



# ARES COMMUNICATOR

Information for Scott County Amateurs



June, 2008

Accurate, Reliable Emergency Communications

Volume 8, Number 6

## Join the Field Day Fun!

Everyone is invited

Join in on the fun and excitement as Scott County ARES members take to the field the weekend of June 28<sup>th</sup> and 29<sup>th</sup>. Scott County ARES members along with over 30,000 other amateur radio operators will take part in the largest annual emergency communications operation in the country, the 76<sup>th</sup> annual field day emergency exercise.



June 28-29  
Canterbury City Park  
Savage, MN

Our site for this year's event is Canterbury City Park in Savage, MN. The park is located at 13444 Inglewood Ave. in Savage. Operating stations will be set up in the park's picnic shelter with antennas in the area around the hockey rink. You can find the park by traveling east from the intersection of Glendale Rd. (County 93) and 137<sup>th</sup> Ave. Watch for the signs.

Set-up will begin Saturday morning with the stations ready to go on the air for the 1PM start of the Field Day contacts. This year we have the okay from the Savage Police Dept. to operate for the entire 24 hour contest period. We will operate overnight only if there are operators who want to try the late night bands. We will be operating from 1PM to 10PM, or later, on Saturday and 7AM to Noon on Sunday. The park is closed from 10PM to 7AM.

Plans are to have one station for contesting on the HF bands and a second station for soundcard digital modes,

## ARES Members Recognized

W0NFE, W0GXO Receive Awards

Congressman John Kline honored several residents of Minnesota's 2<sup>nd</sup> Congressional district with a Congressional Certificate of Special Recognition at the "Star of the North" ceremony Monday, April 21, 2008, at the Lakeville Area Arts Center.

Representative Kline remarked, "Minnesotans have long had a reputation for lending a helping hand, and we are blessed to have so many friends, family and neighbors who have reached out to others in their time of need."

I was compelled by these acts of generosity to publicly recognize these volunteers with the Congressional Certificate of Special Recognition. The examples set by "Star of the North" recipients should serve as inspirations for us all to give of ourselves for the benefit of others."

Savage resident Bob Minor and Shakopee resident Steve Kickert, members of the Scott County Amateur Radio Emergency Service, assisted last August with emergency communications when heavy rain knocked out communications throughout southeastern Minnesota. This service provided vital communications when all other forms were rendered inoperable by the storm.

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## ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)  
Breakfast Saturday, May 10th

### SELECTED TRAFFIC NETS

Designator	Freq.	Local Times	
MN Phone	3.860Mhz	Noon, 5:30pm	Daily
MN CW	3.605Mhz	6:30pm, 9:50pm	Daily
<b>ARES</b>			
Scott ARES	146.535 S	7:00pm	Monday
Carver ARES	147.165+	8:30pm	Sunday
Bloomington	147.090+	9:00pm	Sunday
<b>Neighboring Nets</b>			
North Dakota	3.937Mhz	6:30pm	Daily
South Dakota	3.870Mhz	6:00pm	Daily
Wisconsin	3.985Mhz	5:30pm	Daily

The ARES COMMUNICATOR is published for the benefit of Amateur Radio Operators in Scott County and other interested individuals.

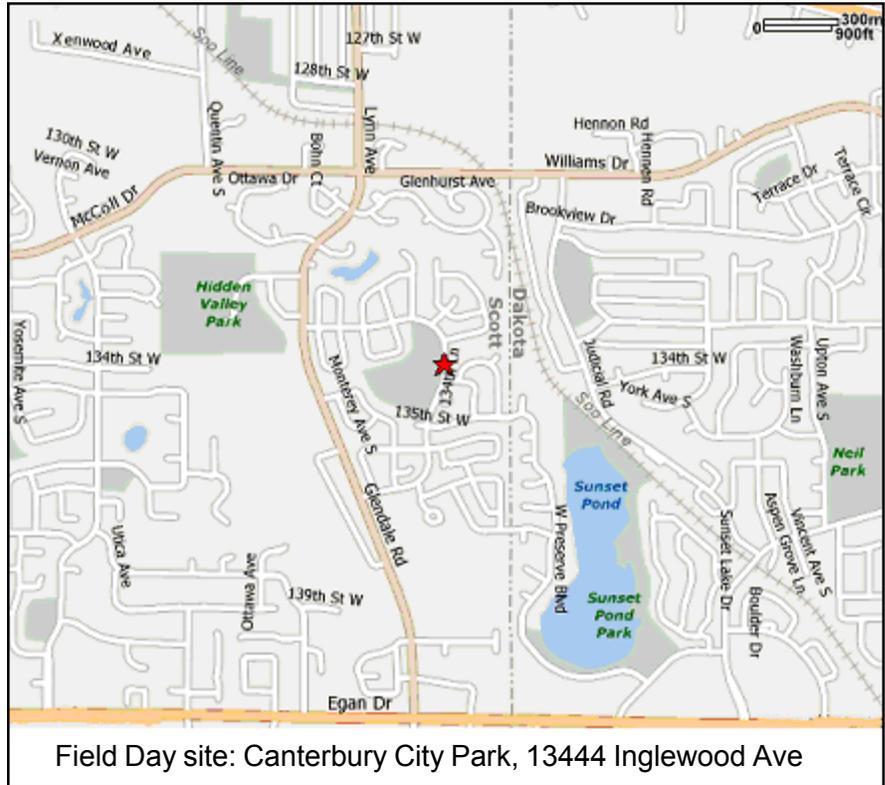
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mainly PSK31, and VHF/UHF contacts. If you haven't been on the air for a while or are a Technician who wants to get some HF experience, plan to stop by the field day site and make some contacts. This will give you the opportunity to check out the digital modes in a contest setting. There will be experienced operators there to help you out so don't be shy!

Saturday supper time will feature a potluck with hot grills provided for grilling the meat of your choice.

Mark your calendars and plan to join the fun the fun this Field Day with the Scott County ARES group. You can check out the Field Day locator on the ARRL website ([www.arrl.org](http://www.arrl.org)) for other field day sites in the area. You are always welcome!

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**Congratulations**

**2008 Graduates**

### Scott County ARES Contacts

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### June Events 2008

- 14 Flag Day
- 15 Father's Day
- 20 Summer Arrives!
- 21 Kid's Day
- 28 ARRL Field Day

## ARC Responds Regarding Background Checks

In November 2007, ARRL President Joel Harrison, W5ZN, wrote to the American Red Cross (ARC) regarding concerns voiced by ARRL volunteers. In 2006, the Red Cross stated it would implement background checks that included, among other things, a credit check and a "mode of living" check for its staff and volunteers, including ARES volunteers providing services to the Red Cross during disasters. ARRL saw these portions of the background check as unneeded and inappropriate for ARES service.

In a letter dated May 8 of this year, Armond T. Mascelli, ARC Vice President for Disaster Response Services replied to President Harrison: "I can now report back to you that [these] actions have been completed and changes have been instituted which I trust resolves the concerns detailed in your letter. This effort took considerably more time and attention than originally envisioned, but I believe the results will now benefit our respective organizations.

"A new background consent form now [is] to be used by all Red Cross chapters for ARRL members and other partner organizations. The form and related process is limited to the name and social security number verification of the individual, and a criminal background check. References and suggestions to other related investigative possibilities have been stricken."

With the background check issue apparently resolved, the ARRL will be working with the ARC in the negotiation and creation of a draft for a new "Memorandum of Understanding" (MOU) or similar document to replace the one which expired last year; Dura and Keith Robertory of the ARC will be leading the effort. When complete, the draft of the MOU will be presented to the leadership of both organizations for approval.

"While we believe that the Red Cross is implementing some changes that will address some of the concerns expressed to them by ARRL, at this point, it is work in process," said ARRL Chief Operating Officer Harold Kramer, WJ1B. "There are many questions yet to be answered, but we believe that the Red Cross is progressing in good faith to complete the changes to their policy and their background check consent form, which was the primary concern expressed to the Red Cross by ARRL. There will be more clarifications and information in the near future. Please keep an eye on the ARRL Web site for updates as we know them. We are very much aware of your concerns and have conveyed them to the Red Cross. We expect the Red Cross to address these and other concerns on subject of their background check policy in the near future."

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## BPL Dead in Dallas

The Dallas Morning News has reported that "an ambitious plan for using power lines to deliver fast Internet service to 2 million Dallas-area homes collapsed Thursday." Current Group, LLC has announced plans to sell its Dallas BPL network to Oncor, a regulated electric distribution and transmission business, for \$90 million. Oncor reportedly has no plans to offer Internet service but will use the network to detect distribution network issues

While Current originally touted the network as a way to offer Internet service to consumers and had entered into a marketing arrangement with DirecTV, the Houston Chronicle quotes Oncor spokesman Chris Schein as confirming that Oncor will use the network only for monitoring the power grid: "Our business is delivering electricity, not being an Internet provider or a television provider."

ARRL Chief Executive Officer David Sumner, K1ZZ, observed that "This announcement underscores yet again that the Government made a fundamental error in judgment when it erroneously identified BPL as a potential 'third wire' delivering broadband to consumers. As the Court of Appeals for the DC Circuit determined last week

The FCC then compounded the error by 'cherry-picking' from its staff studies and ignoring other studies that proved the FCC was underestimating the interference potential of BPL systems. One can only hope that this latest marketplace failure of BPL will send a clear message that the answer to expanding consumer broadband access lies with other, more promising technologies that do not have such a potential to pollute the radio spectrum."

ARRL Laboratory Manager Ed Hare, W1RFI, was quick to point out that BPL was not going away in Dallas. According to Oncor Vice President Jim Greer, Oncor will use the BPL network to spot grid problems to detect large power outages before they affect customers. Oncor will not offer Internet service through the system as Current had originally planned when they built it.

The ARRL has no issues with BPL as long as it does not cause harmful interference to the amateur bands. Current's Dallas system is a good example of that, Hare said, as it is "notched" so as not to interfere with the Amateur Radio Service: "The Current system in Dallas is probably not causing interference to ham radio. Their equipment doesn't use the ham bands. It is also quiet except when in use."

DirecTV customers who get Internet service through Current's network will probably lose service when the deal goes through. "Oncon is not in the telecommunications business, and it has no plans to get into the telecommunications business," said Schein.

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## ARES Toolbox

### DigiPan - PSK31

Free software, low-cost interface, easy to use, low power computer, operating fun, does it get any better than this? The sound card modes offer all this and more. Last month we covered a basic interface to connect the computer and radio. This month we'll take a look at setting up what is perhaps the granddaddy of the sound card mode software, DigiPan running PSK31.

PSK31 was initially developed by SP9VRC as *SLOWBPSK* and then later reworked by Peter Martinez, G3PLX. DigiPan software appeared on the scene in 1999. The software was a collaborative effort by Skip Teller, KH6TY and Nick Fedoseev, UT2UZ, who gave the software to the amateur community. You can download the software at <http://www.digipan.net/>.

Digipan 2.0 works best on a 266 MHz or faster Pentium processor and requires Windows 95 or greater, it doesn't require a computer powerhouse! Once you download and install DigiPan the next step is to configure the software for your specific station.

There are two general areas in the configuration process; computer to radio control, and text transmit / receive. When you have DigiPan running, click on the configuration tab on the menu at the top of the screen. First fill in your personal data. Next select the serial port tab. Indicate which serial port you will use to signal the radio to transmit. Check both RTS and DTR for keying. With the computer connected to the audio output of your radio, click the waterfall drive from the configuration menu. Adjust the slider controlling the waterfall drive to show a speckled blue field in the (lower) receive window. Now, connect your radio to a dummy load and set your power out for around 50%. Click the T/R button from the menu on the bottom of the screen, and key your transmitter. Click on the Transmitter Drive in the Configure menu and increase the Wave slider, while watching the ALC indicator on the radio. As soon as the ALC starts to read, STOP. This is the maximum power output you can use to maintain a clean signal. If you overdrive the transmitter you will produce a wide signal that splatters other signals on either side of your signal. You do not want to have a reputation as an inconsiderate operator.

Okay, what are we looking for on the waterfall? The

PSK31 signal sounds like a warbling tone that you can't miss once you find it (see fig.1). Check out the chart to see where PSK31 ops are most likely to be found on each band. PSK31 signals on the waterfall resemble a birds eye view of rolling tracks. You will see two parallel lines with numerous horizontal divisions.

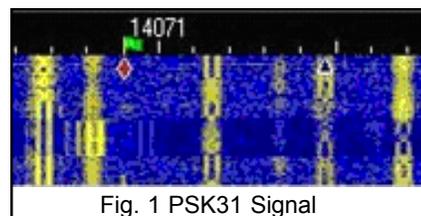
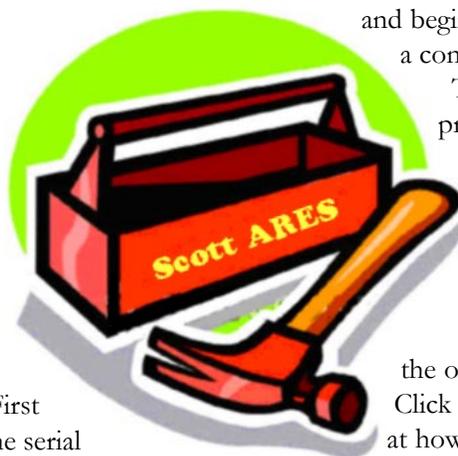


Fig. 1 PSK31 Signal

Pont and click on a signal with your mouse and watch the signal decode in the receive window.

Now that we have the radio – computer functions configured, you could click on the TX button on the menu and begin typing but there is an easier way to make a contact. Use the macros!

The second part of the configuration process makes the information exchange a lot easier. The Marcos are a library of standard phrases used during regular operation. These allow you to send information to the other station without having to actually type each word. Let's take a look at the "CQ" macro. Back to the old Configuration tab and select Fn Marcos. Click on the "CQ" macro and we'll take a look at how these messages work. You see the basic script for calling CQ, "<TX>CQ CQ CQ DE <MYCALL> <MYCALL> <MYCALL> pse K <RXANDCLEAR>". The macro turns on the transmitter, sends the CQ message, goes back to the receive mode and clears the receive window. Whew, all that with just one keystroke! Another macro you may want to set up is the "Brag". This macro will send the information you enter about your station i.e. radio, computer, antenna, power output, etc. You may want to write a macro titled "73". This script is used to end the conversation and could go something like this, "<TX> <CALL> DE <MYCALL> 73 AND TNX FOR THE QSO HOPE TO SEE YOU ON THE WATERFALL AGN SK <RXANDCLEAR>". You will discover other macros that fit your operating style as you make PSK31 contacts. You can also cut and paste from the windows clipboard to transmit detailed messages and save received message text.



## DigiPan *cont'd from pg. 4*

DigiPan also includes a logging function that you will find convenient when using the macros during a QSO. Browse through the help file topics. There is a lot of good information that will make your warbling more enjoyable. The best way to master the mode is to have some fun by getting on the air and making some contacts!

If you have any questions don't hesitate to ask the other operator. You will generally find a person willing to help out a newcomer to the mode. An excellent website for basic DigiPan operation is <http://www.qsl.net/wm2u/digipan.html>. If you enjoy PSK31 operation you will want to check out the 070 Club at <http://www.podxs070.com/>. These guys sponsor fun operating events on an almost monthly basis and the cost is minimal – FREE!

Have you got the soundcard digital bug? Check out the table for other soundcard modes / software. Next month we will take a look at the Narrow Band Emergency Messaging software which builds upon your experience using DigiPan. Using NBEMs we gain the advantage of station to station connection with error correction using a variety of soundcard modes. Check back next month!

### PSK31 Frequencies

160M	1838.15kHz	15M	21070.15kHz
80M	3580.15kHz	10M	28120.15kHz
40M	7070.15kHz	6M	50.290mHz
40M	7035.15kHz	2M	144.144mHz
20M	14070.15kHz		

### Soundcard Software Sites

PSK31 - Digipan <http://www.digipan.net/>  
NBEMS <http://www.w1hkj.com/NBEMS/>  
MMSSTV - Slow Scan  
<http://mmhamsoft.amateur-radio.ca/mmsstv/>  
MMTTY - Radio Teletype  
<http://mmhamsoft.amateur-radio.ca/mmtty/>  
MT63 <http://xoomer.alice.it/aporcino/MT63/index.htm>

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*Start every day off with a smile and get  
it over with.*

W. C. Fields

## Chinese Amateur Radio Operators Respond to Quake

As disaster recovery efforts continue following the earthquake in the Wenchuan area of China's Sichuan province on May 12, China's Information Office of the State Council reports that the death toll has reached more than 67,000 persons as of May 27. Communications in some of the surrounding areas were cut off, and communications in some other areas experienced network congestion due to drastically increased traffic. According to the Chinese Radio Sports Association (CRSA) — the Chinese IARU Member-Society — Chinese government officials and the news media have recognized that when communications failed after the earthquake, Amateur Radio operators stepped in to provide vital links.

CRSA designated 14.270, 7.050 and 7.060 MHz for emergency communications use during the quake, but these frequencies are now no longer restricted for this use; should a severe aftershock occur, CRSA said it will make the call for them to be kept clear again.

On Monday, May 26, China Central Television (CCTV) reported that, "When all other communication means failed, Amateur Radio operators came out! An Amateur Radio emergency communication network was set up, and one of the commanders, Liu Hu [BG8AAS], called for Amateur Radio operators on air to provide services for disaster relief."

Fan Bin, BA1RB, on behalf of CRSA, said, "Thankfully, one main repeater survived during the earthquake. This repeater provided 100 km coverage to Mianyang. Amateur Radio operators from Chengdu, Shenzhen, He'nan went to the center of the disaster area, set up repeaters in Beichuan County and provided various valuable first hand information from the center."

CRSA officials said they hoped to report more detailed information on the role of Amateur Radio emergency communications in the big earthquake at a later date. In the meantime, Fan said, CRSA acknowledged that the main organizer of local Amateur Radio traffic, Luo Minglin, BY8AA, "continuously coordinated VHF/UHF communications for a 100 km radius from Chengdu, the capital of southwest China's province of Sichuan. More repeaters were set up in both Beichuan and Mianyang — among the worst hit areas outside the epicenter — to form an effective Amateur Radio communication network."

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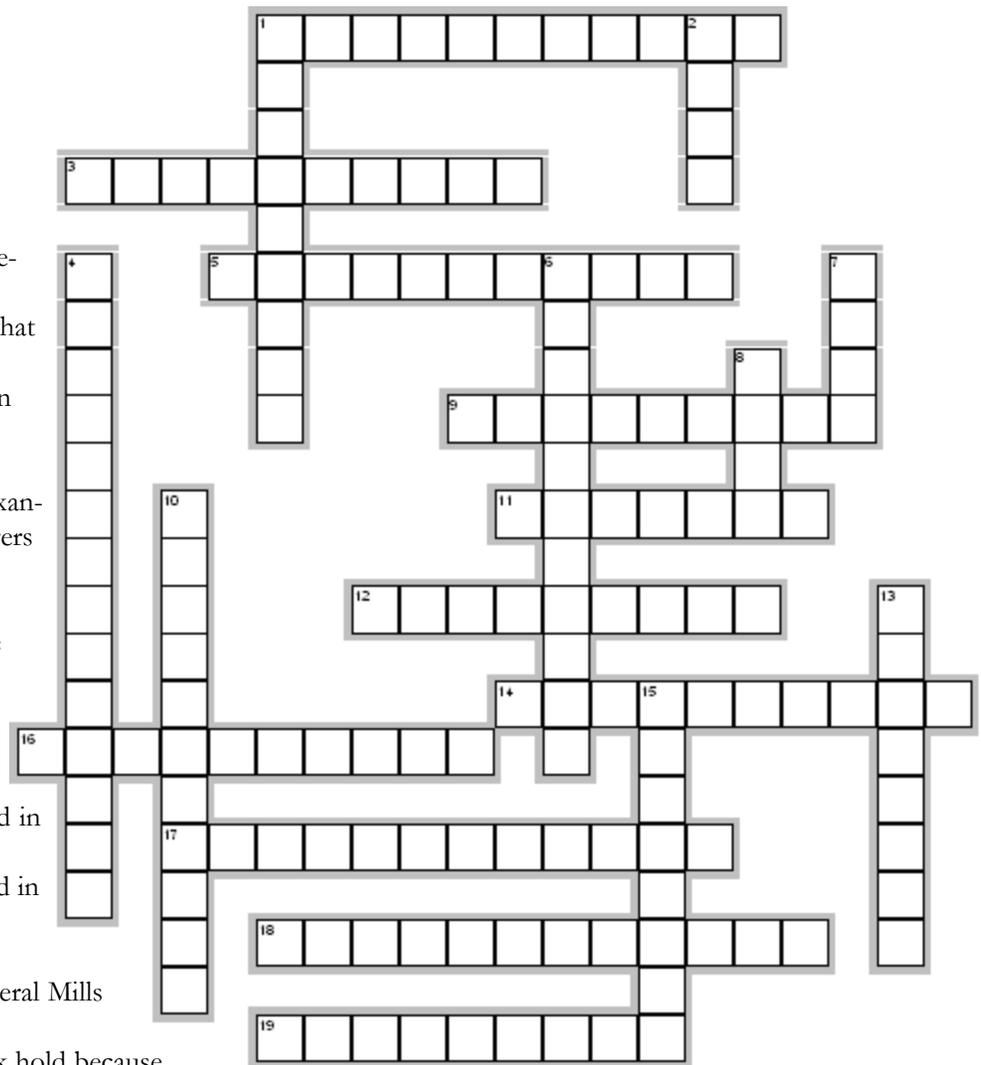
# MINNESOTA ICONS

## Across

1. The Pillsbury Doughboy with a trademark giggle debuted in 1965.
3. The large green ogre, born in 1921, that now stands guard over LeSueur.
5. The U of M mascot adopted after an 1857 political cartoon satirizing Gov't investment in building railroads.
9. Artifact discovered in 1898 near Alexandria. Some say it proves Nordic explorers arrived in Minnesota in 1362.
11. This pottery was once a part of Minnesotans' everyday lives and was the nation's largest pottery manufacturer.
12. This gangly, goofy looking animal and his pals starred in beverage commercials from 1953 to 1969.
14. Legendary lumberjack memorialized in Bemidji and Brainerd.
16. Minnesota's first state park, founded in 1891, includes the headwaters of the Mississippi River.
17. The trusted spokeswoman for General Mills since 1921.
18. This butter business trademark took hold because Minnesota is the legendary land of Hiawatha.
19. This lighthouse was authorized after a 1905 great lakes storm battered 29 ships along Lake Superior's shoreline.

## Down

1. The Meal-in-a-bun introduced at the State Fair in 1947.
2. Famous luncheon meat introduced by Hormel in 1937.
4. A major tourist attraction in 1800's popularized by the Henry Wadsworth Longfellow poem "The Song of Hiawatha" published in 1855.
6. Following coronation, this American Dairy Assn. spokesperson is sculpted in butter at the fair.
7. Large Ox that accompanied the legendary lumberjack across northern Minnesota.
8. The state legislature, in 1961, adopted this as the official state bird.
10. This 12 foot tall indicator sat atop the NW National



- Bank building from 1949. "When RED, warmer weather ahead."
13. Statue representing agriculture and industry, in addition to earth, fire, water and wind, seen in St. Paul.
  15. Norwegian delicacy consisting of cod that has been dried, soaked in lye, and boiled.



## Electronic Terms Crossword Solution

### Across

6. ACVOLTAGE—Voltage that varies smoothly from zero to a maximum value in one direction, or polarity, and returns to zero. It then reverses its direction (polarity) and rises to a maximum value in the opposite direction, and then returns to zero to complete the cycle.
7. BATTERY—An electrical device consisting of one or more cells which converts chemical or solar energy into electrical energy. Provides a source of steady-state DC voltage.
8. DC—Voltage with a constant direction (polarity) with respect to a fixed reference. Can be either positive or negative.
11. OHM—The unit of measurement of resistance symbolized by the Greek letter, omega. It is named after a 19th century German physicist.
12. CIRCUIT—A single component or group of interconnected components powered by a source of voltage and configured according to specified rules.
15. VARISTOR—A metal (zinc) oxide over-voltage protective device.
16. LOAD—A device, component, appliance, system, or machine to which an electrical force (voltage) is applied.
17. RESISTANCE—The electrical characteristic of a component, material, circuit, or system which acts to limit current in a circuit. It is measured in ohms and designated with the letter R.

### Down

1. ELECTROMOTIVEFORCE—The electrical force that exists across the terminals of an electrical generator, or battery. When connected to a load in a closed circuit, this force produces a voltage across the load and causes current to flow in that circuit.
2. AMPERE—The unit of measurement of electrical current flow, named after a 19th century French physicist.
3. GROUND—The part of a circuit or system that is the reference for the voltages existing in that circuit or system.
4. ELECTRON—Considered to be the smallest unit of electrical charge.
5. WAVELENGTH—The physical distance between the beginning and the end of a cycle in a periodic wave as it travels through space or through a conductor. It is measured in meters
9. CIRCUITBREAKER—An automatic, magnetic, or bimetallic device that will open a current-carrying circuit causing the circuit to become inoperative. This device is used to prevent circuit damage under a condition of excess current.

10. BLOWTIME—Maximum time required for a fuse to open after being subjected to an excess of the device's rated current. Classified as slow, normal, or fast.
13. POWER—The rate at which work is done and measured in watts (W). In electrical and electronic circuits, Power (P) = Supply Voltage (E) x Supply Current (I).
14. VOLT—The unit of measurement of electromotive force necessary to produce one ampere of current in a circuit having a total resistance of one ohm. It is named for an 18th century Italian physicist.

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**ARES Breakfast**  
Saturday June 14th  
7:30AM  
Perkins Restaurant  
Savage, MN

### NECOS Schedule - June 2008

2 Jun	KB0FH Bob
9 Jun	KC0YHH Tony
16 Jun	N0PI Dan
23 Jun	W0NFE Bob
30 Jun	KB0FH Bob
7 Jul	KC0YHH Tony
14 Jul	N0PI Dan