



# The Wisconsin EC Newsletter



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Wisconsin ARRL/ARES Section Emergency Coordinator and EC Newsletter Editor

RACES Chief Radio Officer

Bill Niemuth, KB9ENO

W8088 Hillcrest Court

Hortonville, WI 54944

920-779-0611

920-475-4819 (Mobile)

[bniemuth@new.rr.com](mailto:bniemuth@new.rr.com)

*The WEC Newsletter is published monthly in .pdf format to the Wisconsin ARES/RACES Web site <http://wi-aresraces.org>. It is intended to provide a forum for ECs to share ideas concerning the organization and training of their respective groups, and as a source of news concerning Wisconsin ARES and RACES. Comments, suggestions and articles (finished or in rough form) are solicited from the readers.*

**Deadlines:** *The newsletter is published between the 15th and the 31st of the month preceding the date shown on the issue. Thus, the February issue is published in late January. Articles and notices should reach the editor no later than January 1 to be considered for the February issue. Permission is granted to reprint articles from this newsletter provided credit is given as follows: "Reprinted from the Wisconsin Emergency Coordinator Newsletter, Bill Niemuth, Editor".*

## **ARES Leadership Changes**

By Bill Niemuth, KB9ENO, SEC WI

**Wally Kruk, N9VAO**, has volunteered to assume the Sawyer County EC position. Wally has been WI ARES/RACES Net Manager for over a year and has done a great job. The goal is for Wally to redevelop the Sawyer County team and then find his replacement. Thanks, Wally!

I am sorry to report **Scott Nelson, KC9BLE**, has stepped down as Brown County EC. We are searching for a replacement for Scott in this critical county of Wisconsin. Currently, there is no ARES/RACES group in Brown County.

## **WEM Ham Shack Participates in Exercise**

By Mack Brophy, N9NTB, WEM Hamshack Manager

The WEM hamshack had a minor role in the October 15, 2005, Watertown, Wisconsin exercise, which featured multiple, simultaneous incidents. Interoperability communications proved to be in need of improvement between the participating agencies. It was determined ACU-1000 operators need to be familiar with the radios networked by the ACU-1000 to make the system most efficient.

## **Dane County ARES/RACES Team Gets a Great Generator Donation!**

By Don Michalski, W9IXG, WI ARRL SM

This month Dane County ARES/RACES accepted a donation from the HHH of a Honda EU 1000i generator! Accepting are **Joe Senulis, N9TWA**, Dane County Emergency Coordinator and **Don Michalski, W9IXG**, Wisconsin Section Manager for the American Radio Relay League.

They will put it to good use at public service events and for emergencies to better support the team's served agencies.



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## **New Jackson County Repeater System!**

By John Elliott, KB9SHK, EM Jackson County (Former EC, Jackson County)

Subject: News Release

From: Jackson County Emergency Management/Black River Region Amateur Radio Emergency Services (ARES)

Re: Antenna installation completed on Sunday, October 30, 2005

A few motorists traveling on I-94 last Sunday probably noticed a person on one of the communication towers. The old Sheriff's Department tower is located on the same ridge with three larger towers three miles west of the City of Black River Falls. The climber, **Mike Baker, KB9TWI**, of La Crosse, is an amateur radio operator who volunteered to install a new antenna on the top of the tower. In spite of wind and rain, Baker was able to complete the installation.

The repeater with the identification call sign **KC9GEA**, provides a link between amateur radio operators (hams) in the Eau Claire area and to the south to the Mauston area on 147.270 MHz with a 131.8 MHz tone. The repeater should also reach into both Clark and Trempealeau counties. More important, the new antenna and transmitter provides the ability for local Amateur Radio Emergency Services (ARES) operators to communicate emergency information during a response to a local emergency. Many agencies that will be called upon during an area emergency do not have their own radios. Local amateur radio operators can provide a vital link to radio sites such as Emergency Management office, Black River Memorial Hospital, local Red Cross Shelters and to other emergency response agency locations.

The Jackson County Emergency Coordinator contact for amateur radio is **Roger Turner, N9PPB**. For further information on joining the ARES group, contact him at 715-284-3062. Turner notes that "volunteers and donations are always needed and welcome". Or, call Jackson County Emergency Management Director, **John Elliott, KB9SHK**, at 715-284-0263 for responder information.

John added the following:

The freestanding tower is on a 1325-foot bluff and is 223 feet tall. Tell folks to look for the three large communications towers on the bluff three miles west of Black River Falls on the left off I-94. Ours is the much smaller fourth tower on the same hills. That is 1548 feet of elevation for the transmit/receive antenna. The Jackson County surveyor tells me there are no interfering bluffs from here to Eau Claire and going south (or east on I-94, if using that corridor) and Mauston may well be in reach. Not bad for two meters. Be sure to let us know how well it works.



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## **WI ARES/RACES Holds its Annual Leadership Conference**

By Bill Niemuth, KB9ENO, SEC WI

Seventy-seven members of WI ARES/RACES leadership and a few emergency management directors attended the 2005 WI ARES/RACES Leadership Conference on October 29, 2005, in Weston, WI. The theme of this year's conference was Back to Basics. Attendees took voluminous notes and had the opportunity to network with peers.

Highlights included the presentation of the EC and DEC of the Year award winners, keynote speaker Jeff Last of the Green Bay National Weather Service Office, discussions about the statewide repeater project and the status of Winlink 2000.

A full report will appear in the December 2005 EC Newsletter. Thanks to all who attended and did presentations!

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# **WI ARES/RACES Winlink 2000 White Paper**

By Jim Darrow, KB9MMC, Digital Communications Coordinator

Editors Note: This white paper was included last month, but it was an outdated copy. This is the final draft.

## **Wisconsin ARES/RACES** **Winlink 2000** **Task Force Report**

### **Executive Summary**

WinLink 2000 (WL2K) is a hybrid system that enables amateur radio RF paths to bridge across a failed portion of the Internet. The current system provides capabilities of e-mail message delivery not easily done via RF-only amateur radio paths and is the most practical way to provide our served agencies with an easy to use interface for their staff to route traffic to distant points. All WL2K software is free for amateur use.

### **Winlink Equipment Requirements**

WL2K consists of "server" and "client" parts, most of which operate under the Microsoft Windows environment. The system can route e-mail messages via VHF/UHF packet radio, typically at 1200 or 9600 baud, HF PacTOR II and III. New technology modes can also be used such as the ICOM D-Star microwave transceivers, WiFi, and the coming higher-powered WiMax systems.

#### **Client Portion**

Connections are made to the system with a supported digital mode. For typical VHF/UHF packet radio connections, either PacLink AGW / Post Office or AirMail are programs would be used.

**PacLink AGW / Post Office** uses a standard e-mail program, e.g., Microsoft Outlook Express, as the interface point, through an individual computer, or can act as a server for the served agency when connected to that agencies LAN. It then uses the AGWPE (AGW Packet Engine) program to drive either a TNC operating in KISS mode, or a sound card.

**AirMail** is an alternative product that will also operate with older MS Windows 98 software and provides its own e-mail interface. It cannot connect to a LAN and is used in stand-alone computers. AirMail has two additional features, which allow it to act as a peer-to-peer hub between VHF/UHF stations, and it is used as the interface to HF equipment using the SCS II modem. Unfortunately, AirMail supports only a limited number of TNC models.

**Telpac** (TELnet PACket bridge) is a simple interface between amateur radio RF data and the Internet and is the main bridge between the client side to the server side when using VHF/UHF.

#### **Server Portion**

The client software operating through an appropriate digital mode connects to a PMBO (Participating Mail Box Office). Once the data enters the PMBO, it is routed locally or to one of eight mirrored CMS's (Central Message Server)'s that stores the necessary routing data and permits an address with an @winlink.org extension. This allows e-mail to be properly routed world wide to any location that has an operating portion of the Internet.

Detailed information on WL2K can be found at the [www.winlink.org](http://www.winlink.org) site.

## **Deployment**

There is a great deal of flexibility with the WL2K system and different parts of our Section will need to determine what is best for their location and their neighboring counties.

Most stand alone digital stations might want to consider using AirMail due to the ability to use older versions of MS Windows, and the ability to connect with other VHF/UHF stations on an RF peer-to-peer basis if the internet connection should be lost.

When a served agency wants to have the ability to send e-mail when their Internet connection or e-mail server is inoperative, the use of Paclink AGW / Post Office will allow the sending of messages to a distant Telpac Node. If a Telpac Node's Internet connection fails, you can still keep the system operational by digipeating to another TelPac Node that does have Internet connectivity. It is strongly recommended that many Telpacs be set up throughout the state.

When longer distances are needed, HF with PacTOR II and III can be used to bridge the distance. In the near future, Paclink SCD, which uses the SCAMP (Sound Card Amateur Message Protocol) mode may prove to work well and eliminate some of the need for the SCS PacTOR II and III modems. The SCAMP mode is free but requires at least a 1 GHz computer processor running Windows 2000 or XP.

### **Other comments**

It is very unlikely the entire Internet can fail. In practical terms it means you can have unlimited Telpacs and Paclink and AirMail clients feeding traffic in to the system. With more input from ARRL, it may be possible that some of WL2K current limitations can be overcome.

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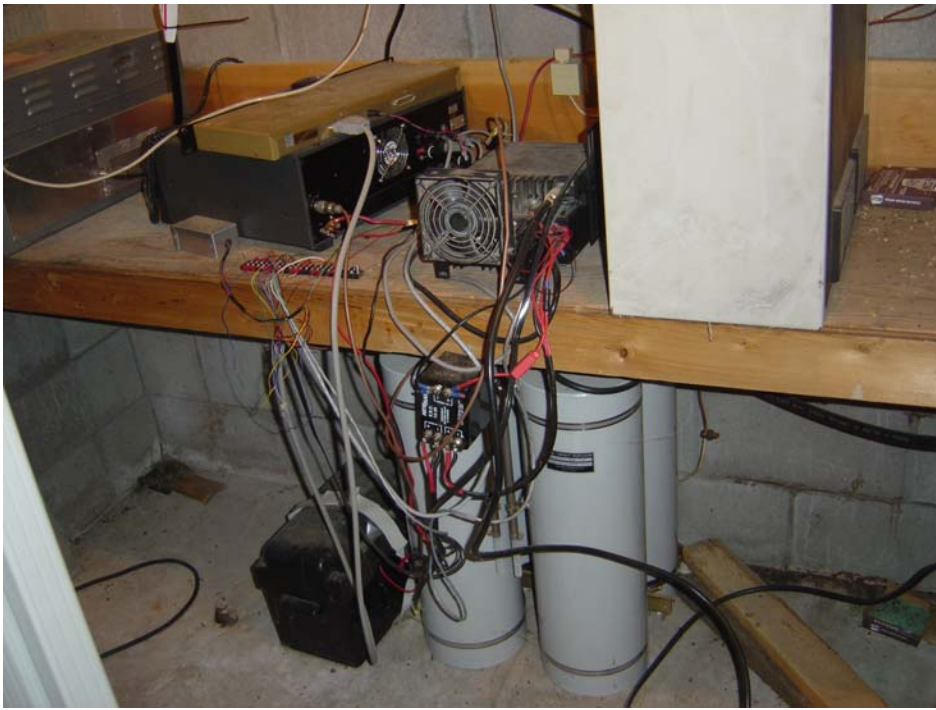
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## **EC Resources, Ltd. Installs Rebuilt Sayner 145.130 Repeater**

By Bill Niemuth, KB9ENO, SEC WI, and President EC Resources, Ltd.

In May 2005, EC Resources, Ltd. a nonprofit, tax-exempt organization created to support ARES/RACES organizations, acquired the Sayner 145.130 repeater. The repeater system was in need to some tender loving care. In late September, the repeater was removed from service and after the existing Icom repeater was evaluated, it was found to have integrity problems. The EC Resources board decided to replace the repeater with Icom commercial equipment and a Henry Radio repeater amplifier. The repeater was reinstalled on Sunday, October 30, 2005. Unfortunately, an antenna problem exists and the repeater is intermittent. EC Resources is trying to replace the original amateur radio antenna with a commercial folded dipole. Once all of the problems are resolved, it will be a great resource for Vilas County ARES/RACES. A linking partner to get weather data to the Green Bay National Weather Service is also being sought.

Please see the before and after photos below.



Before



After