



ARES COMMUNICATOR

Information for Scott County Amateurs



May, 2016

Accurate, Reliable Emergency Communications for our Community

Volume 16, Number 5

P5 Still Silent

It takes ca\$h and more ca\$h

A co-leader of the recent VP8STI/VP8SGI "Intrepid DX Group" DXpedition, said this week that what he called "a surprising lack of support and lack of funding from some of the world's paramount DX foundations" thwarted his group's plans to mount a DXpedition to North Korea. In "The P5DX Story" posted on April 25, Paul Ewing, N6PSE, said that years of negotiations had finally yielded a written invitation from the Democratic Peoples Republic of North Korea (DPRK) — the most-needed DXCC entity — to operate there.

"We had hoped to be the first large DXpedition with clear and unambiguous proof that we were active within the country and with real evidence of permission," Ewing said in announcing the DXpedition's cancellation.

The Intrepid-DX Group announced its "P5 Project" in 2013. After considerable expense and nine visits to North Korea, nothing had paid off until recently. An "emissary" with strong ties to the DPRK and a regular visitor there took an interest, Ewing said. "We renewed our proposal, and the talks continued," he wrote. "Finally, North Korea agreed to a 10-day Amateur Radio activity with three radios and up to 20 team members. A venue was investigated and approved." Officials insisted on no advance publicity, and all involved were sworn to secrecy.

"Our last major hurdle was that the DPRK was asking for a very large fee to be paid for the permissions at various government levels and ministries to operate from within the DPRK," Ewing recounted. The size of the requested fee, Ewing said, prompted him to approach several large Amateur Radio foundations for financial help. "All of our fees would be paid directly to a China-based tour company, and no direct exchange would take place with the North Koreans," Ewing pointed out. But the group was rebuffed. "I am deeply disappointed that they could not find a way to support our plans," he said.

Ewing said he and co-leader David Collingham, K3LP, decided they had no other choice but to "drain our own personal retirement savings to provide the bulk of our funding." Money for various fees as well as equipment and air fare ran into the thousands of dollars. "We purchased roughly \$16,000 in equipment, and we spent almost \$4000 to ship it FedEx to Beijing to our staging area, where it still sits," he said.

Then, word leaked out, igniting an Amateur Radio media firestorm. "We tried not to comment at all, but the rumors would not go away," Ewing said. "Finally, we admitted we might be making progress but begged for discretion." But, he continued, "Things began to spiral out of control."

A week before the team's planned departure, Ewing learned that officials had denied him and some other team members permission to enter North Korea, leading to his decision to cancel the entire enterprise. "I could not devote a sizable chunk of my life savings for a project that I could no longer participate in," he explained. "The financial losses suffered by Intrepid DX and all of our team members are substantial."

"We had permission. We had a team. We had all necessary equipment staged in Beijing. We had a venue in North Korea. We had flights and hotels to China and the DPRK confirmed," Ewing summarized. "What we did not have was the support of

P5 Silent *cont'd on page 2*

ARES Activities

Weekly Net Monday 7 PM 146.535 mhz (s)

Breakfast Saturday, May 14th

Digital Monday, May 16th

ARES Nets

- MN ARES Phone Net
6:00PM Sunday Freq: 3.860 mhz
- ARRL MN Phone Net
12:00p, 5:30p CST Daily Freq: 3.860 mhz
- ARRL MN CW Net
6:30p, 9:50p CST Daily Freq: 3.568 mhz

NETS WITH OUR NEIGHBORS

- North Dakota: Daily 3.937 mhz 6:30pm
- South Dakota: Daily 3.860 mhz 6:00pm
- Wisconsin: Daily 3.985 mhz 5:30pm
- Iowa: Daily 3.970 mhz 12:30/5:30pm

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

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Summer Events '16

Grab your HT and have some fun volunteering for a Public Service event this summer! You get the chance to use your communications skills to benefit the community and meet some new Hams. Hey, there might even be a "Free Lunch" thrown in for good measure.



Check out the events listed below and volunteer for a couple hours of ham radio fun!

Saturday, June 11th - Chanhassen

Bailiwick/Lake Hazeltine Boys/Girls Club - 5K RUN
Near Lifetime Fitness south of HWY 5
07:30 - 10 AM Briefing at 07:30 - Race 8 AM - 9:30 AM.
Carver Repeater 147.165

Saturday, June 18th - North Mankato

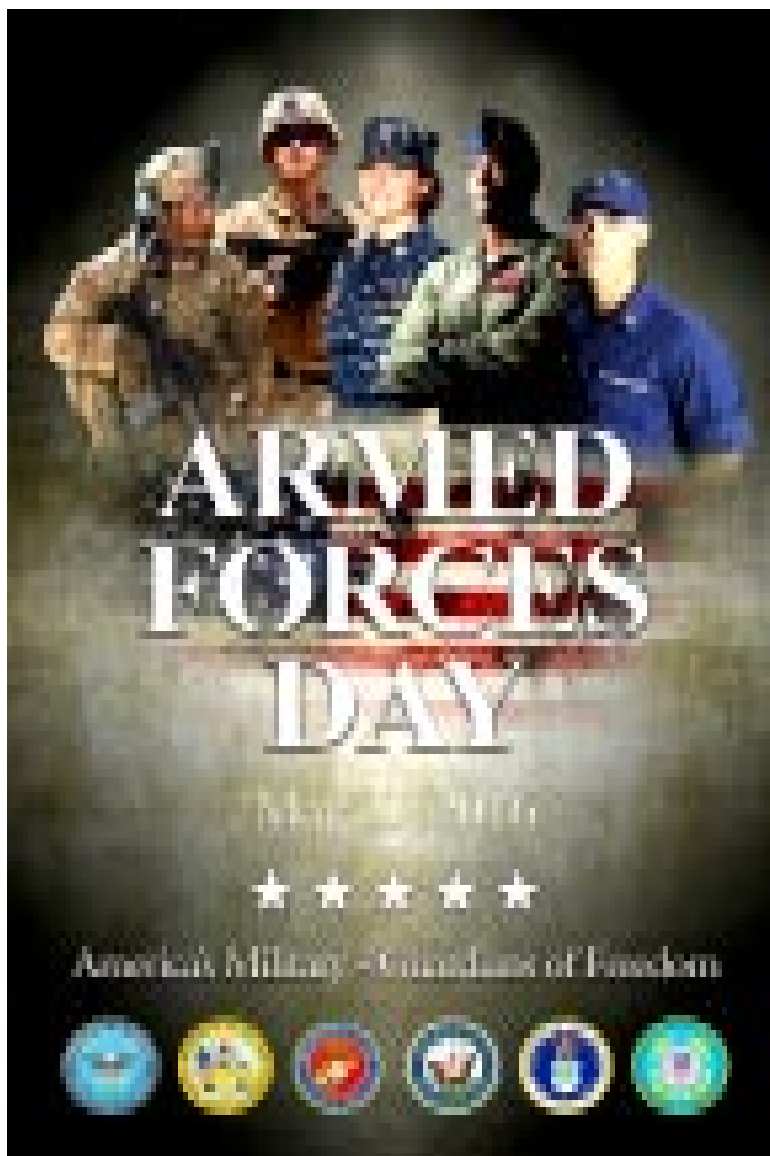
MN North Stars 100 Mile BIKE Race
Nicollet County and Blue Earth Counties
Staging/Briefing 11 AM - Race 12NOON til 5 PM

Monday, July 4th - City of Richfield

4th of July Parade
Staging at 11 AM at Richfield PD
Parade 12-Noon to 2:30 PM.

If you are interested in any of these events, please RSVP to KC0QNA: email kc0qna@yahoo.com
Phone 612-578-7561

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*"Luck is a dividend of sweat.
The more you sweat, the luckier you get."*

Ray Kroc



P5 Silent - cont'd from page 1

those we asked to remain quiet, nor the support of anyone we asked for help with funding. This could have been a DXpedition for the record books. But now we will never know."

In addition to the late 2015 P5/3Z9DX operation and the 2001-2002 activity by P5/4L4FN, the only other approved ham radio operations from North Korea occurred in 1995, when Martti Laine, OH2BH, and two other Finnish radio amateurs demonstrated ham radio by making 20 contacts as P5/OH2AM. In 1999, Laine operated briefly as P51BH, making just 263 contacts.

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Scott County ARES Con- tacts

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Amateur Radio License Exam

Want to become a ham? Want to upgrade your license? You can find information and resources to success in ham radio at this page: http://www.scottares.org/License_Info.htm

If you want to ask questions or find a local Elmer (Mentor) just drop an email to: newhaminfo@scottares.org

The hams in Scott ARES gather for breakfast the first Saturday of the month at the Perkins Restaurant in Savage. Bring you ham radio questions and talk to local amateur radio operators.

Now that you have done the work to study for your upgrade, here is where to find a convenient exam session near you. There is a VE exam search engine at: http://www.arrl.org/exam_sessions/search

Walk-ins allowed at most sessions however it is always best to check the details at the specific session you are planning to attend. Below is a list of scheduled sessions close to Scott County.

Good Luck!

May 21, 2016 Saturday 9:00AM

Sponsor: SEMARC

Daniel M. Franz (651) 769-0358

Email: wd0gup@hotmail.com

Location: Zion Lutheran church

8500 Hillside Trl S

Cottage Grove MN 55016-3273

May 23, 2016 Monday 6:00 PM

SMARTS

Dale A. Blomgren (952) 402-2155

Email: kd0b@arrl.net

Location: Carver County Library

7711 Kerber Blvd

Chanhassen MN 55317

Walk-ins allowed, Pre-reg requested

June 4, 2016 Saturday 10:00 AM

Sponsor: St Paul Radio Club

Leon H. Dill (651) 688-9964

Email: w0coe@arrl.net

Location: Ramsey Co Library Maplewood

3025 Southlawn Dr

Saint Paul MN 55109-157

Walk-ins allowed, Pre-reg requested

June 8, 2016 Wednesday 7:00 PM

Sponsor: VARC

James C. Rice (612) 384-7709

Email: jrice@danpatch.org

Location: Perkins Restaurant & Bakery

17387 Kenyon Avenue

Lakeville MN 55044-4459

Take a Dip in the General Pool

Time to test your knowledge of the information covered by the General Class license exam. Each month we'll take a look at a selection from the question pool.

Strap on your thinking cap and see what you can recall. Here is this month's sample:

1. What signals are used to conduct a two-tone test?
 - A. Two audio signals of the same frequency shifted 90-degrees
 - B. Two non-harmonically related audio signals
 - C. Two swept frequency tones
 - D. Two audio frequency range square wave signals of equal amplitude
2. Which of the following must be connected to an antenna analyzer when it is being used for SWR measurements?
 - A. Receiver
 - B. Transmitter
 - C. Antenna and feed line
 - D. All of these choices are correct
3. Which of the following can be determined with a field strength meter?
 - A. The radiation resistance of an antenna
 - B. The radiation pattern of an antenna
 - C. The presence and amount of phase distortion of a transmitter
 - D. The presence and amount of amplitude distortion of a transmitter

(Check next month's issue of the ARES Communicator for the answer.)

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April General Pool Answers

1. What signal source is connected to the vertical input of an oscilloscope when checking the RF envelope pattern of a transmitted signal?
 - A. The local oscillator of the transmitter
2. What sound is heard from an audio device or telephone if there is interference from a nearby single-sideband phone transmitter?
 - C. Distorted speech
3. What effect can be caused by a resonant ground connection?
 - C. High RF voltages on the enclosures of station equipment

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AFD Crossband

Radio Communications Test 14 May 2016

The Army, Air Force, Navy and Coast Guard are sponsoring the annual military/amateur radio communications tests in celebration of the 66th Anniversary of Armed Forces Day (AFD). The AFD Military/Amateur Crossband Communications Test is conducted 14 May 2016.

The annual celebration is a unique opportunity to test two way communications between Amateurs and military communicators authorized in 47 CFR 97.111, and features traditional military to amateur cross band SSB voice, Morse Code, practice using legacy interoperability waveforms, as well as an opportunity for Amateurs to utilize more modern military communications modes such as MIL-STD Serial PSK and Automatic Link Establishment (ALE). New for Armed Forces Day this year, military stations and amateur radio operators are authorized to directly communicate on the 60 Meter interoperability channels.

These tests give Amateur Radio operators and Short Wave Listeners (SWL) an opportunity and a challenge to demonstrate their individual technical skills, and to receive recognition from the appropriate military radio station for their proven expertise. QSL cards will be provided to those stations making contact with the military stations.

Military-To-Amateur Cross Band SSB & CW 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 in single sideband voice (SSB). Some stations may not operate the entire period. Participating military stations will transmit on selected Military 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. Some stations will use CW to provide the opportunity to check in by Morse Code.

Army Stations:

AAZ/FTHUACHUCA, AZ

(14 MAY 1500Z - 2359Z)

FREQUENCY	MODE	BAND
5,330.5 kHz	USB	60M
14,383.5 kHz	USB	20M
18,211.0 kHz	USB	17M

AAC/BARROW ARMY RESERVE CENTER, KY

(14 MAY 1300Z - 15 MAY 0100Z)

FREQUENCY	MODE	BAND
5,346.5 kHz	USB	60M
7,360.0 kHz	USB	40M
13,963.5 kHz	USB	20M
20,920.0 kHz	USB	15M

AAV / CAMP EVANS, NJ

(14 MAY 1400Z - 2100Z)

FREQUENCY	MODE	BAND
5,330.5 kHz	USB/CW	60M
7,493.5 kHz	USB/CW	40M
14,846.0 kHz	USB/CW	20M
18,272.0 kHz	USB/CW	17M

ABH / SCHOFIELD BARRACKS, HI

(14 MAY 1600Z - 2300Z)

FREQUENCY	MODE	BAND
5,357.0 kHz	USB	60M
14,438.5 kHz	USB	20M
18,272.0 kHz	USB	17M
20,997.0 kHz	USB	15M

ADB / CAMP FOSTER, OKINAWA

(14 MAY 1500Z - 15 MAY 0100Z)

FREQUENCY	MODE	BAND
14,487.0 kHz	USB	20M
17,545.0 kHz	USB	17M
20,994.0 kHz	USB	15M

WAR / PENTAGON WASHINGTON, DC

(14 MAY 1200Z - 2400Z)

FREQUENCY	MODE	BAND
5,357.0 kHz	USB/CW	60M
14,854.0 kHz	USB/CW	20M
18,211.0 kHz	USB/CW	17M
24,760.0 kHz	USB/CW	12M

WUG-2 / ARMY CORPS OF ENGINEERS, TN

(14 MAY 1300Z - 15 MAY 0200Z)

FREQUENCY	MODE	BAND
5,403.5 kHz	USB	60M
13,910.5 kHz	USB/CW	20M
18,293.0 kHz	USB/CW	17M
20,973.5 kHz	USB/CW	15M

ALT / CAMP MABRY, TX

(14 MAY 1300Z - 15 MAY 0200Z)

FREQUENCY	MODE	BAND
5,357.0 kHz	USB	60M
14,512.5 kHz	USB	20M
18,293.0 kHz	USB	17M
20,997.0 kHz	USB	15M

Air Force Stations:

AIR / ANDREWS AFB

(14 MAY 1200Z - 2400Z)

FREQUENCY	MODE	BAND
4,517.0 kHz	USB	80M
7,305.0 kHz	USB	40M
15,807.0 kHz	USB	20M
20,740.0 kHz	USB	15M

Test Your NIMS Knowledge

This month we continue our review of ICS-800: National Response Framework. The purpose of the National Response Framework is to ensure that all response partners across the Nation understand domestic incident response roles, responsibilities, and relationships in order to respond more effectively to any type of incident. The Framework focuses on response and short-term recovery instead of all of the phases of incident management.

Check your recall of the course material with this question.

The National Preparedness Vision, National Planning Scenarios, Universal Task List, and Target Capabilities List are the four critical elements comprising the _____.

- A. National Infrastructure Protection Plan
- B. National Preparedness Guidelines
- C. Federal Department and Agency Operations Plans
- D. National-Level Interagency Concept Plan

Check next month's ARES Communicator for the solution

April NIMS Knowledge Solution

1. Operating under the direction of the FEMA Regional Administrator, Regional Response Coordination Centers (RRCCs) coordinate Federal regional response until:

- D. The Joint Field Office (JFO) is established.

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NBEMS Current Versions

The current version of the Fldigi manual is available at NBEMS Info page at www.scottares.org. Look under the 'Help Sheets' heading.

Now is a good time to check to your digital software to make sure you are running the newest versions. You can find the most recent versions posted at both: www.w1hkj.com/download.html and <http://www.scottares.org/NBEMS.htm>

Here are the most recent releases as of March 15, 2016.

Software	Version
Fldigi	3.23.08
Flwrap	1.3.4
Flmsg	2.0.15
Flamp	2.2.03

The Monday evening training net is a great place to have your digi questions answered and problems solved! Join the Scott ARES group on 146.535 MHz simplex at 7:00pm on Monday evenings.



AFD Crossband - cont'd from page 4

AGA2SY / HANCOCK FIELD, NY

(14 MAY 1200Z TO 2400Z)

FREQUENCY	MODE	BAND
4,575.0 kHz	USB	80M
7,540.0 kHz	USB	40M
13,993.0 kHz	USB	20M

AGA4AR / ARNOLD AFB, TN

(14 MAY 1500Z TO 2000Z)

FREQUENCY	MODE	BAND
3,299.0 kHz	USB	80M
7,457.0 kHz	USB	40M
15,632.0 kHz	USB	20M

AGA5SC / SCOTT AFB, IL

(14 MAY 1600Z TO 2300Z)

FREQUENCY	MODE	BAND
3,308.0 kHz	USB	80M
4,872.0 kHz	USB	80M
7,545.0 kHz	USB	40M

AGA9TR / TRAVIS AFB, CA

(14 MAY 1600Z TO 2300Z)

FREQUENCY	MODE	BAND
4,575.0 kHz	USB	80M
4,872.0 kHz	USB	80M
7,545.0 kHz	USB	40M

Coast Guard Stations:

NMC1 / COAST GUARD ISLAND, ALAMEDA, CA

(14 MAY 1400Z - 15 MAY 0030Z)

FREQUENCY	MODE	BAND
7,542.0 kHz	USB	40M
15,740.5 kHz	USB	20M
22,924.5 kHz	USB	15M

Navy Stations:

NIW / USS MIDWAY CV-41 SAN DIEGO, CA

(14 MAY 1200Z - 15 MAY 0600Z)

FREQUENCY	MODE	BAND
4,003.5 kHz	USB	80M
7,360.0 kHz	USB	40M
14,441.5 kHz	USB	20M
18,211.0 kHz	USB	17M
20,997.0 kHz	USB	15M

NWKJ / USS YORKTOWN CV-10

(14 MAY 1200Z - 15 MAY 0400Z 2015)

FREQUENCY	MODE	BAND
4,000.0 kHz	USB	80M
7,360.0 kHz	USB	40M
14,663.5 kHz	USB	20M
18,272.0 kHz	USB	17M
20,940.0 kHz	USB	15M

AFD Crossband - cont'd from page 5

NIIW / USS MIDWAY CV-41 SAN DIEGO, CA

(14 MAY 1200Z - 15 MAY 0600Z)

FREQUENCY	MODE	BAND
4,003.5 kHz	USB	80M
7,360.0 kHz	USB	40M
14,441.5 kHz	USB	20M
18,211.0 kHz	USB	17M
20,997.0 kHz	USB	15M

NWKJ / USS YORKTOWN CV-10

(14 MAY 1200Z - 15 MAY 0400Z 2015)

FREQUENCY	MODE	BAND
4,000.0 kHz	USB	80M
7,360.0 kHz	USB	40M
14,663.5 kHz	USB	20M
18,272.0 kHz	USB	17M
20,940.0 kHz	USB	15M

NMN / CAMSLANT, CHESAPEAKE VA

(14 MAY 1400Z - 15 MAY 0030Z)

FREQUENCY	MODE	BAND
7,528.6 kHz	USB	40M
14,459.6 kHz	USB	20M
19,221.6 kHz	USB	17M

NWVC / LST-325 EVANSVILLE, IN

(14 MAY 1200Z-15 MAY 0400Z)

FREQUENCY	MODE	BAND
4,007.0 kHz	USB/CW	80M
6,913.0 kHz	USB/CW	40M
13,974.5 kHz	USB/CW	20M
17,500.0 kHz	USB/CW	17M
24,782.0 kHz	USB/CW	12M

NPAX / US NAVAL ACADEMY MD

(14 MAY 1300Z-15 MAY 0200Z)

FREQUENCY	MODE	BAND
4,038.5 kHz	USB/CW	80M
7,533.5 kHz	USB/CW	40M
14,487.0 kHz	USB/CW	20M
17,545.0 kHz	USB/CW	17M
20,994.0 kHz	USB/CW	15M

Sec Def Message Test Via Digital Modes

The Secretary of Defense message will be transmitted via Military Standard radio teletype modes described in MIL-STD 188-110A/B and listed below. Reception of Serial PSK will provide a technical challenge to Amateur stations to receive the broadcasts using a high symbol rate Serial PSK waveform not utilized in Amateur radio, but found in all modern military equipment.

Additionally, broadcasts will be sent using Wide Shift FSK (RTTY), as this mode represents a baseline in interoperability common in all radio services. Specific settings are shown below.

cont'd col. 2

MIL-STD 188-110 A/B Serial PSK

Software to demodulate the military Serial PSK waveform and detailed instructions can be downloaded at:

http://www.n2ckh.com/MARS_ALE_FORUM/

Utilizing this mode with soundcard equipment can be challenging and we recommend Amateur stations review the instructions carefully. Receivers should be set for a 2.7 kHz passband between 300 and 3000 Hz. Audio level should be set to just above the minimum level that decodes. Reception of the preamble at the beginning of the transmission is required to demodulate text.

To practice receiving signals in this mode, tune to the following dial frequencies at 1201Z, 1801Z or 0001Z daily.

11,105.0 kHz	USB
11,454.0 kHz	USB
12,147.0 kHz	USB
13,512.5 kHz	USB
14,935.0 kHz	USB
15,870.0 kHz	USB

FSK in accordance with MIL-STD 188-110A/B

Military FSK is Baudot at 850 Hz, 75 baud, low mark, and 2000 Hz center. Most RTTY programs can be set to decode this mode. To achieve low mark while receiving in USB, the reverse shift is selected.

Although not a capability normally found in Military stations, to accommodate amateurs some stations will transmit the Secretary of Defense message using common ham radio modes such as RTTY, PACTOR, AMTOR, PSK-31, MFSK and MT63. Amateur sound card modes will use default settings.

The Secretary of Defense message can be received from the stations listed below.

Frequencies listed are provided as "Window/Dial Frequency" in kHz. All times in Zulu (UTC).

Combined Broadcast Stations By Time

14 MAY	MODE	FREQUENCY	
1400Z	MIL FSK	13,506.0 kHz	USB AGA2SY
1410Z	MIL PSK	13,506.0 kHz	USB AGA2SY
1420Z	MIL FSK	13,506.0 kHz	USB WAR
1420Z	MIL FSK	17,443.0 kHz	USB AGA2SY
1430Z	MIL PSK	13,506.0 kHz	USB WAR
1430Z	MIL PSK	17,443.0 kHz	USB AGA2SY
1440Z	MIL FSK	13,506.0 kHz	USB AAC
1440Z	MIL FSK	17,443.0 kHz	USB WAR
1450Z	MIL PSK	13,506.0 kHz	USB AAC
1450Z	MIL PSK	17,443.0 kHz	USB WAR

AFD Crossband - cont'd from page 6

14 MAY	MODE	FREQUENCY	
1500Z	MIL FSK	17,443.0 kHz USB	AAC
1510Z	MIL PSK	13,506.0 kHz USB	AAZ
1510Z	MIL PSK	17,443.0 kHz USB	AAC
1530Z	MIL PSK	17,443.0 kHz USB	AAZ
14 MAY			
1800Z	MIL FSK	13,506.0 kHz USB	AGA2SY
1810Z	MIL PSK	13,506.0 kHz USB	AGA2SY
1820Z	MIL FSK	13,506.0 kHz USB	WAR
1820Z	MIL FSK	17,443.0 kHz USB	AGA2SY
1830Z	MIL PSK	13,506.0 kHz USB	WAR
1830Z	MIL PSK	17,443.0 kHz USB	AGA2SY
1840Z	MIL FSK	13,506.0 kHz USB	AAC
1840Z	MIL FSK	17,443.0 kHz USB	WAR
1850Z	MIL PSK	13,506.0 kHz USB	AAC
1850Z	MIL PSK	17,443.0 kHz USB	WAR
14 MAY			
1900Z	MIL FSK	17,443.0 kHz USB	AAC
1910Z	MIL PSK	13,506.0 kHz USB	AAZ
1910Z	MIL PSK	17,443.0 kHz USB	AAC
1930Z	MIL PSK	17,443.0 kHz USB	AAZ
1930Z	RTTY	7,457.0 kHz USB	AGA4AR
1930Z	RTTY	7,540.0 kHz USB	AGA2SY
1930Z	RTTY	7,545.0 kHz USB	AGA5SC
1930Z	RTTY	7,915.0 kHz USB	AGA9TR
14 MAY			
2030Z	MT63	7,457.0 kHz USB	AGA4AR
2030Z	MT63	7,540.0 kHz USB	AGA2SY
2030Z	MT63	7,545.0 kHz USB	AGA5SC
2030Z	MT63	7,915.0 kHz USB	AGA9TR
14 MAY			
2100Z	MFSK	7,457.0 kHz USB	AGA4AR
2100Z	MFSK	7,540.0 kHz USB	AGA2SY
2100Z	MFSK	7,545.0 kHz USB	AGA5SC
2100Z	MFSK	7,915.0 kHz USB	AGA9TR
2130Z	RTTY	13,993.0 kHz USB	AGA2SY
2130Z	RTTY	14,392.5 kHz USB	AGA5SC
2130Z	RTTY	14,411.0 kHz USB	AGA9TR
2130Z	RTTY	15,632.0 kHz USB	AGA4AR
14 MAY			
2200Z	MIL FSK	13,506.0 kHz USB	AGA2SY
2200Z	MIL PSK	14,487.0 kHz USB	ADB
2210Z	MIL PSK	13,506.0 kHz USB	AGA2SY
2210Z	MIL PSK	20,994.0 kHz USB	ADB
2220Z	MIL FSK	13,506.0 kHz USB	WAR
2220Z	MIL FSK	17,443.0 kHz USB	AGA2SY
2230Z	MIL PSK	13,506.0 kHz USB	WAR
2230Z	MT63	13,993.0 kHz USB	AGA2SY
2230Z	MT63	14,392.5 kHz USB	AGA5SC
2230Z	MT63	14,411.0 kHz USB	AGA9TR
2230Z	MT63	15,632.0 kHz USB	AGA4AR
2230Z	MIL PSK	17,443.0 kHz USB	AGA2SY
2240Z	MIL FSK	13,506.0 kHz USB	AAC
2240Z	MIL FSK	17,443.0 kHz USB	WAR
2250Z	MIL PSK	13,506.0 kHz USB	AAC
2250Z	MIL PSK	17,443.0 kHz USB	WAR

14 MAY	MODE	FREQUENCY	
2300Z	MFSK	13,993.0 kHz USB	AGA2SY
2300Z	MFSK	14,392.5 kHz USB	AGA5SC
2300Z	MFSK	14,411.0 kHz USB	AGA9TR
2300Z	MFSK	15,632.0 kHz USB	AGA4AR
2300Z	MIL FSK	17,443.0 kHz USB	AAC
2310Z	MIL PSK	13,506.0 kHz USB	AAZ
2310Z	MIL PSK	17,443.0 kHz USB	AAC
2330Z	MIL PSK	17,443.0 kHz USB	AAZ
15 MAY			
0240Z	RTTY	13,506.0 kHz USB	NWKJ
0240Z	RTTY	17,443.0 kHz USB	NWKJ
15 MAY			
0300Z	CW-25WPM	4,007.0 kHz USB	NWVC
0300Z	CW-25WPM	6,913.0 kHz USB	NWVC
0310Z	AMTOR FEC	13,506.0 kHz USB	NWKJ
0310Z	AMTOR FEC	17,443.0 kHz USB	NWKJ
0340Z	MT63	13,506.0 kHz USB	NWKJ
0340Z	MT63	17,443.0 kHz USB	NWKJ

Submission Of Sec Def Test Message Entries

Transcripts of the received text should be submitted "as received". No attempt should be made to correct possible transmission errors. Provide time, frequency and call sign of the military station copied, including name, call sign, and address (including zip code) of individual submitting the entry. Ensure this information is placed on the paper containing the test message. Each year a large number of acceptable entries are received with insufficient information, or necessary information was not attached to the transcriptions and was separated, thereby precluding issuance of a QSL card. Entries must be sent to the appropriate address as follows:

A. Stations copying Secretary of Defense message transmitted from Army and Navy stations, send entries to:

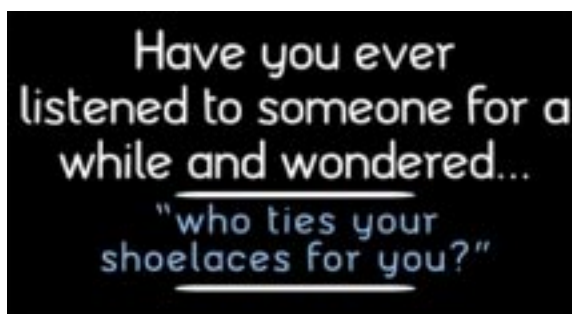
ARMED FORCES DAY CELEBRATION
COMMANDER NETCOM
ATTN: NETC-ITSMD
BLDG 90549 JIM AVENUE
FORT HUACHUCA, AZ 85613-7070

B. Stations copying Secretary of Defense message transmitted from Air Force stations, send entries to:

ARMED FORCES DAY CELEBRATION
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BREAK - OVER

Deep Thoughts



Circuit Classics

Forrest M. Mims Revisited

Aside from being a treasure trove of information for budding electronics engineers from the 1980s on, the down-to-earth style of Forrest M. Mims' *Engineers' Notebook* and *Getting Started in Electronics* series of books was a large part of their appeal. Now a

crowdfunding project is looking to bring back some of that original charm by producing a limited set of working circuit boards in the Mims' style, replete with accompanying explanations and a wooden stand to display these electronic works of art.

Star Simpson, a young San Francisco electronics enthusiast and designer, is working directly with Mims to bring a limited collection of his designs in

"Circuit Classics." With three designs being made available – a Dual LED Flasher, a Stepped Tone Generator, and a Bargraph Voltage Indicator – each circuit board has an etched copper circuit and solder-mask overlay to make it look just like each of the Mims' circuits it replicates, right down to a hand-written explanation on the face of the board.

Designed to be assembled by the purchaser, each kit comes with all of the through-hole components required to populate the boards. With overlays depicting both the copper (track) side and the component side of the boards, Simpson claims that following the accompanying instructions and soldering in the electronic parts is easy thanks to large, gold-plated pads and generous spacings.

Each of Mims' hand-drawn schematics is also replicated directly from the originals on the right hand side of each board, which align the circuit diagram with the physical hardware to aid in comprehension. And, with the use of masking overlays that show the circuit tracks beneath the components, Star says that learning electronics construction without having to constantly flip boards or hold them up to the light during assembly, makes the whole experience that much more pleasant.

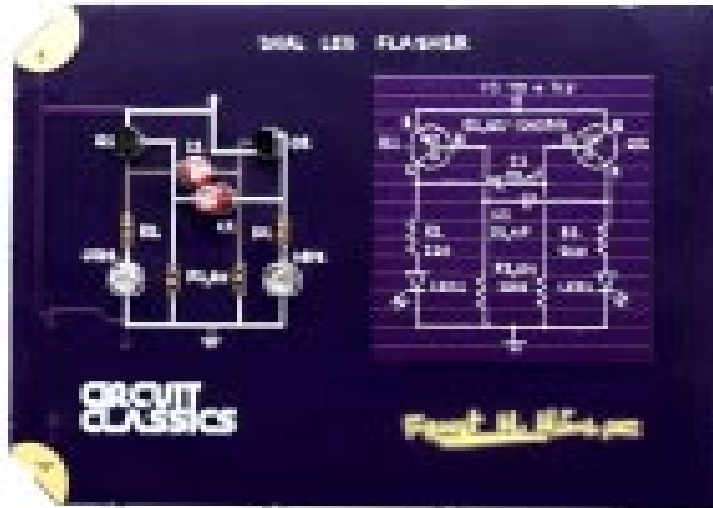
The boards also have book and page number references to make it easy to look up the original circuit, whilst Mims' signature is boldly emblazoned across the lower right-hand corner. Each of the circuits is powered by a standard CR202 button battery or two in a holder attached directly to the board, though the batteries themselves are not supplied. The whole kit does, however, come with a specially-crafted blond

stand to hold completed boards and show off your finished project.

All of the boards are constructed from FR4 PCB material (a composite made from epoxy resin and woven fiberglass cloth that is flame retardant – hence the "FR" appellation) and though the prototypes are shown in an eye-catching mauve color, the creator promises that production versions will come in a standard and, some would say, more soothing blue.

As for price, each of the three boards on offer costs exactly the same; \$US44 with free US shipping (or a \$10 flat rate worldwide). Reprinted copies of Mims' *Getting Started in Electronics* are also available separately at \$24 each (with an additional \$8.00 for international shipping).

All going well, Simpson expects to begin shipping her creations sometime around the third quarter of this year.



The dual LED flasher is probably the easiest circuit to make, but the alternately flashing LEDs are a very satisfying result

BREAK - OVER



ARES Breakfast

Saturday May 14th
7:30AM
Perkins Restaurant
Savage, MN

NECOS Schedule May 2016

The first Monday or the month the net is held on the WB0RMK repeater, Carver. You will find WB0RMK here: 147.165/765 PL 107.2

May 2016

May 9 KB0FH Bob
May 16 WA0DGW John
May 23 KD0UWZ Chad
May 30 KB0FH Bob

June 2016

June 6 WA0DGW John