



# The Wisconsin ARES/RACES Emergency Coordinator



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## WISCONSIN SECTION EMERGENCY COORDINATOR, CHIEF RACES RADIO OFFICER AND EDITOR:

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The WEC Newsletter is sent monthly to all American Radio Relay League Emergency Coordinators in the State of Wisconsin. It 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 ARES and RACES activities in the state.

Comments, suggestions and articles (finished or in rough form) are solicited from the readers.

This newsletter and other important documents are posted on the Wisconsin ARES/RACES web page at:

<http://wi-aresraces.org>

in PDF format, shortly after each issue is published.

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## ARRL/REACT MOU

[From the ARRL Letter, Vol. 20, No. 20, May 18, 2001. ECs, take note. Is there a REACT unit in your county that you can work with? If so, do it. Many REACT members are hams, and most have useful equipment that can help in an emergency. Cooperation and mutual respect can never hurt!]

**ARRL AND REACT TO SIGN MEMORANDUM OF UNDERSTANDING** Representatives of the ARRL and REACT met in Dallas, Texas, May 16 to sign a memorandum of understanding between the two organizations. The agreement is intended to promote joint coordination of the resources between ARRL and REACT and to facilitate the flow of information to and from the public during emergencies.

ARRL president Jim Haynie, W5JBP, and REACT International president Chuck Thompson, N5IAG, signed on behalf of their respective organizations.

"This memorandum of understanding is part of our efforts to establish a common front in dealing with

emergencies and disaster communication and with other issues facing the radio hobby, including such things as antenna ordinances," Haynie said. Thompson said the memorandum will strengthen the organizations' "common goal of providing assistance to the public."

While REACT has been associated primarily with Citizens Band in the past, the organization has widened its focus to embrace amateur and other services. ARRL and REACT share common goals in terms of emergency communication. The primary mission of REACT is "to provide public safety communications to individuals, organizations, and government agencies to save lives, prevent injuries, and give assistance wherever and whenever needed."

The memorandum of understanding calls on the two organizations to "cooperate and utilize their resources from time to time to optimum mutual benefit to both parties." Among specific principles, the agreement will involve cooperation during emergencies and disaster relief and the elimination of "duplicative or technically inferior service" during such responses. "The parties will generally encourage ongoing liaison with each other and urge members of both organizations to develop increasingly effective communications and cooperation," the agreement states.

Thompson and Haynie are long-time friends, and Haynie is a member of REACT in the Dallas area. Haynie was the instructor for Thompson's Novice Amateur Radio license class. He says Thompson recruited him to REACT membership.

A copy of the REACT-ARRL Memorandum of Understanding is available on the ARRL Web site at <http://www.arrl.org/FandES/field/mou/react.html>.

## Traffic is Terrific

By Dennis Rybicke, K9LGU

[From Denny's April STM Report. Thanks, Denny!]

What's happening? Are the section nets still handling traffic on a daily basis? Is the Badger Weather Net still collecting data every morning without fail? Does the Badger Emergency Net move from 3985 to 7270, when conditions warrant? Will the NCS on the WNN, WSSN, and WIN slow down to the speed of

the station checking in? Has there been an increase in CW activity on the section nets? How does K9FHI not only get enough NCS volunteers but also find some for alternate duty? You can find the answers to these and many other questions by checking in to your favorite section net.

Traffic tip of the month - from W9KKM - It helps to pace yourself in sending traffic by voice if you write out the message as you send it. That way, you won't speak faster than the receiving station can handle. Using a tape recorder for back up is another good idea (Thanks, N9TVT). Of course, nothing replaces practicing careful sending and accurate receiving.

Suggestion for Net Managers: Please encourage your net control stations to send an occasional QNC (message for the entire net) and have everyone copy it. If each station confirms reception of the message, that's counted as one handled by the net, one sent by the NCS and one received by each station checked in. More importantly, it is a chance to practice -- even for those stations that do not handle much traffic into their area.

Let us remember that traffic is not limited to the NTS. As the severe weather season is upon us, accurate and timely weather observations sent in the TLCS (Time-Location-Condition-Source) format is very important traffic. This might be handled on two meters FM, packet, SSB, or even CW. Even a road report of some hazardous driving condition or an unsafe driver could be a very important message. Call it in on your local repeater. Of course, I suppose that would be traffic traffic.

## Some Interesting Stats

As of April 2001, there were 710,249 hams in the US, and 10,878 in Wisconsin (1.53% of US hams). The Wisconsin licenses were apportioned as follows:

CLASS	NUMBER	% of WI
Nov	650	6
Tech	3,457	32
Tech+	1,379	13
Gen	2,304	21
Adv	1,441	13
Ext	1,546	14
Club	101	1

As of 20 May 2001, there were 1245 ARES/RACES hams registered in Wisconsin. Therefore, 12% of the hams in Wisconsin are involved in ARES/RACES training and response.

## Grab-n-go Kit

*[You have probably seen many lists of what should be in a grab-n-go kit, and most lists are good. Here, however, is the most comprehensive kit list that I have seen. Written by C. Edward Harris (KE4SKY), this list is broken into three parts for varying degrees of emergencies. Check out [http://www.aresva.org/library/go\\_kits.html](http://www.aresva.org/library/go_kits.html), the Virginia ARES website, for more comprehensive notes that go with the list. Thanks, Virginia ARES! Stan]*

### EVERYDAY KIT (5 lbs. total, < 24 hours)

1. Dual band HT in padded belt case.
2. Copy of current FCC license.
3. "Tiger tail" (enhances xmit/rcv by 3db).
4. Hi-capacity nicad (1,000mAh) or backup AA battery case (loaded) for HT.
5. DC adapter and cigarette plug cord for HT.
6. Two extra 2A fuses for HT cord.
7. Earphone or speaker mike.
8. Spartan pattern Swiss Army pocketknife.
9. Leatherman multipurpose tool.
10. Mini-Mag light, extra bulb and spare AAs.
11. Pencil and pocket notepad.
12. Emergency money (gas/phone: \$10 bill and four quarters, five dimes) in a pillbox.
13. SO-239 to male BNC adapter to fit HT to mobile antenna coax; female BNC to SO-239 to fit HT gain antenna to jumper.
14. RG-8X (6 feet) jumper with BNC male and female connectors to extend HT antenna with suction cups or auto window clip.
15. Spare eyeglasses.
16. Band aids, moist towelettes, and sunscreen.
17. Pocket sewing kit, matches, pocket compass.
18. Operating reference card for HT.
19. ARES phone and frequency reference card.

### BACKUP BAG (24 hours, car trunk, ~ 18 lbs.)

1. Neck-lanyard pocket with spare car keys, \$20 emergency cash, credit card, long distance calling card, ARES photo ID.
2. Second "backup/loaner" 2m HT (battery packs and accessories should interchange with dual bander).
3. Spare nicad/AA battery pack, earphone and speaker mike for second HT.
4. Operating manual for HT.
5. Fused DC adapter cords with Molex connectors for brick amplifier and HTs.
6. Extra 10 feet #10 AWG twin lead extension cord, with battery clips, in-line fuses and Molex connectors to power brick amp or HT.
7. Compact, rugged 25 to 40 watt 2m or dual band brick amplifier.
8. Gain antennas for both HTs (telescoping half wave Larsen and flexible dual band Comet CH-72, ¼ wave VHF, and 5/8 wave UHF).
9. HT nicad and 12 volt gel cell wall chargers.

10. Four NP2-12 gel cell batteries to power small brick amp at 10 watts @ 25% duty cycle/8 hrs.
11. Two refills of AA alkaline cells for HT.
12. RG-8X jumpers with soldered PL-259s (two 3 foot, one 6 foot, one 10 foot and one 25 foot) with double female connectors so all can be combined.
13. BNC male to SO-239, BNC female to SO-239, BNC male to PL-259, BNC female to PL-259, NMO to SO-239 adapters.
14. Cable ties, 6 each large, 6 each small.
15. Lensatic compass, 7.5-min. series area topo.
16. Two sharp pencils, pencil sharpener, gum eraser, note pad, permanent marker.
17. ARES Field Resource Manual.
18. Compact, rugged flashlight with extra bulb and extra batteries.
19. Two sets of spare fuses (2A, 10A, 15A) for HT cords, mobile radio or brick amplifier.
20. Comfort, safety and first aid items: sunglasses, matches, tissues, toothbrush, sun block, sewing kit, insect repellent, tweezers, band aids, adhesive tape, gauze pads, wound cleaning wipes, etc.

#### **DISASTER BAG** (car trunk, in a duffel bag)

Includes a portable brick amplifier to provide better range and clarity with an HT. The amp should weigh no more than 1.5 lbs. and draw no more than 8 amps at maximum output so that it can be used with common Molex connectors and fused cigarette plugs. Best according to VA ARES: Mirage B-23, BD-45 and RF Concepts Mini-144. This duffel bag based pack includes items needed for a weekend activation or evacuation, such as operating a remote SKYWARN net control station during a power outage accompanying a severe storm event.

1. Three-ring zipper portfolio binder with county ARES handbook, SKYWARN Net Control Operations Manual, area topo maps and operating manual for mobile rig.
2. Dual band or 2m mag mount antenna with portable ground plane.
3. MS-44 mast kit, tripod adapter, dual band base antenna and 100 ft of 9913 coax on a reel.
4. AC charger for HT nicads and small gel cells.
5. BCI Group 27, 95Ah AGM battery and 1.5 amp charger (48 hr power for HT brick amp or mobile rig on low or medium power, plus 12v 8w fluorescent light for use as needed).
6. Fluorescent 12v droplight with alligator clips for attaching to auto or gel cell battery, with spare bulb. Gives adequate light for operating efficiency and morale; safer and more reliable than gasoline lanterns.

7. Weller Pyropen soldering torch with two cans of propane fuel, 63/37 eutectic solder and flux.
8. Leather work glove shells, wool fingerless liners, warm hat, wind/rain suit, sweater, insulated rubber safety boots, extra pair of dry socks and change of underwear.
9. Tarp or poncho.
10. Wool blanket or insulated poncho liner.
11. Two message pads, two pencils, grease pencil, two sheet protectors, 12 push pins.
12. Vinyl electrical tape for rain wraps, 1 roll.
13. Cable ties, large and small, 12 each.
14. Rubber bands, medium and large, 6 each.
15. Adjustable open-end wrench, 6 inch, 0-5/8".
16. Folding hex key set.
17. Klein pliers with crimpers and side cutters.
18. Needle nose pliers.
19. Channel Lock or Vise Grip pliers.
20. Small, mobile type SWR/power meter.
21. Pocket VOM or multimeter with leads.
22. Assorted connectors and adapters including no solder BNC and UHF, for emergency repairs.
23. First Aid kit.
24. Three days supply\* of bottled water and non-perishable food which can be eaten cold, mess kit and utensils. \*One gallon of water per person per day for drinking and washing.

## The Anderson Powerpole

[Adapted from several sources on the web, including the Auxiliary Communications Service (ACS/RACES) of the State of California, Anderson Power Products, Inc., D & L Antenna Supply Co., and others. ECs, if you begin to switch over to these connectors as I have, don't fail to make an adapter! That is, prepare a short cable with the Powerpole on one end and a **female** RS 274-222 (with male pins) on the other end. Even better, make two – one of each possible style of RS 274-222 on one end and the Powerpole on the other. Then, no matter what configuration you encounter in an emergency, you can quickly adapt to it. Stan]

Are you getting a new rig for home or mobile use? If so, consider using the new Anderson Powerpole for power disconnects.

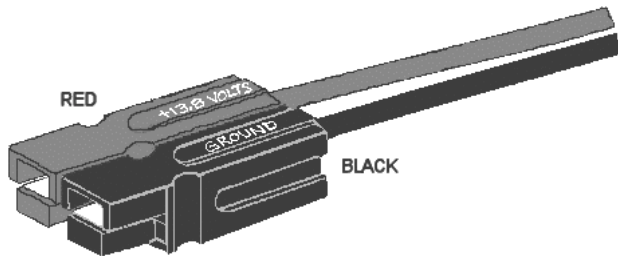
Prescribed by the State of California for use by their ACS/RACES personnel, this connector allows reliable, quick and easy installation and substitution of batteries, power supplies and rigs.

The connector comes in two ratings (15 and 30 ampere), but since the plastic housings are the same for both ratings, they will mate with each other. Actually, the only difference between the two is the barrel into which the wire inserts. The wire may be crimped or soldered in place in the barrel. The 15-ampere barrel is designed for 16-20 AWG wire and the 30-ampere barrel is designed for 12-16 AWG

wire. After a barrel has been crimped or soldered to a wire, it should be installed into the housing so that the housing spring mates with the underside of the contact.

To remove a contact from the housing, use Anderson insertion/extraction tool #111038G2. A jeweler's screwdriver, X-Acto knife or other small tool will also work to depress the spring, allowing the contact to be removed.

The positive and negative (red and black) plastic connectors dovetail together into a compact unit, as shown below. A 3/32 inch, ¼ inch long roll pin can be inserted between the two mated connectors to keep them from sliding apart. However, in my experience the two are so tightly attached that the roll pin is not necessary. Alternatively, a small drop of plastic glue applied just before sliding the two together will bond them in place forever.



Housings should be mated according to the diagram above, viewed from the contact side (opposite the wire side), tongue down, hood up, **red** on the **left**, **black** on the **right**.

There are a number of very desirable features of this connector. Highly conductive silver-plated copper contacts allow minimal contact resistance at high currents. Self-wiping action on make and break keeps the conducting surfaces clean and conductive paths at low resistance. Contact dents keep connectors mated even in high-vibration applications and provide quick-break, snap action upon disconnect.

Non-corrosive stainless-steel leaf springs maintain constant contact pressure, which is ideal to prevent problems during frequent connects and disconnects and even during intermittent overloading. The plastic housings for the contacts are durable, high impact-resistant polycarbonate with UL94V-2 flammability ratings. These come in many colors, but of course, we are interested in black and red. When disconnected, there are no metal parts exposed, reducing any chance of short circuits.

A nice feature is that, unlike the old RS 274-222 (Molex) connectors, the Powerpole connector halves are genderless. In other words, when connecting together two Powerpole cables (4 wires), the connectors on each of the two cables are exactly the

same. This not only makes assembly quick and easy, it reduces the number of parts needed. All you need is a batch of black and red connector halves and barrel contacts, and you are ready to prepare a batch of cables. No more worrying about male pins inside female connectors, etc., as with the old Molex style.

Here are the Anderson part numbers:

15 amp	#1395 (red)	#1395G1 (black)
30 amp	#1330 (red)	#1330G4 (black)

The connectors can also be panel mounted with clamp receptacles, consisting of two aluminum plates (Anderson part #1462G1), notched to hold the plastic housings when they are dovetailed together.

For more information and to see the illustrations in color, navigate to the Anderson Power Products web site at: <http://www.andersonpower.com/>.

## An Important Field Exercise

What is the largest emergency-related field exercise in the world? What large-scale field exercise is held every year and involves more hams than any other? Right! FIELD DAY is the answer to both questions. The event gives all hams, not just ARES/RACES folks, a chance to set up communications in the field, operate under less than perfect physical conditions using emergency power sources and field-adaptable equipment. Field Day has probably done more to prepare hams for emergencies than any other activity. So, what are your plans for the weekend of June 22 – 23 – 24? I plan to operate several shifts with the Ozaukee Radio Club. Whether you set up as an ARES group or work with a radio club, please try to participate in Field Day. It can be a great experience in ham radio, and does much to foster a spirit of cooperation and camaraderie between operators and groups. Put it on your calendar, now.

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**FIELD DAY – JUNE 22, 23, 24**