



MINNESOTA MARSGRAM



Information for Minnesota Navy-Marine Corps. MARS Members

May, 2005

Volume 9, Number 5

NNN0ALL Minnesota

by NNN0GAZ Tim

Greetings, Mother Nature is sure having a tough time with the seasonal changes this year. May 1 brought a mix of *winter weather* – snow, sleet, and wind. Seemed a bit funny to watch Christopher and Sondra taking their swimming lesson and it was snowing outside. I'm sure that we will see our fair share of summer weather, eventually.

The Armed Forces Day celebration is just about here. The list of military stations participating in Armed Forces Day is posted on the Minnesota MARS website. Let's see if the Central Area can be successful again this year. Last year, despite awful propagation conditions – NAV 4 managed 500 contacts. Please forward this information to your local club, any nets you may participate in, and your amateur radio friends, this material has not been published in QST or CQ magazines. Your help in spreading the word would be appreciated. Try to make contact with NAV 4 on May 14. The past three years the Central Area has finished ahead of all others in the number of QSOs, lets keep the tradition going.

Once again the spring season finds me very busy. My absence from evening nets is not due to equipment or antenna failure. I'm still here, unfortu-

nately my schedule has been pretty full lately. I've spent a lot of time in the classroom teaching Skywarn classes. My local school asked if I would speak to their third graders about severe weather – about 75 third graders spread out over 3 hours. The youngsters are so curious and full of energy. I was truly amazed at some of the questions they asked. To all of you, thanks for your patience and to those of you who filled in for me as NECOS and TREP – a big THANK YOU. Your assistance during this time is much appreciated.

Don't forget, the Minnesota Area Conference, in Waite Park, is scheduled for Saturday, June 11. Al, NNN0KZC will be the Master of Ceremonies. If you have items for the conference agenda, please forward them to Al with a copy to me. The conference is what you make it – so if you have topics you want to see discussed, please make sure to get them on the agenda.

Finally, with warmer weather and the opportunities to spend more hours outside, please don't forget our evening nets. We would like to hear

for you during the spring and summer months. Don't miss the opportunity to participate in an evening net, an ecom exercise, you will find that checking in to the evening net to enjoy fellowship with your fellow MARS members is definitely worth the time.

Enjoy this issue of the Minnesota MARSGRAM.

BT OVER



The MINNESOTA MARSGRAM is published for the benefit of Amateur Radio Operators in Minnesota and other interested individuals. The contents DO NOT reflect official Navy positions.

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Content Contributions Welcomed and Encouraged

MINNESOTA TRAFFIC NETS

Designator	Frequency	Local Times
5G1B	Pri. NCE Sec. NBG Ter. NAR	18:30 Daily

MINNESOTA ADMIN. NET

5G4A	Pri. NCE	19:00 2nd Sunday
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MARS DATA SYSTEM

Frequency	NN0DVD	NCO AFSK/USB
Intranet site	http://www.communityzero.com/mnmars	

Evolution of America's domestic "forward observers": How MARS readied itself before the terrorists struck

Bill Sexton, N1IN/AAA9PC

A good bit happened before 17 January 1994 and a great deal after. But on that particular day when an earthquake devastated California's San Fernando Valley, MARS made significant history of its own.

The quake, centered on Northridge 20 miles northwest of Los Angeles, took only 15 seconds to create this country's costliest natural disaster up to that time. It left \$44 billion in damage, 51 persons killed, 9,000 injured, 22,000 homeless. Of particular concern to relief forces, it also blocked 11 major approaches to Los Angeles and destroyed nine freeway bridges.

For the Army Military Affiliate Radio System, however, Northridge provided a positive test and a turning point. MARS, previously known primarily for getting messages and phone connections to American troops abroad, now positioned itself as the front-line eyes and ears for military disaster response at home.

It's quite a story.

By chance, barely three weeks before Northridge, the Army MARS civilian chief, Robert Sutton, had a coffee break conversation with a key, Pentagon planner regarding MARS utility in domestic emergencies. The two met at a Defense Department conference on disaster relief.

This was an issue that gained stark new meaning after Hurricane Andrew's deadly assault on South Florida and coastal Louisiana the previous year. Andrew left \$26 billion in damage. It was the most costly natural calamity in U.S. history prior to Northridge.

Now came the Northridge quake, and almost immediately LTC Fenton "Dutch" Thomas, the same planner Sutton had met at the Pentagon three weeks previously, telephoned the MARS chief at his Ft. Huachuca AZ headquarters.

Since landline communications were inoperative, Thomas asked, could Army MARS operators provide first-hand, real-time information on the disaster's impact?

Specifically, the Army Directorate of Military Support (DOMS) needed information on alternative supply routes around the destroyed freeways. DOMS also wanted to know if any airports were operational and capable of accommodating large aircraft. And what was the hospital situation - destroyed, like 7,000 other buildings, or operational?

Sutton, who was already monitoring a hurriedly mustered California MARS emergency net, relayed the queries to the scene. One set of volunteers took to their cars to check out hospitals. Others observed that commercial aircraft were

taking off and landing. And members identified roads still open to 18-wheeler trucks. DOMS got its answers within minutes.

According to Sutton, Colonel Thomas, who became a fan and supporter of MARS, "later told us that these seemingly small bits of information were of significant value to the decision makers of DOMS."

"Since normal communications were down, the question was asked how he (Thomas) obtained the information so quickly," Sutton recalled. "The answer was a simple one. 'Army MARS.' The program and its capabilities were not initially understood, but later briefings and the follow-on provided the answers."

That initial conversation between Sutton and Thomas back at the Pentagon sketched broad lines of a nationwide information-gathering program that has since become the primary day-to-day MARS emergency function. Sutton continued the discussions with his staff and Signal Command officers back at Ft Huachuca. By the time 9/11 mobilized the rest of America, the MARS emergency information system was fully tuned up and long since operating.

MARS members still, provide backup communications when accidents, weather, natural, disasters or hostile action interdict normal channels. They always have. And yes, MARSgrams and phone patches are available for servicemen abroad.

But day in and day out, it's the steady flow of specially formatted messages alerting federal authorities to developing emergencies where MARS management devotes major attention.

In 2004, Army MARS logged 1,740 "Actual Incident" EEI (Essential Elements of Information) messages transmitted to DOMS for redistribution to agencies concerned. Air Force and Navy-Marine Corps MARS members contributed significant additional numbers. The EEIs covered everything from the 2004 barrage of Atlantic hurricanes to the tornadoes, aircraft accidents, Interstate highway pileups, train derailments, blizzards, and chemical spills that afflicted other areas.

Army MARS' 2,700 members additionally filed 6,498 practice or "exercise" EEIs during the year - that is, carefully labeled fictitious messages for training purposes that are not circulated outside the MARS system. This allows operators to learn the format and filing procedures, And note that

EVOLUTION *cont'd from pg. 2*

figure 2,700: these Army MARS operators, augmented by their Air Force and Navy-Marine Corps fellow members, cover virtually every corner of America.

Additionally, during the Army's Grecian Firebolt 2004 exercise, MARS participation was in support of Homeland Defense and Homeland Security and exercise EEI reports were a major role. MARS volunteer members provided EEI information concerning simulated terrorist attack information from all over the U.S.

For veteran participants in MARS, the new focus on emergency traffic was - and for some, still is - a considerable wrench. Patiently monitoring local sources for fast notice of major emergencies that never seem to happen conveys little of the drama and reward of a MARSgram delivered to a nervous family from a son or daughter overseas, or connecting them via a phone patch.

Literally hundreds of thousands of MARSgrams were handled during the Vietnam conflict. Even the Desert Storm campaign of 1991 counted 180,000 MARSgrams and 60,000 phone patches via HF radio.

Unfortunately, the advent of e-mail and cell phones doomed these morale and welfare services.

Sutton, who spent 20 years as an U.S. Air Force communicator, has been a MARS volunteer, since 1961. Later in his service career, the Army MARS Western Area Gateway station became one of his many operational responsibilities. He doffed his uniform in 1980 to become a Department of the Army civilian concerned with signal technology. On 14 Dec. 1989 he won the assignment of Chief, Army MARS.

Early on, the new chief detected the changing priorities - "transformation" eventually became the buzzword - within the Army.

"There was a government drive for downsizing to reduce manpower and spending and consolidate resources," he recalls. "It became clear after Desert Storm that the morale and welfare role that MARS was most noted for was being replaced with newer technology. It was also clear that if MARS were to survive the cutbacks, it needed to refocus on its primary mission, which is and always was emergency communications."

During 1992-3 Sutton chaired a team that discussed how best to utilize MARS assets and capabilities in support of disaster relief agencies. So when he encountered LTC Thomas the next year, he was ready.

So was MARS. By the time the Wildfire season hit the western states in summer 1994 -so soon after the Northridge quake - MARS members had been trained and the first EEIs began flowing to the Pentagon's Directorate of Military Support. And they're still flowing, thanks to the dedication of Hams like Jack Wood, AAR4UA, of Baker FL.

Digital Re-broadcast

Weigh in with your opinion

Recently we have been discussing the possibility of re-broadcasting messages addressed to ALL using digital means - PSK, MT63 or other modes. This "broadcast" would take place following the evening net. By offering this "broadcast" members would have an opportunity to practice with the digital modes and we could evaluate the reliability of the various modes for use in other situations. If you think this is a good idea, let the staff know. BT OVER

Test Your MARS Skills

You are operating as the State traffic net's traffic representative (T-REP). You download an administrative message that has the operating signal ZEN/ preceding several call signs in the addressee list. How do you transmit these operating signals by voice?

- You don't. The operating signal ZEN/ is ignored when transmitting MARS messages by voice.
- You transmit the operating signal as a single word 'ZEN SLANT', followed by the MARS call sign of the addressee.
- You precede the transmission of the message with an advisory comment, informing the receiving station(s) that several addressees have been 'ZEN'ed out.
- You transmit the heading just as it is shown in the message, reading the operating signal ZEN/ phonetically ('I SPELL ZULU ECHO NOVEMBER SLANT').

Solution for the April MARS Skill

How often are station capability report updates required?

- Any time there is a substantial change in your station's capabilities.
- Only when you first enroll in MARS.
- Once per quarter.
- Once per calendar year.

Answer

- Any time there is a substantial change in your station's capabilities.

Check next month's MARSGRAM for the MARS Skill solution

As Hurricane Ivan swept from the Gulf of Mexico into the Florida Panhandle last 16 September; the wind ripped all the shingles off Wood's roof and rain flooded the entire house. But Wood remained in his shack filing two EEI messages reporting the course and impact the course of the storm. "We're just now getting back to normal," he said, at February's start. BT OVER



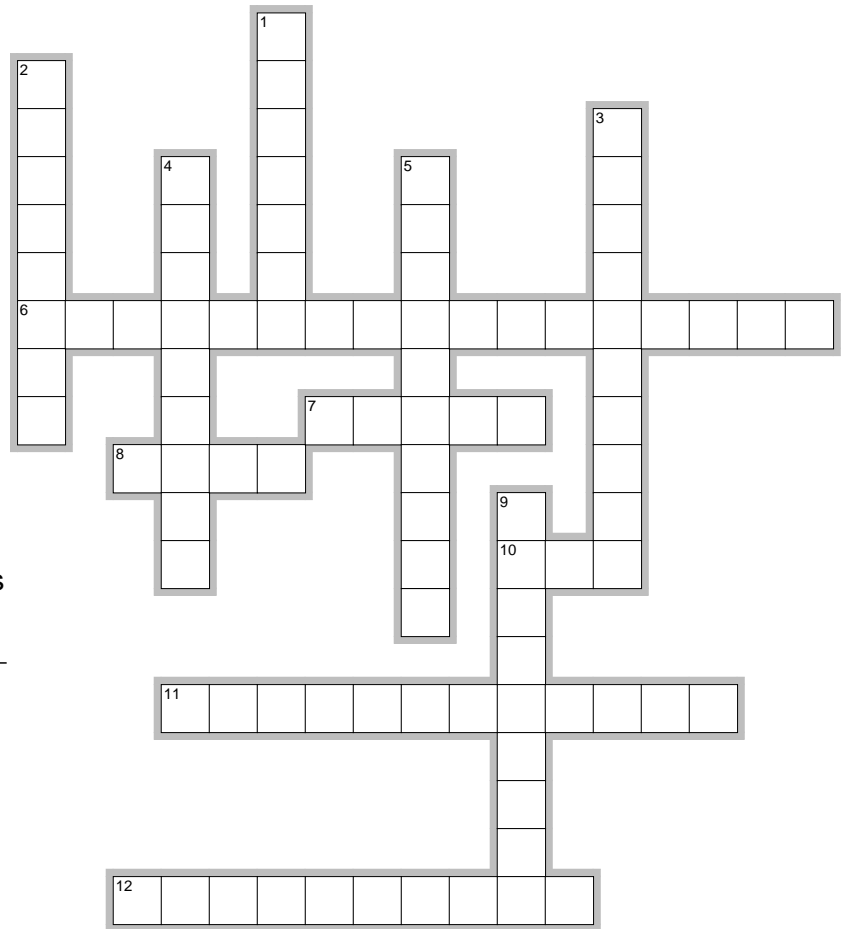
Incident Command System Basics

Across

- 6. Under the ICS, the one person in charge is always called the _____ ?
- 7. Each operating section has its own _____ ?
- 8. Incident command system used in Minnesota.
- 10. A model tool for the command, control, and coordination of resources and personnel at the scene of an emergency.
- 11. The Information, Safety, and Liaison Officers make up the IC's _____ ?
- 12. Operating sections may have various _____ working on specific goals.

Down

- 1. The section that uses staff from each agency involved to track the cost of the disaster.
- 2. Section responsible for information gathering and dissemination and working out the details of each agency's response.

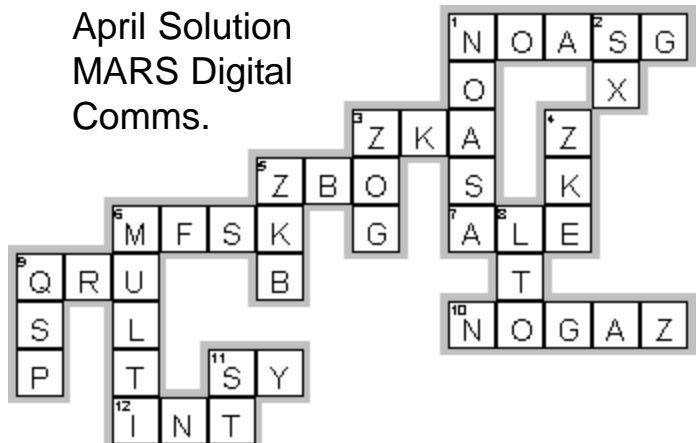


Created with EclipseCrossword — www.eclipsecrossword.com

- 3. Section involving Police, Fire, Public Works, Red Cross and relief agencies who are actually in the field doing the work to protect the public.
- 4. The section that provides services only for the responding agency personnel, not the general public.
- 5. _____ tasks in the ICS are performed under the overall direction of a single Incident Commander (IC) in a coordinated manner.
- 9. Firefighting Resources of California Organized for Potential Emergencies - early ICS organization.



April Solution MARS Digital Comms.



Created with EclipseCrossword — www.eclipsecrossword.com

Traffic Handling

- contributed by the Minnesota MARS staff

Many of you who check the switch or even check into our nets have noted an increase in traffic to our area. The traffic generally falls into three categories; broadcasts addressed to NNN0ALL, messages addressed to specific MARS Member's call signs, and third party traffic. This increase in traffic is the result of recent Region Five staff changes and probably will continue for the duration of the Region Director's tenure. We have also seen an increase in the use of email to deliver MARS traffic from the switch. While this practice is not being discouraged, now may be the time to review and clarify traffic handling procedures and the use of email.

Messages that are "broadcasts" - these include:

- Chief MARS broadcasts
- Chief MARS info broadcasts
- Central Area broadcasts
- Region Five broadcasts
- Minnesota Area Broadcasts
- Administrative messages addressed to all Navy-

Marine Corps MARS stations (ALL)

This type of message can be brought to the net and rogered by any station. Once the message is rogered, the message can be removed from the switch. In fact, the Traffic Rep (TREP) can essentially roger the message and "kill" it on the switch when he/she picks the daily traffic up from the switch. We trust that the Traffic Rep will deliver the message to the net. Current practice finds that broadcast message(s) are being delivered via email, this does not exempt the TREP from listing traffic nor from being prepared to pass the broadcast traffic via the voice net. If stations have received their email, stations can roger the traffic indicating that they have hard copy of the message.

When the NECOS calls the net and on subsequent net IDs, the traffic should be listed. When a station checks into the net and does not "roger" listed broadcast traffic - it is not acceptable to query the station repeatedly to see if he/she wants to "roger" traffic. When the member checked into the net he/she did not roger the traffic, i.e. the station does not have hard copy; repeatedly querying the station will not change the situation. We expect that when a station checks in that their attention is on the net. If the member wants the traffic read, then the Traffic Rep needs to read the traffic.

In Minnesota, we have typically allowed the broadcast traffic to remain on the switch for a short time after the net so that other stations, with the capability to connect with the

switch, could download the traffic. This will remain the case, but we do ask the traffic reps to visit the switch later in the evening to remove the broadcast traffic that has been passed.

Other messages that come through the switch typically have specific addressee(s). These messages could be third party traffic (wouldn't that be a change of pace), traffic addressed to specific MARS members, traffic addressed to Minnesota staff members, traffic addressed to Region staff members and/or traffic addressed to Area staff members. This type of traffic is to be brought to the net by the Traffic Rep and delivered to the intended addressee. Yes, the message can also be sent to the addressee via email.

What happens when the addressee does not check into the net? For messages that a TREP has downloaded from the switch, perhaps even emailed the message to the addressee, the fact is the message(s) remains undelivered. Just because the message was sent via email does not mean that it reached the intended addressee and/or reached them in time for the net. In addition, the intended addressee was not on the net and could not "roger" the traffic, even if he/she did receive the email - which by the way, as a Net Control Station (NECOS) and/or Traffic Rep you do not know because the addressee wasn't there to roger the message. The TREP needs to leave the message(s) on the switch. The Traffic Rep for a subsequent net will retrieve the message bringing it to the net for the purpose of passing it to the addressee, this will continue until the message is delivered. The only other acceptable resolution is for another station to "guard" for the addressee - meaning the "guard" will guarantee delivery of the message to the intended addressee.

Message addressees may check the switch and download the message(s). However, if the intended addressee is not the TREP for that particular net, the message needs to remain on the switch for the designated TREP to pick up and bring to the net. When the TREP checks into the net, lists the traffic, the addressee can then roger the traffic. Because the addressee already has hardcopy, there is no need for the traffic to be read on the net.

Traffic reps must always bring the message(s) to the net, be prepared to deliver the message via voice, even if the message has been emailed to the addressee. Emailing a message to the addressee does not exempt the TREP from being prepared

TRAFFIC *cont'd from pg. 5*

to pass the traffic via the voice net; to believe otherwise is not acceptable.

Net Control Stations and Traffic reps should realize that message(s) could be brought to the net one, two, three or more times until the message is delivered to the addree. Until the message reaches the intended addree, the message should continue to be brought to the net and remain on the switch.

While email does help in the distribution of traffic, it adds a level of complexity to the question of when a message was delivered. We need to keep in mind that email is not infallible. We've all experienced interruptions in telephone, cable and satellite service – the exact same means by which email travels. We're communicators, let us not become so reliant on the new technology that we cannot operate without it. Following proper procedures assures us of the ability to handle traffic with reliability, security and speed. As MARS members reliability in traffic handling is always paramount. It must never be sacrificed to achieve security or speed.

BT OVER



Secretary Of Defense Message Test Via Digital Modes.

The secretary of defense message will be transmitted via digital modes including RTTY, PACTOR, AMTOR, clover, PSK-31 and MT63 from the stations listed below, including frequencies, mode, and date/time in zulu (utc). All frequencies are listed for center of intelligence. Offset as appropriate for your TNC. (note: not all stations may necessarily operate on all the frequencies listed, depending on propagation and available equipment.)

**STATION: NAV-4
(NAVMARCORMARS RADIO STATION, GREAT LAKES, IL)**

FREQUENCY	MODE	BROADCAST DATE/TIME
7375.0 KHZ	RTTY	15 MAY/0240Z
	AMTOR FEC	15 MAY/0310Z
	MT63	15 MAY/0340Z
14468.5 KHZ	RTTY	15 MAY/0240Z
	AMTOR FEC	15 MAY/0310Z
	MT63	15 MAY/0340Z

Support NAV-4 in Cross-band Contacts

Saturday May 14, 2005

The Army, Air Force, Navy, Marine Corps, and Coast Guard are co-sponsoring the annual military/amateur radio communications tests in celebration of the 55th anniversary of armed forces day (AFD). Although the actual armed forces day is celebrated on Saturday, May 21, 2005, the armed forces day military/amateur crossband communications test will be conducted one week earlier on may 14, 2005 (local).

The annual celebration features traditional military to amateur cross band communications SSB voice test and the secretary of defense message-receiving test. These tests give amateur radio operators and short wave listeners an opportunity to demonstrate their individual technical skills and receive recognition from the secretary of defense and/or the appropriate military radio station for their proven expertise.

QSL cards will be provided to those making contact with the military stations. Special commemorative certificates will be awarded to anyone who receives and copies the digital armed forces day message from the secretary of defense.

Military-to-amateur cross band SSB test contacts. Military-to-amateur cross band operations will take place on the dates/times in zulu (UTC), and frequencies listed below for each station. Voice contacts will include operations on single sideband voice (SSB). Some stations may not operate the entire period, depending on propagation and manning. Participating military stations will transmit on selected military mars frequencies and listen for amateur radio stations in the amateur bands indicated below. The military station operator will announce the specific amateur band frequency being monitored. Duration of each voice contact should be limited to 1-2 minutes. The following stations will be transmitting on mars frequencies listed below which are provided as 'window/dial frequency' in KHZ.

STATION: NAV-4 (14 MAY 1200Z - 15 MAY 0400Z)

FREQUENCY EMISSION AMATEUR BAND

4011.5 KHZ LSB 80M

7376.5 KHZ LSB 40M

14467.0 KHZ USB 20M

21758.5 KHZ USB 15M

ADDRESS: NAVMARCORMARS RADIO STATION

615 PREBLE AVENUE

CAMP BARRY BLDG. 153

GREAT LAKES, IL 60088-2850

POC: ITC (SW/AW) JEFFRIES

5G1B Net Schedule

6:30PM 4007 kHz USB

Day	NECOS	Tfc Rep
Sun.	XYA	XEE
Mon.	XEE	XEE
Tue.	KZC	KZC
Wed.	BQH	BQH
Thu.	SXU	SXU
Fri.	ACY	OCF

Sat. Rotating Duty (see below)

Don't be bashful, if the net has not been called by the net control station within 2 minutes, jump in and start things rolling.

Saturday NECOS / TREP Schedule

	NECOS	TREP
May 7	SXU	SXU
May 14	ACY	OCF
May 21	XYA	XEE
May 28	XEE	XEE
Jun 4	KZC	KZC
Jun 11	BQH	BQH

Test Your Analytical Skills

The Matrix

a	1	2	3	4	5	6	7	8	9	10	b
	x										11
											12
											13
f											c
e											d

Study the figure above very closely. From a to b we have 10 units, and from a to e we have 10 units, thus yielding a 100 square unit area. A total of 3 questions deal with Figure 1. Three questions deal with this figure. This month we will only deal with one of the questions, we will deal with the remaining questions in future months.

Notice the numbering sequence as we go around the perimeter, from a to b to c to d to e to f to x.

What number would go into the spot marked x?

Don't count them out with your fingers, just deduce it logically.

Answer in the next issue of the Minnesota MARSGRAM



Pacific Ocean (Mar. 14, 2005) - Four F/A-18F Super Hornets fly over USS Nimitz (CVN 68) and her escorts while underway off the coast of southern California. Nimitz and Carrier Strike Group Eleven (CSG-11) are currently conducting a Joint Task Force Training Exercise (JTTFEX). U.S. Navy photo by Photographer's Mate 3rd Class Shannon E. Renfroe (RELEASED)



Don't Forget:

**Mother's Day
May 8th**

Solution for the April Test

A blink of an eye takes $\frac{1}{5}$ of a second, and a person blinks 25 times per minute. If you average 50 mph on a 500 mile trip, how many miles will you drive with your eye closed.

Answer: 41.6 miles

Details:

5280 feet/mile

3600 seconds per hour

5280 divided by 3600 = 1.467 feet per second

50 mph divided by 60 mph = .83 miles in 1 hr.

1.467 times 50 = 73.35 ft/sec

.02 times 25 = .5 seconds/min

25 blinks times 6000 minutes = 150,000 blinks

.5 seconds/min times 6000 minutes = 3000 seconds

73.35 ft/sec @50mph times 3000 seconds = 220050 ft

220050 ft divided by 5280 = 41.6 miles