciously come forward to set up, and to finish coordinating the event. I know she will do a really good job. Many heartfelt thanks go out to her, as well. For anyone who would still like to sign up for a pot luck dish, please contact Donna at 330-782-8525 (or by email <harens@juno.com>). If you and any family members are planning to come and have not signed up yet, please call Donna so that you can be included in the head count. This is needed so we will know how many hamburgers, hot dogs, and buns to purchase. Family members are always welcome!

Once again it will be a fun event. There will be lots of socializing (always a plus). Be ready for some ham radio trivia, or what ever Robert has planned, and for another t-hunt. Remember to bring your hand-helds and any T-hunt antennae you may have. Mostly come and relax and have fun. Sorry the Stein clan can't actually be there this year, but we will be there in thought. Enjoy!

Maureen KD8NXS

WHAT'S COMMING UP?

**Tour of the Valley, July 12 & 13** - Please volunteer - Contact Al or Jane 330-549-3051 with your shirt size.

**July 16** - The WRARC Picnic. Let Donna 330-782-8525 or by email <harens@juno.com> know what you will be bringing to our Pot Luck! Hot Dogs, Hamburgers, and condiments are provided by the Club.

**The August 20 meeting** is scheduled to be "Show and Tell". Robert would like our club members to send an e-mail along to him with:

- Their name and call sign
- The project, or other ham related effort, they have have built or participated in

The projector and screen will be available if anyone needs it to present their project or effort

Testing all license classes Saturday, **August 21**, 6:30 P.M. at ITT.

**Diabetes Walk Sunday, October 20** - Please volunteer - Contact Al 330-549-3051.

YOUR HELP IS NEEDED



Tour of the Valley will return in 2013 for it's fifth edition with even more riders, cash and prizes! Please volunteer - Contact Al or Jane 330-549-3051 with your shirt size.

Volunteer to help us July 13, in Columbiana County! This Public Service event is Ohio's largest three-day cycling stage race, held every July, will soon become an international event, if it hasn't already happened. Last year riders from Europe participated.

Our job is to protect the riders. The course is very hilly and there are some hairpin turns just to challenge the riders. This event is, or will be, considered a 'training' event for those riders who will go on to race in the Tour de France.

Please volunteer - Contact Al or Jane 330-549-3051 with your shirt size.

**WRARC Communications Unit Net Friday Nites 8:00P.M.  
145.270, PL -110.9  
Net Control will be rotated**

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

**Upcoming Net Control Operators**

July 05 Dave KC8WY  
July 12 John KC8SPF  
July 19 Joe KD8RCC  
July 26 Al AB8AA  
Aug. 16 Maureen KD8NXS  
Sept. 20 Maureen KD8NXS

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

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

**Mahoning County ARES® Nets**

**1<sup>st</sup> Monday 8.30 PM ET W8QLY Repeater - 146.745 (PL 110.9)  
&**

**3<sup>rd</sup> 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 the 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.**



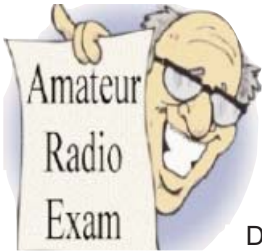
Thanks & 73

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; AB8AA, KD8NXS, KD8SNA, KB8UUZ, W8IZC, W8DEC, N8SY, W5YI, the ARRL and the World-Wide Web.

**Never hate people who are jealous of you,  
but respect their jealousy.  
They're people who think you're  
better than they are.**

VE TESTING IN JUNE



We had two test sessions in June. On the nineteenth, and at our Field Day site Saturday, June 22. The VEs at one or both sessions were: Al Avnet, AB8AA, contact VE; Dave Beaty, KC8WY; Jane Avnet, K8JAA; Roy Haren, KD8IJF; Jim Jickess, KB8QDZ; Dave Brett KD8NZF; Wes Boyd, W8IZC. Thanks for your help.

We had seven testing at our Wednesday night test session for Tech., General and Extra. Of these there is now one new Extra, Robert Burgoon KK4JBO, three new Generals, David Hartzler KC8NEH, David Salmen WB8IBA, and Thomas Simpson KC8UQY, and two new Technicians Carolyn Kuhns KD8VET and Philip Wightman KD8VEU.

At our Saturday morning Field Day test session we had three testing. Jason Hurford KD8VFI and Handsome Powell KC3AVM both passed their Technician tests. Congratulations to all of you.

FROM THE FIELD DAY DESK 2013

Field day 2013 has passed and we are looking now for a new location for 2014. I would like to thank everyone that helped me with setting up our site. Many thanks to Dennis, KD8NSA, for bringing out his generators to our site. Thanks to Joann for her helping me with everything. Thanks to Darrin, N8DMC, our Tech class burger flipper. Darrin and I only lost two burgers and one hot dog - Darrin, job well done. Thanks to Al AB8AA for the antenna trailer and all of your hard work. John KC8SPF let us use the big write on board that we had out front for information at our site. Maureen KD8NXS many thanks for your hard work in getting dinner set up another job well done. It was very nice to see everyone for dinner Saturday. W8WRC had designation was Ten alpha - job well-done operators



W8WRC will be looking for a new site for 2014 so keep your eyes open. If you come across a good location, please let one of the officers know about it. I hope that everyone had a good time at field day this year.

73 KC8SOY Steve

*A reminder from a good friend Tom KB8UUZ - "Only 363 days until Field Day 2014!" - sent 23 June 13*

FIELD DAY IN REVIEW

Whew, Field Day is just a few days behind us and I can well imagine there is some recuperating going on among our fellow hams. What a great event - always - despite the heat (cold), sun (rain), bugs (insert critter of your choice) to make things interesting. Still, it is the largest US/Canada operating event of the year and has been a traditional showplace for ham radio. I truly hope that all of our Great Lakes Division's clubs were able to muster some FD activity and get on the air. Speaking of get on the air, FD's traditional Get-on-the-Air (GOTA) stations have afforded potential hams as well as newly licensed ops the chance to operate in this event. GOTA is a wonderful recruitment and PR tool.

From Weaver's Words, June 2013

CONTACT WRARC ELMERS WITH YOUR QUESTIONS - [QUESTIONS@WRARC.NET](mailto: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	WR8RW@arrl.net
Williams, Russ NR8W	Electrician, tele-data, Amateur Extra	rwiliams@neo.rr.com

**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 three days before the end of the month. Please send your articles to: [k8jaa@arrl.net](mailto: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

**SWAP N' SHOP**

**Member's Equipment for sale**

Ten Tec Keyer	\$25
Ham Keyer (new \$90)	\$30
Head Set (new \$40)	\$25
MFJ CW Decoder (new \$89)	\$40
MFJ 401 econo Keyer (new \$95)	\$30
Computer Speakers (new \$40)	\$20
IC90M IC280 2-meter mobilelike new - 10-watt output	\$40

Contact Russ NR8W 330-296-7000

**Silent Key Equipment for sale:**

Yaesu HF Transceiver FT1000	\$1,250.00
Yaesu FL2100B Linear	\$ 500.00
Yaesu Dynamic Microphone MD1	\$ 50.00
Ameritron AL82 liner Amplifier	\$1,250.00
MFJ Versa Tuner V 3-Kilowatt Model MFJ 989C	\$ 500.00
MFJ Artificial Ground Model MFJ 931	\$ 50.00
MFJ Versa Tuner V 3-Kilowatt Model MFJ 989C	\$ 600.00
VCI Vectronics mobile Antenna Tuner	\$ 50.00
Landliner RX Gain Phone Patch Speaker SP-901P	NPA(\$25 est.)
TimeWave DSP 9+ Digital Noise Filter	NPA(\$75 est.)
Katsumi Electronic Keyer 1801EK108D	NPA(\$25 est.)

*NPA - No Price Given*

Contact Harriet at 330-219-9596, Call or Text.

This lady had her husband's (SK) items up for sale at our Field Day site on Saturday. The items appear to be in good to excellent condition, but weren't checked out - no time.

**"HEY HONEY!  
LOOK WHAT  
FELL OFF  
A TRUCK!"**



<http://www.dashtoons.com/>

**SEVEN  
WARNING  
SIGNALS  
OF  
RF OVERDOSE**

1. YOU WEAR FLATTERING HATS, BADGES, BUCKLES AND BOLO TIES.
2. YOU SEE A FINE BUSINESS ANTENNA WHERE YOUR NEIGHBORS SEE A 60-FOOT CRANK-UP LAWN FLAMINGO TOPPED BY A 3-ELEMENT WHITEWASHED TRACTOR TIRE.
3. YOU PUBLICLY SHARE INTIMATE DETAILS OF YOUR LAST OPERATION WITH A COMPLETE STRANGER STATIONED IN ANTARCTICA.
4. YOU JOIN A CLUB THAT WOULD HAVE YOU AS A MEMBER.
5. YOU SPEND MORE YEARS COOPED-UP IN A LITTLE ROOM THAN MOST CONVICTED FELONS.
6. YOU ATTEND HAMFESTS, BUY BUSHELS OF CERAMIC TUBE SOCKETS AND LATER REGAIN CONSCIOUSNESS.
7. YOU LOVE, CHERISH AND RESPECT YOUR XYL BUT WHEN IT COMES TO BUYING RADIO STUFF YOU LIE LIKE A RUG.

**WALK  TO CURE DIABETES**

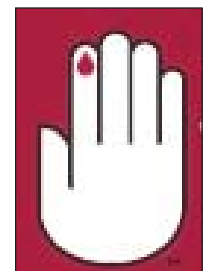
Hi Allan.

I hope you are doing well! This is Jennifer Knechtel with the American Diabetes Association. I wanted to reach out to you and hopefully get our **Step Out event** at the Canfield Fairgrounds on your calendar for this fall. We have been so grateful to have you and the other volunteers at the walk to help with communication along our route, and I hope you will be able to support us again this year. The event will be on Sunday, October 20.

I have changed the routes to stay within the Fairgrounds. There will be no one venturing in downtown Canfield. Everyone will walk the perimeter of the Fairgrounds, either once or twice, depending on if they want to walk 2 or 4 miles.

Please let me know if you have any questions.

Thanks,  
Jennifer Knechtel



Manager, Special Events-  
Northeast Ohio  
American Diabetes Association

**HAM RADIO TECHNICIAN CLASS**  
**WEDNESDAY EVENINGS, 7:00 - 9:30 P.M.**  
**SEPT.11 THRU OCT. 19, 2013**  
**CLASS LOCATION: ITT TECH,**  
**1030 NORTH MERIDIAN ROAD, YOUNGSTOWN**

**HAM RADIO GENERAL CLASS**  
**WEDNESDAY EVENINGS, 7:00 - 9:30 P.M.**  
**NOV. 6 THRU DEC. 18, 2013**  
**CLASS LOCATION: ITT TECH,**  
**1030 NORTH MERIDIAN ROAD, YOUNGSTOWN**

FOR INFO CALL AL  
330-549-3051



**Field Day 2013**

### AT&T SEEKS TO PATENT SELF-DESTRUCTING EMAIL

Jun 20, 2013, 10:38am EDT - Staff Atlanta Business Chronicle  
AT&T is seeking to patent self-destructing email.

A U.S. patent application by AT&T that was made public today notes that once you send an email, you can't control what's done with it: it can be forwarded, printed, saved or copied.

"Conventional e-mail systems may also be inappropriate for sending confidential or proprietary information because these systems do not allow the sender of an e-mail message to control the lifespan of the e-mail message," the patent application notes. "E-mail messages may, therefore, languish in a recipient's e-mail 'in-box' or on an e-mail server computer for months or even years. Some e-mail systems will allow an e-mail recipient to specify that messages should be deleted after a certain amount of time. However, these systems do not allow the sender to specify a time for destruction of the sent e-mail message. Therefore, an e-mail sender cannot be certain that a sent e-mail message containing time sensitive information will ever be deleted."



AT&T says its new technology can create self-destructing e-mail messages that allows a user to specify a time for the destruction of a sent e-mail message and that will destroy all instances of the e-mail message when the specified time arrives. It also can restrict the number and type of things that may be done to a sent e-mail message, thereby restricting the ability of a recipient to replicate it.

"The e-mail message will be destroyed by the e-mail client application whether or not the message has been read," the patent application says. "Alternatively, if the e-mail message specifies that it should be deleted after it has been read, the e-mail client application will destroy the e-mail message once it has been opened and closed by the recipient. All instances of the e-mail message are deleted from the recipient's computer."

The inventors of the technology are three Atlantans, William A. Hartselle, Shannon M. Short and Vernon Meadows.

### TACTICAL CALL SIGNS -- HOW, WHY AND WHEN?

An EM basic studies training module)

Tactical call signs, when used properly by well-trained and practiced operators, can prevent confusion, save a great amount of time, and also aid in making a net or operation run smoothly and efficiently. When used improperly, or with poorly-trained and inexperienced operators, they will usually cause delays and confusion. Typically, "tactical call signs" are used during disaster or other emergency situations to identify a specific location or a function. They are especially helpful when multiple operators are being rotated (in shifts) at stations such as a shelter, a net control station, or for a certain job/position (e.g. - logistics or "tech support") which may be a mobile unit.

Tactical call signs are also appropriate in regular (daily or weekly) public service, traffic and other nets. Properly used, they provide training, practice and experience. They are more commonly used on 'phone nets, but also can save time on CW nets. In the very early days of radio communication (all Morse) they were rarely needed since call signs often consisted of just two or three letters. Now that call signs are much longer, the use of tactical call signs make a lot of sense. The use of tactical call signs can be very helpful if "mutual aid" has been invoked and operators with call signs that may be unfamiliar to "locals" arrive in an affected area. For example: A station identifying as "Riverdale EOC"\* is immediately known as to where and what it is by everyone on the net or arriving in an area, regardless who is the operator on duty. Likewise, stations in the field who want to contact the "Riverdale EOC", can simply say: "Riverdale EOC", and not have to worry about remembering the FCC call sign of the operator.

ONE COMMON MISTAKE (often heard) is an operator identifying with the station's tactical call sign and then says his or her own call sign. Example: "Riverdale EOC KJ6ERK". This is unnecessary and defeats the whole purpose. Amateur operators only need to identify with their FCC-assigned call sign at the end of a transmission when they do not expect to transmit again within ten minutes and at the end of their shift assignment. (Ref. FCC part 97.119)

ALSO, it is redundant and unnecessary to say, "for ID". Saying your call sign IS your "ID!" GUIDELINES for using TACTICAL CALL SIGNS

*Continued page 7*

## TACTICAL CALL SIGNS -- HOW, WHY AND WHEN? - CONTINUED FROM PAGE 6

1. In any NET, INCIDENT, OPERATION or EVENT, every location or station should have its own unique TACTICAL CALL SIGN.
2. TACTICAL CALL SIGNS should be descriptive such as a LOCATION, "Maple Street Shelter," a FUNCTION, "Team Leader," or both, "SEATTLE RELAY"
3. Don't use FCC call signs to identify a particular location or function since it is possible that an operator may be at one tactical location one day and at another the next day, or even the next hour! But be sure to use FCC-issued call signs when, and as required, by FCC Part 97.
4. REMEMBER: A TACTICAL CALL SIGN remains the same for a given station and does NOT change with the time, shift, day or with an operator change. It remains the same until the net or incident is over.

From EMCOMM Monthly, January 2008

## PORTABLE 2M "AMMO CAN" RIG FOR PORTABLE/EMERGENCY USE

Everything fits neatly inside a regular surplus ammo can. Ammo cans are shallow for most full size mobile radios, so the 6" deep radio was mounted at an angle to let the knobs clear the lid when shut. A 90-degree adapter was used for the RF cable connection on the back. Several radio models can be used, but check the dimensions first or you'll end up with a can that won't shut! Once the job is done, everything fits inside neatly, including a small Bird FWD and REV power meter which happened to be on hand. The meter has four small threaded holes in the bottom of the case, and these were used to attach the meter to the bottom wall of the can with screws. A larger/deeper can could have been used, but something was needed that could be placed on the transmission hump of a Ford Crown Victoria and still allow the ashtray/cup-holder to be opened. The ashtray assembly, when opened, also helps hold the can in place. Later, a hinge will be added to the bottom of the can (bottom as in the orientation shown below -the 'operating position' -the sides of the can will be referred to as the can is shown in the picture below.) with a bracket or 'tang' which will unfold and slide in between the halves of the bench seat and help hold the can in place. A thin but lengthy hinge would be good here. The idea is for it to be removable easily to prevent theft or to take it and use it outside of the vehicle.



In order to get enough of an angle to clear the volume and squelch knobs as well as the 90-degree PL259-to-SO239 adapter, the radio mounting bracket was modified to permit a more extreme angle of tilt. Most of these brackets have several holes and a slot so the angle can be adjusted. On this one, which has a slot and a hole on each side, an extra hole was drilled on each side above the original hole, so that the radio could be tilted enough to 'shorten' it to clear the can. Doing this resulted in the bracket touching the top of the radio just behind the front panel. This means that the bracket could not

then be mounted directly to the can top wall because the front panel would hit the wall before the bracket would fit flush. Three small (3/4" tall) threaded ceramic stand-offs left over from a vacuum tube project were used to space the bracket down from the top of the can as shown so that the front of the radio would clear the can's 'ceiling'. The radio has a fan on the back, and mounting it at an angle gives this some clearance so it can do its job.

The picture with the flash helps show the inside. Also, note the provided microphone hanger was attached to the outside of the can in such a position that when the unit is sitting flat on a table, the mike is easy to get to. When in the car, it can just be put in the can or laid on the seat or cupholder. It can be seen that the radio is being powered by a cigarette lighter connector. The radio draws up to 15 amps, so be sure to get one that can handle the current. Radio Shack has a 15-amp one which comes with a 3-way socket as well. The manual advises not to use a cigarette lighter cord due to vehicle noise but there has been no problem with that or with the current



Continued page 8

AMMO CAN - CONTINUED FROM PAGE 7

drain on the 75-watt "high power" setting so far. Measured voltage at the radio was 13VDC with 13.5VDC at the lighter socket, and this is with the 15FT or so of DC wire supplied with the radio. It has not been cut to length yet, and with such a low voltage drop, there seems to be no reason to shorten it. Just make sure the socket can handle the current necessary for the radio. The radio can be put on low or medium to reduce power drain substantially in weaker electrical systems. Many operators use "Anderson power pole" connectors, so maybe these could be added inline for greater flexibility.

Dimensions of some other mobile radios which might fit in this application (any over 6" deep are not included):

- Alinco 6M; DR-M06TH 2.0"H x 5.51"D x 5"W
- Icom 2M; IC-2200H 1.6"H x 5.5"W x 5.8"D
- Kenwood 2M; TM-271AK 1.7"H x 6.3"W x 5.4"D
- Radio Shack 2M; HTX-252 1.25" x 5.12" x 5.5"

About the IC-V8000

The Icom IC-V8000 is a 2m FM mobile transceiver with 75 watts output. It has a switchable amber or green alphanumeric (6-character) LCD display, and features weather alert scan, DTCS and CTCSS tone encode/decode/scan, extended receive, optional DTMF paging and squelch, 207 memory channels, 10 24-digit DTMF autodialer memories, multiple scanning modes, and more. The radio is supplied with a fused DC power cord, mounting bracket with hardware and a backlit DTMF hand microphone with up/down frequency controls and programming buttons.

- RX coverage 136 - 174 MHz
- sensitivity <.15  $\mu$ V
- output power 75 Watts
- input voltage 13.8 vDC  $\pm$ 15%
- current consumption 15 amps, maximum
- dimensions 2"H x 6"W x 6"D
- weight 2.2 pounds

Options

- CS-V8000, Programming Software
- OPC-474, Cloning Cable
- OPC-478, Programming Cable
- OPC-589, Microphone Adapter Cable (extension)
- SP-10, External Speaker



BOEING'S NEW MIRACLE

CHAMP - lights out

By Randy Jackson

This technology could take out Iran's nuclear program in a New York heart beat. ....and N. Korea

A recent weapons flight test in the Utah desert may change future warfare after the missile successfully defeated electronic targets with little to no collateral damage. Boeing and the U.S. Air Force Research Laboratory (AFRL) Directed Energy Directorate, Kirtland Air Force Base, N.M., successfully tested the Counter-electronics High-powered Microwave Advanced Missile Project (CHAMP) during a flight over the Utah Test and Training Range.

CHAMP, which renders electronic targets useless, is a non-kinetic alternative to traditional explosive weapons that use the energy of motion to defeat a target. Power is cut to a room of computers after being hit by a high-powered microwave pulse from a Counter-electronics High-powered Advanced Missile Project.

During the test, the CHAMP missile navigated a pre-programmed flight plan and emitted bursts of high-powered energy, effectively knocking out the target's data and electronic subsystems. CHAMP allows for selective high-frequency radio wave strikes against numerous targets during a single mission.



Continued page 9



## BOEING - CONTINUED FROM PAGE 8

"This technology marks a new era in modern-day warfare," said Keith Coleman, CHAMP program manager for Boeing Phantom Works. "In the near future, this technology may be used to render an enemy's electronic and data systems useless even before the first troops or aircraft arrive." Power is cut to a room of computers after being hit by a high-powered microwave pulse from a Counter-electronics High-powered Advanced Missile Project.

[http://www.boeing.com/Features/2012/10/bds\\_champ\\_10\\_22\\_12.html](http://www.boeing.com/Features/2012/10/bds_champ_10_22_12.html)

## NOTES &amp; STUFF FROM MATT

These notes will also be available on the ARES page at [www.arrl-ohio.org](http://www.arrl-ohio.org)  
Ohio Digital Emergency Net (OHDEN) Tues at 8PM. 3585 kHz and 7072 kHz Upper Side Band.  
Ohio HF Net by W8SGT. Tues at 7PM on 3875 kHz and 7240 kHz Lower Side Band.  
Preparedness Leads to Readiness

Field Day 2013 is in the history books. Wow! Whatta weekend! How was your Field Day? Tell us on the ARES Blog. You can find it from the ARES page at [www.arrl-ohio.org](http://www.arrl-ohio.org). I had a blast at Field Day from Mosquito Lake State Park with the Warren Amateur Radio Association W8VTD. Even learning how to setup a computer network in the field for the first time ever made the experience that much better. The bands were good. The food was fantastic. The station worked flawlessly. The weather was gorgeous. Friendship and fellowship was outstanding. Ya know, Field Day is a one of kind event. There are not too many opportunities to practice emergency communications for 24 hours straight. I am so looking forward to Field Day 2014! Oh, if anyone asks, a wire antenna made from stainless steel braided cable worked just fine. Someone said it wouldn't work too good because it's not copper. Well, it worked great for Field Day! If I could hear'em, I worked'em.

Many thanks to those who sent me newspaper / media articles about Field Day. I enjoyed reading them. One of my favorites was from the Delaware Amateur Radio Association (DELARA). Delaware County EC Stan N8BHL had this to say..."Sandy N8YS our AEC/PIO made the arrangements and the reporter actually got the story right!"

REGISTRATION NOW OPEN!! - Click on this LINK to register for the All Ohio ARES Conference. Mark your calendars for Saturday, November 9th at the Ohio Fire Academy in Reynoldsburg, Ohio. I have begun working on the agenda. So far I have three great presentations by three awesome presenters. There is plenty of room of more! If you have something you'd like to present at the conference, demonstrate, or just flat-out "show-off", send me an email at [w8dec@arrl.net](mailto:w8dec@arrl.net) with your topic. Last year we had 105 people in attendance! Not to mention one of the largest go box displays I have ever seen! Bring your communications vehicle or trailer for display! What about upgrading your license? That's right there will be a license exam sessions as well! It was a great time last year. This is a chance to share your ideas, share your experiences, meet amateur radio operators from all over Ohio who share the same passion. Take a look at all the photos from last year's conference on the ARES page at [www.arrl-ohio.org](http://www.arrl-ohio.org).

As a reminder to all, ASEC Scott N8SX is still collecting FEMA training certificates and/or transcripts from any and all amateur radio operators in the Ohio Section. In addition, if you have any other training relating to ARES, you're more than welcome to submit those certificates as well. Please submit your training in electronic format to [n8sx@arrl.net](mailto:n8sx@arrl.net). Please visit the training page at <http://www.arrl-ohio.org/SEC/training.html> for guidance or if you have any questions.

## Important Dates

Saturday, July 13th - Great Lakes Emergency Communications Conference. [www.glecc.org](http://www.glecc.org)  
July 25th - 28th - Pan Ohio Hope Ride. 328 mile bike ride from Cleveland to Cincinnati in 4 days.  
Saturday, August 3rd - ARRL Great Lakes Division Convention - Columbus Hamfest.  
Saturday, August 24th - Ohio QSO Party. Excellent training opportunity.  
Saturday, September 7th - Ohio State Parks On The Air. Another great training opportunity.  
Saturday, October 12th - Statewide Simulated Emergency Test (STATE SET). (Second weekend in October)  
Saturday, November 9th - All Ohio ARES Conference - Ohio Fire Academy.

I'd like to give a shout out to all the amateur radio volunteers who will be assisting with communications for the American Diabetes Association Northeast Ohio Tour de Cure in Summit County (District 5) this coming

## MATT - CONTINUED FROM PAGE 9

Saturday, June 29th.

Across my desk...

I found this to be an interesting read. FCC Opens Rulemaking to Allow Encryption in Amateur Radio Service.

Training. This week I am going to discuss cross band repeat. A cross band repeater is a cool tool to extend the range of handheld transceivers. During public service events, some people do not want to be glued to the vehicle. They want to get out, enjoy the fresh air, and maybe cheer on the runners or cyclists. Sometimes 5 Watts from a portable transceiver (AKA handie talkie or HT) is not quite enough to get you to the repeater. Or sometimes, that 6", 8", or 15" rubber duck is still not enough. That's where a cross band repeater can be a useful tool. If you have a dual band mobile that is capable of cross band or have access to one, it can definitely can be useful to get your transmission where it needs to go. How does it work? Using your HT, transmit on UHF (70cm) simplex to your cross band capable mobile transceiver (usually on low power) and it will simultaneously transmit back out on the VHF (2M) repeater. You might not need high power in the mobile. Adjust your power level to ensure adequate signal into the repeater. When you unkey your HT, your cross band capable dual band transceiver will receive the 2M transmissions and simultaneously transmit back to you on UHF simplex (usually on low power). I did a Google search and I found the two figures below to illustrate. One thing you need to be mindful of is identification. Next week, I'll discuss proper identification using a cross band repeater.

That's all from me this week. As always, I sincerely thank you for everything you do for amateur radio.

73 de Matt W8DEC  
Ohio Section Emergency Coordinator  
ARRL - The national association for AMATEUR RADIO™  
w8dec@arrrl.net  
440-585-7388



### IMPORTANT MESSAGE FROM CEO DAVID SUMNER, K1ZZ

Dear Friend of Amateur Radio,

Unless you're Rip Van Winkle you know there is a revolution underway in mobile broadband communications. Most users of smartphones, tablets and other mobile devices that connect to the Internet don't think of them as radio transceivers, but in fact that's what they are – and they're worthless without spectrum access.

Right now there is tremendous pressure for more spectrum for commercial mobile broadband services. The pressure comes from consumers who want faster, more reliable Internet connections wherever they go. It comes from the companies that stand to make billions of dollars by meeting the demand. It comes from politicians and others who see wireless broadband as an engine for employment and economic growth.

The mobile broadband revolution is mostly good. Chances are you're using some of its benefits yourself. But the radio spectrum is a limited resource. The frequencies where mobile broadband works best – between about 400 MHz and 6 GHz – are fully allocated for a wide range of uses, including Amateur Radio.

How to accommodate tens of millions of new wireless devices is an incredibly difficult and complex problem that is occupying the time and attention of thousands of spectrum management specialists all over the world. Even the United States Congress – hardly a repository of spectrum management expertise – is getting in on the act.

Amateur Radio has vital interests – and other challenges in addition to mobile broadband – in this frequency range.

- - Our popular 70 cm band, 420-450 MHz, is already shared with military radar and other systems.
- - The FCC has just given its consent for commercial deployment of a new precision location system in part of the 902-928 MHz band, which already hosts a variety of uses including unlicensed "Part 15" devices.
- - The FAA is deploying upgraded air traffic control radars in the 1240-1300 MHz band, which is also subject to increased use by radionavigation-satellite networks.
- - The 2300-2400 MHz and 3400-3500 MHz bands are already earmarked for mobile *Continued page 11*

## K1ZZ - CONTINUED FROM PAGE 10

broadband in much of the world, and of course 2400-2450 MHz is heavily used by unlicensed Wi-Fi already. While other uses being made of these bands in the United States offer us some protection for now, 3300-3500 MHz is on some broadband proponents' wish list as part of a "spectrum superhighway" from 2700 to 3700 MHz.

· - Much of our 5 cm allocation, 5650-5925 MHz, is already in use by unlicensed broadband devices; the ARRL is opposing the extension of that use into the rest of the band.

We are not alone in feeling the pressure. Broadcasters, public safety agencies, and even the Pentagon are being forced to relinquish or to share spectrum. We have successfully shared with the military in this frequency range for decades; sharing with commercial services would be much more difficult if not impossible.

In short, as radio amateurs we face a huge challenge.

But we have faced huge challenges before – and together we have met them.

There is one reason for that, one cause of our success: the ARRL.

There are many Amateur Radio organizations that are worthy of your participation and support. But there is only one – the ARRL – that looks after the defense of American amateurs' access to the radio spectrum. There is only one that maintains a full-time staff to represent your interests in our nation's capital. And just like radio waves, that defense doesn't stop at the borders. Working with our colleagues in other countries through the International Amateur Radio Union (IARU), the ARRL ensures that your voice is also heard in meetings and conferences of the International Telecommunication Union and regional telecommunications organizations.

Backed by more than 161,000 members, the ARRL's voice is strong. But membership dues only go so far. For more than a decade we have appealed to members and friends to support the Spectrum Defense Fund by going above and beyond basic dues. Your generosity has made it possible for us to field an experienced, effective team of professional staff and talented, committed volunteers in Washington, Geneva and wherever else decisions about the radio spectrum are being made.



Our efforts are not limited to defense. Over the years the ARRL and the IARU have succeeded in gaining new and improved allocations for Amateur Radio. Right now we are preparing for a World Radiocommunication Conference in 2015 where an amateur allocation around 5300 kHz is on the agenda.

I ask you to join me in ensuring that the ARRL can continue its record of success in defending and expanding your access to the radio spectrum – a precious, priceless natural resource.

Thank you.

Sincere 73,

ARRL Chief Executive Officer David Sumner, K1ZZ

<http://www.arrl.org/spectrum-defense-fund>

### RULES CHANGE SOUGHT TO PERMIT ENCRYPTION OF SENSITIVE EMERGENCY COMMUNICATIONS

QST de W1AW

ARRL Bulletin 15 ARLB015

From ARRL Headquarters

Newington CT June 25, 2013

To all radio amateurs

The FCC is inviting public comments on a proposal from a Massachusetts ham to amend the Part 97 Amateur Service rules to permit the encryption of certain amateur communications during emergency operations or related training exercises. On June 7 the FCC accepted for filing a Petition for Rulemaking (RM-11699) from

Don Rolph, AB1PH, and put it on public notice. It will remain open for comment until July 8. The petition for rulemaking can be found online at <http://apps.fcc.gov/ecfs/document/view?id=7022424684>.



# July 2013



**PREPAREDNESS LEADS TO READINESS**  
**WE NEVER KNOW WHAT THIS DAY WILL BRING TO US**

6/30	1	2	3 Skywarn Net 8:30 P.M. 146.745	 Happy Birthday KD8OKK 	5 Comm Unit net 8:00 PM 145.270 WRARC Net 9:00PM 145.270	6 Happy Birthday WR8RW 
7	8 ARES Net 8:30 PM 146.745 PL 110.9	9 Eat'n Park Boardman 8:30 A.M.	10 Skywarn Net 8:30 P.M. 146.745	11	12 Comm Unit net 8:00 PM 145.270 WRARC Net 9:00PM 145.270	13
14 WRARC Board Meeting 7:00P.M	15	16 WRARC Annual Picnic 7:00P.M	17	18	19 Comm Unit net 8:00 PM 145.270 WRARC Net 9:00PM 145.270	20
21	22 ARES Net 8:30 PM 146.745 PL 110.9	23 Eat'n Park Boardman 8:30 A.M. Ham Community Breakfast	24	25	26 Comm Unit net 8:00 PM 145.270 WRARC Net 9:00PM 145.270	27 Comm Unit Meeting 9:00 AM
28  WaveBender Articles Due	29	30	31	8/1	8/2 Comm Unit net 8:00 PM 145.270 WRARC Net 9:00PM 145.270	8/3