



# ARES COMMUNICATOR

Information for Scott County Amateurs



June, 2009

Accurate, Reliable Emergency Communications

Volume 9, Number 6

## EXPLORE RADIO SCOUTING

The Scout Radio Outpost was one of the many exciting displays in the ARRL EXPO, at the Dayton Hamvention, that were eagerly anticipated by youth and adults alike.

According to Brian Walker, K9BKW, Scout Leaders will again be reaching out to ham radio operators to encourage them to provide Amateur Radio opportunities to Boy Scouts back in their home towns.

Walker and a team of Scouters will host the Outpost, answering questions and provide amateurs with resources about Radio Scouting.

"Ham Radio has such a huge impact on the quality of a Scouting program. From bringing Scouts around the world together, to providing event communications and safety, to building a Scout's foundation to become America's future technicians, engineers and scientists. You, the local elmer willing to help out, can really make a difference by getting involved with your local Scout organizations," said Walker, an Eagle Scout, past Scoutmaster, District Commissioner and currently Venturing Crew 272 Advisor (WB9SA).

At the Outpost, amateurs learned how to teach the Radio merit badge and help their local Scouts participate in Scouting's largest annual event, the Jamboree on the Air (JOTA). "Each October, more than half a million Scouts around the world talk to each other via Amateur Radio," Walker said. "We will show hams Tips on how they can let

Radio Scouting cont'd on page 2



## Field Day 2009



Field Day is arguably the most amateur radio fun a person can pack into one weekend all year long! The event is rapidly approaching for 2009.

The last full weekend in June, amateur radio operators all across the country take to the field for a twenty four operating marathon. The portable stations are set up in locations not normally used for communications, simulating an emergency operation.

Once set up, the operators test their skills by attempting to make two-way contacts with as many other stations as possible within the twenty four hours of the contest.

Contacts are made by voice, Morse code, and a number of digital modes. Each contact scores points for the operating team.

Field Day '09 cont'd on page 2

## ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, June 13th

Digital Monday June 15th

### 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.

EDITOR: Bob Reid, Scott County Emergency Coordinator

Snail Mail: 13600 Princeton Circle

Savage, MN. 55378

E-Mail: NOBHHC@aol.com

Phone: Home 952-894-5178 Portable 612-280-9328

Reader submissions encouraged!

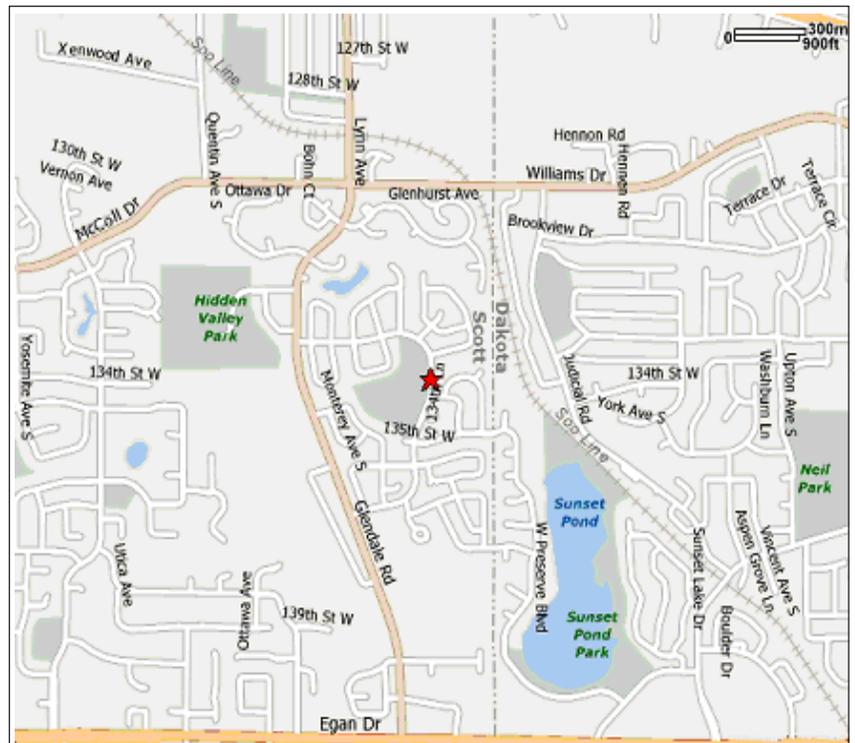
## Field Day '09 - cont'd from page 1

Scott ARES will be operating from the park shelter in the Canterbury City Park in Savage. The park shelter is located at 13400 Inglewood Ave (see map).

The general public along with City and County officials are welcome to stop by anytime and check out the fun. Visitors can watch amateur radio in action, talk with amateur operators and check out the information available.

The group is planning a two station operation with set-up beginning on Saturday morning around 9AM with operating starting a 1PM. Depending on evening propagation conditions, the stations will be on the air for the entire 24-hour period. ARES members are planning a pot-luck picnic supper for members and families on Saturday.

BREAK - OVER



Scott County ARES Field Day Site  
Canterbury City Park, 13440 Inglewood Ave., Savage

### Scott County ARES Contacts

Emergency Coordinator  
Bob Reid NOBHC  
13600 Princeton Circle  
Savage, MN 55378  
952-894-5178  
NOBHC@arrl.net

Asst. Emergency Coordinator  
Bob Minor WONFE  
5210 West 141<sup>st</sup> Street  
Savage, MN 55378  
952-894-2657  
WONFE@arrl.net

Asst Emergency Coordinator  
Daniel Vande Vusse NOPI  
5722 West 141<sup>st</sup> Street  
Savage, MN 55378  
952-440-1878  
NOPI@arrl.net



### Radio Scouting - cont'd from page 1

Scouts in their hometowns participate in this exciting on-the-air event."

Matthew Murphy, KC8BEW, of BSA's Muskingum Valley Council said that hams visiting the Outpost also learned about a new program being developed for 2010's 100th birthday of the Boy Scouts of America: "Scout Camps on the Air (SCOTA) promises to be a fun way for hams to help encourage Amateur Radio operations at Scout camps and other large Scouting events. Murphy is coordinating the SCOTA program. You can find more information about the program at <http://kc8bew.net/scota.html>.

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## Formal Message Elements – 5th in a Series

### Message Text -

#### ARRL Numbered Radiograms

ARRL Numbered Radiograms are a standardized list of often-used phrases. Each phrase on the list is assigned a number. There are two groups of ARL text messages. Group Two contains 21 routine messages, including number "FORTY SIX" and from "FIFTY" through "SIXTY NINE." For the complete list, see <http://www.arrl.org/FandES/field/forms/fsd3.pdf>

When using numbered radiograms, the letters "ARL" are placed in the "check" block of the preamble, just prior to the number indicating the word count, as in "ARL7."

In the text of the message, the numbered radiogram is inserted by using the letters "ARL" as one word, followed by the number written out in text, not numerals. For example: "ARL FIFTY SIX."

It is important to spell out the numbers letter by letter when sending using voice. This allows the receiving station to correctly copy what is being sent, and not inadvertently write the figures out as "FIVE SIX" instead of "FIFTY SIX." "ARL FIFTY SIX" is counted as three words for the "check" block. Two common receiving errors are to write "ARL-56" and count it as one word, or "ARL 56" and count it as two words.

Some numbered messages require a "fill in the blank" word in order to make sense. Here are two examples:

ARL SIXTY TWO: Greetings and best wishes to you for a pleasant \_\_\_\_\_ holiday season.

ARL SIXTY FOUR: Arrived safely at \_\_\_\_\_.

#### ARRL Text Messages Group 2

FORTY SIX—Greetings on your birthday and best wishes for many more to come.

FIFTY—Greetings by Amateur Radio.

FIFTY ONE—Greetings by Amateur Radio. This message is sent as a free public service by ham radio operators at \_\_\_\_\_. Am having a wonderful time.

FIFTY TWO—Really enjoyed being with you. Looking forward to getting together again.

FIFTY THREE—Received your \_\_\_\_\_. It's appreciated; many thanks.

FIFTY FOUR—Many thanks for your good wishes.

FIFTY FIVE—Good news is always welcome. Very delighted to hear about yours.

FIFTY SIX—Congratulations on your \_\_\_\_\_, a most worthy and deserved achievement.

FIFTY SEVEN—Wish we could be together.

FIFTY EIGHT—Have a wonderful time. Let us know when you return.

FIFTY NINE—Congratulations on the new arrival. Hope mother and child are well.

SIXTY—Wishing you the best of everything on \_\_\_\_\_.

SIXTY ONE—Wishing you a very Merry Christmas and a Happy New Year.

SIXTY TWO—Greetings and best wishes to you for a pleasant \_\_\_\_\_ holiday season.

SIXTY THREE—Victory or defeat, our best wishes are with you. Hope you win.

SIXTY FOUR—Arrived safely at \_\_\_\_\_.

SIXTY FIVE—Arriving \_\_\_\_\_ on \_\_\_\_\_. Please arrange to meet me there.

SIXTY SIX—DX QSLs are on hand for you at the \_\_\_\_\_ QSL Bureau. Send \_\_\_\_\_ self addressed envelopes.

SIXTY SEVEN—Your message number \_\_\_\_\_ undeliverable because of \_\_\_\_\_. Please advise.

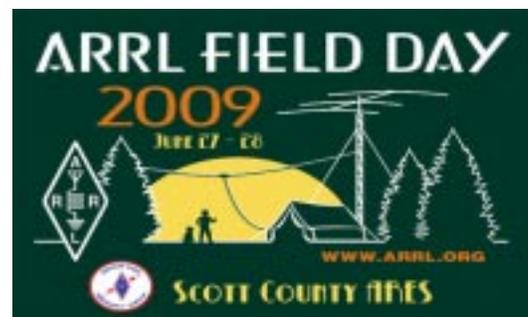
SIXTY EIGHT—Sorry to hear you are ill. Best wishes for a speedy recovery.

SIXTY NINE—Welcome to the \_\_\_\_\_. We are glad to have you with us and hope you will enjoy the fun and fellowship of the organization.

#### The Importance of the Signature

During an emergency, the messages you handle can easily contain requests for expensive supplies that have a very limited "shelf life" (such as blood for an aid station), or for agencies that will only respond to authorized requests (i.e.: for medevac helicopters). For this reason, it is critical that you include that the signature and title of the sender in every message.

BREAK - OVER



## New Solar Cycle Prediction

NOAA Space Weather Prediction Center

An international panel of experts led by NOAA and sponsored by NASA has released a new prediction for the next solar cycle. Solar Cycle 24 will peak, they say, in May 2013 with a below-average number of sunspots.

"If our prediction is correct, Solar Cycle 24 will have a peak sunspot number of 90, the lowest of any cycle since 1928 when Solar Cycle 16 peaked at 78," says panel chairman Doug Biesecker of the NOAA Space Weather Prediction Center.

It is tempting to describe such a cycle as "weak" or "mild," but that could give the wrong impression. "Even a below-average cycle is capable of producing severe space weather," points out Biesecker. "The great geomagnetic storm of 1859, for instance, occurred during a solar cycle of about the same size we're predicting for 2013."

The 1859 storm—known as the "Carrington Event" after astronomer Richard Carrington who witnessed the instigating solar flare—electrified transmission cables, set

of Sciences found that if a similar storm occurred today, it could cause \$1 to 2 trillion in damages to society's high-tech infrastructure and require four to ten years for complete recovery. For comparison, Hurricane Katrina caused "only" \$80 to 125 billion in damage.

The latest forecast revises an earlier prediction issued in 2007. At that time, a sharply divided panel believed solar minimum would come in March 2008 followed by either a strong solar maximum in 2011 or a weak solar maximum in 2012. Competing models gave different answers, and researchers were eager for the sun to reveal which was correct.

"It turns out that none of our models were totally correct," says Dean Pesnell of the Goddard Space Flight Center, NASA's lead representative on the panel. "The sun is behaving in an unexpected and very interesting way."

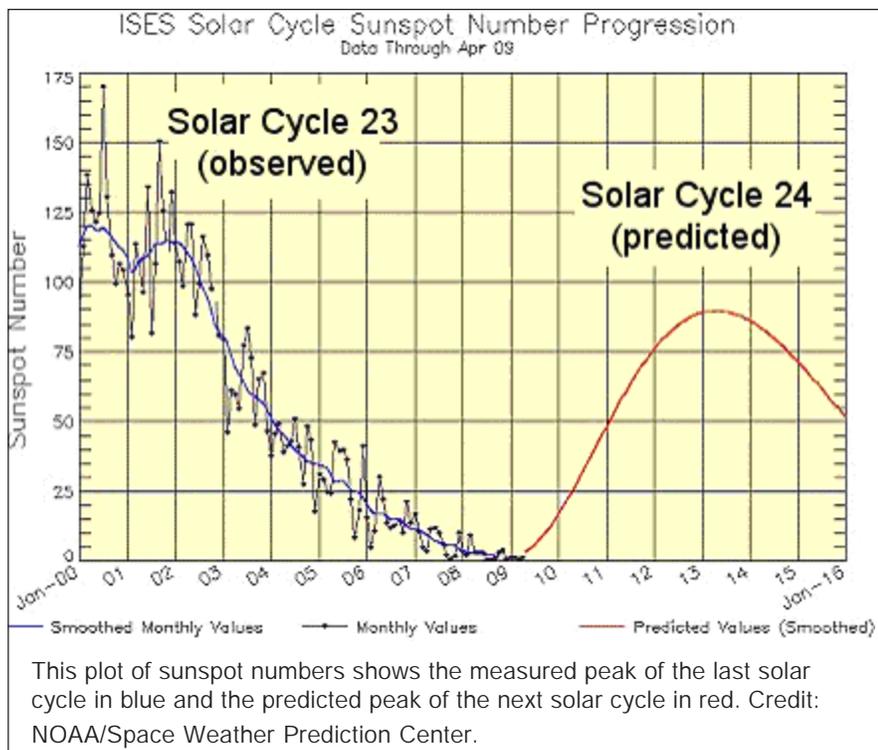
Researchers have known about the solar cycle since the mid-1800s. Graphs of sunspot numbers resemble a roller coaster, going up and down with an approximately 11-year

period. At first glance, it looks like a regular pattern, but predicting the peaks and valleys has proven troublesome. Cycles vary in length from about 9 to 14 years. Some peaks are high, others low. The valleys are usually brief, lasting only a couple of years, but sometimes they stretch out much longer. In the 17th century the sun plunged into a 70-year period of spotlessness known as the Maunder Minimum that still baffles scientists.

Right now, the solar cycle is in a valley—the deepest of the past century. In 2008 and 2009, the sun set Space Age records for low sunspot counts, weak solar wind, and low solar irradiance. The sun has gone more than two years without a significant solar flare.

"In our professional careers, we've never seen anything quite like it," says Pesnell. "Solar minimum has lasted far beyond the date we predicted in 2007."

In recent months, however, the sun has begun to show timorous signs of life. Small sunspots and "proto-sun-



fires in telegraph offices, and produced Northern Lights so bright that people could read newspapers by their red and green glow. A recent report by the National Academy

# Basic Skills

## Crossword Puzzle Solution

### Across

3. BRAVO—Phonetically indicated the letter “B”
4. PROWORDS—Procedural terms with specific meanings.
8. FCCCALLSIGN—Callsign used at the end of an exchange between two stations.
9. OUT—Used to indicate a specific station has completed communications.
10. QUEBEC—Phonetically indicates the letter “Q”
11. ITU—Standard phonetic alphabet used in emergency communications.

### Down

1. JARGON—Technical slang and specialized terminology.

2. TACTICAL—Callsign which allows you to contact another station without using the operator’s FCC callsign.
4. PLAINLANGUAGE—Language used for emergency communications
5. WHISKEY—Phonetically indicates the letter “W”
6. ACCURATELY—How emergency information is communicated.
7. LISTENING—makes up at least 50% of communications.
9. OVER—Proword used to let a specific station know to respond.
10. QUICKLY—Speed at which emergency information is transmitted.

BREAK - OVER

# THESE COLORS DON'T RUN!

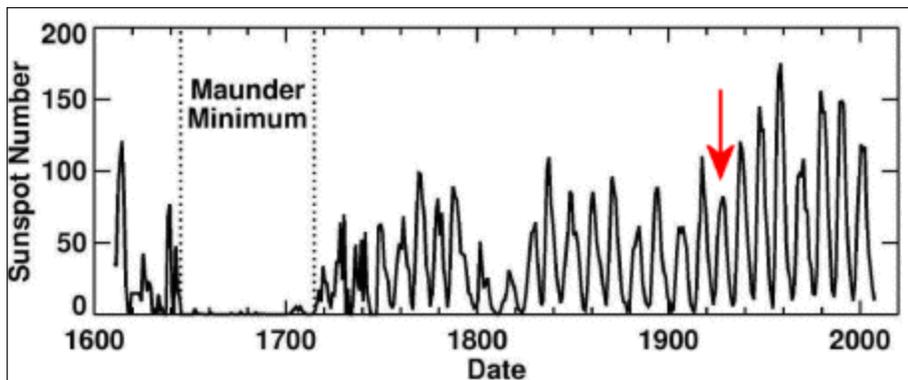
June 14<sup>th</sup>



## Propagation - cont'd from page 4

spots” are popping up with increasing frequency. Enormous currents of plasma on the sun’s surface (“zonal flows”) are gaining strength and slowly drifting toward the sun’s equator. Radio astronomers have detected a tiny but significant uptick in solar radio emissions. All these things are

According to the forecast, the sun should remain generally calm for at least another year. From a research point of view, that’s good news because solar minimum has proven to be more interesting than anyone imagined. Low solar activity has a profound effect on Earth’s atmosphere, allowing it to cool and contract. Space junk accumulates in Earth orbit because there is less aerodynamic drag. The becalmed solar wind whips up fewer magnetic storms around Earth’s poles. Cosmic rays that are normally pushed back by solar wind instead intrude on the near-Earth environment. There are other side-effects, too, that can be studied only so long as the sun remains quiet.



Above: Yearly-averaged sunspot numbers from 1610 to 2008. Researchers believe upcoming Solar Cycle 24 will be similar to the cycle that peaked in 1928, marked by a red arrow. Credit: NASA/MSFC

precursors of an awakening Solar Cycle 24 and form the basis for the panel’s new, almost unanimous forecast.

Meanwhile, the sun pays little heed to human committees. There could be more surprises, panelists acknowledge, and more revisions to the forecast.

“Go ahead and mark your calendar for May 2013,” says Pesnell. “But use a pencil.”

BREAK - OVER

# VHF LINGO

3. Transmitting on one frequency and receiving on another in the same band.

4. Monitor a range of frequencies or a set of memory channels for activity.

8. Cable used to transfer radio-frequency energy from transceiver to antenna.

11. Opposition to ac current flow by a circuit, feed line, or antenna.

15. A signal so strong that circuits begin to operate improperly.

16. Radio that can operate on AM, SSB, CW, digital modes and FM

17. Amateur digital data system that communicates using VHF and UHF frequencies.

19. Antenna with gain primarily in one direction.

20. System for sending and receiving email via Amateur Radio.

21. Several battery cells connected together to act as a single, larger battery.

22. Device that changes ac power into dc power.

## Down

1. Audio frequencies below the usual communication range of 300 – 3000 Hz.

2. VHF/UHF systems used by commercial and government agencies, sharing a few channels among many users by using computers to control the radio's frequencies.

5. Amateur Radio Emergency Service, sponsored by the ARRL's Field Organization

6. Antenna's ability to concentrate received or transmitted energy in a preferred direction.

7. Device that plugs into a vehicle lighter socket and supplies power to a radio or electronic device.

9. Transmitting and receiving on the same frequency.

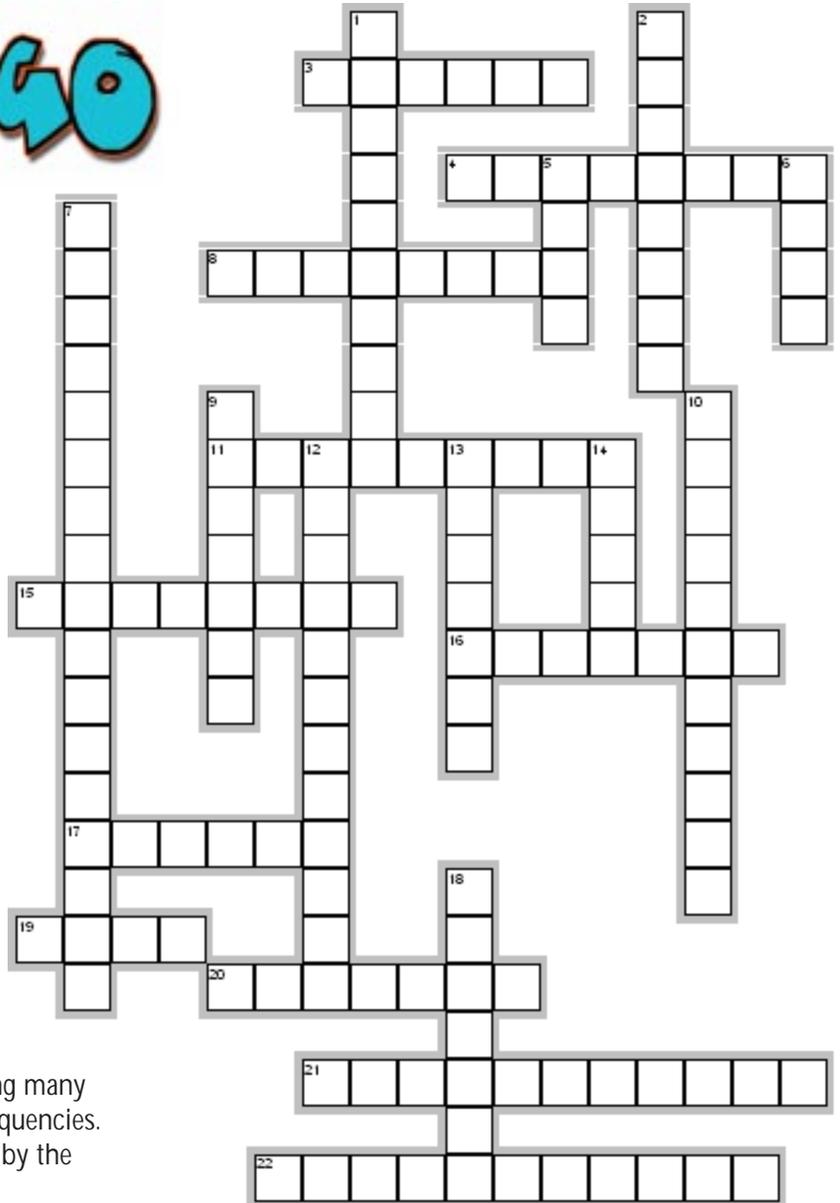
10. A conductive surface that acts as an electrical mirror. A ground plane antenna is an antenna that requires a ground plane to operate.

12. Orientation of radio waves with respect to the surface of the Earth (vertical, horizontal)

13. VHF channels for aviation air-to-air and air-to-ground communications

14. Abbreviation for "emergency communications".

18. Listen without transmitting or disable a radio's squelch to listen for weak signals.



## Field Day Tips And Techniques

ARRL Contest Branch Manager Sean Kutzko, KX9X, offered the following suggestions at the ARRL Field Day Forum at the 2009 Dayton Hamvention on how to make the most of Field Day operation.

- 1) You will get many more stations in your log by calling CQ than by tuning the dial and answering CQs; however, if you're calling CQ and not getting any replies, keep calling. Most major contesters call CQ for several minutes at a time before giving up. Giving up after three or four CQs is giving up too soon.
- 2) Keep your CQs short and to the point: "CQ Field Day, CQ Field Day, Whiskey-One-Alfa-Whiskey, Field Day." Wait about 5 seconds between CQs — this gives stations enough time to answer you.
- 3) Use standard phonetics. "Cute" phonetics don't always get through and they can confuse newer operators.
- 4) When working a station, you should give your exchange information only once and keep it simple. "Whiskey-One-Alfa-Whiskey, copy three Foxtrot Connecticut, QSL?" If they didn't get all of the exchange, they will ask for a repeat.
- 5) If you are running a pileup: Once you have pulled a call out of the pileup, give your exchange information first. Here's an example: "Whiskey-One-Alfa-Whiskey, copy 3F Connecticut, QSL?" Don't ask for the calling station's information first — this will reduce any sense of rhythm and timing in the pileup.
- 6) If you get a pileup of stations and can't make out an entire call, listen for one letter and ask for it specifically: "The station with Delta only, go ahead."
- 7) When you get the other station's information, keep your acknowledgment simple. "QSL, thanks, QRZ Field Day from Whiskey-One-Alfa-Whiskey."
- 8) Find a comfortable pace for you and maintain that pace. You will tire quickly if you are screaming into the microphone or trying to work stations too quickly. This leads to inefficiency.
- 9) Use a headset with a boom microphone and a foot switch — this frees up your hands to log QSOs. Writing or typing with a mike in your hand slows you down.
- 10) Go for as many bonus points as you possibly can. Numerous opportunities exist, from copying the Field Day message to sending traffic to using natural power for QSOs.

These tips should help maximize your score on Field Day. Remember: No matter how you choose to enjoy Field Day, maximize your fun, however you define it.

BREAK - OVER

## Uff Da!

Roving correspondent A. Nony Moose reports this happened about a month ago just outside of Willmar, and while it sounds like an Alfred Hitchcock tale, it's real.

This out of state traveler was on the side of the road, hitchhiking on a real dark night in the middle of a thunderstorm. Time passed slowly and no cars went by. It was raining so hard he could hardly see his hand in front of his face. Suddenly he saw a car moving slowly, approaching and appearing ghostlike in the rain. It slowly and silently crept toward him and stopped.

Wanting a ride real bad the guy jumped into the car and closed the door; only then did he realize that there was nobody behind the wheel, and no sound of an engine to be heard over the rain. Again the car crept slowly forward and the guy was terrified, too scared to think of jumping out and running. The guy saw that the car was approaching a sharp curve and, still too scared to jump out, he started to pray and began begging for his life; he was sure the ghost car would go off the road and into a nearby lake and he would surely drown!

But just before the curve a shadowy figure appeared at the driver's window and a hand reached in and turned the steering wheel, guiding the car safely around the bend. Then, just as silently, the hand disappeared through the window and the hitchhiker was alone again!

Paralyzed with fear, the guy watched the hand reappear every time they reached a curve. Finally the guy, scared to near death, had all he could take and jumped out of the car and ran and ran, into town, into Willmar.

Wet and in shock, he went into a bar and voice quavering, ordered two shots of whiskey, then told everybody about his supernatural experience. A silence enveloped and everybody got goose bumps when they realized the guy was telling the truth (and was not just some drunk).

About half an hour later two guys walked into the bar and one says to the other, "Look Ole, ders dat idiot dat rode in our car when we wuz pushin it in da rain."

BREAK - OVER



## ARES Breakfast

Saturday June 13th  
7:30AM  
Perkins Restaurant  
Savage, MN

## NECOS Schedule June 2009

8 Jun KC0YHH Tony	29 Jun KB0FH Bob
15 Jun NOPI Dan	6 Jul KC0YHH Tony
22 Jun W0NFE	13 Jul NOPI Dan