



ARC OVER



The Official Newsletter of the Fox River Radio League
Since 1924

Our 94th Year in Amateur Radio!

May 2018



Proud to be an ARRL
Special Service Club

Membership Meeting:

Tue - May 8, 2018 @ 7:30 PM
Bethany Lutheran Church in
Batavia, IL

Board of Director's Meeting:

Tue - June 5, 2018 @ 7:00 PM
Colonial Café, in Aurora, IL

Next — VE Test Sessions:

Tue - May 15, 2018 @ 7:00 PM
Messenger Library, in
North Aurora, IL

Sat - June 9, 2018 @ 9:00 AM
Golden Corral, in Aurora, IL



MS WALK
was a Great Success!
Thanks to all who worked it!!



The **MS Walk** at Pottawatomie Park in St. Charles on Sunday May 6th was a great success!! A big **THANK YOU** goes out to everyone who worked this event. And **Thank You** to the MS Walk Chairman **Priscilla Miller, AE9PM (KD9ICS)** for all the hard work she did on the event.

It's not to late... Tell your Friends!
Technician License Class

The **FRRL** and **BARS (Bolingbrook Amateur Radio Society)** clubs co-presentation of the **Technician Class** is at the half way point and is a big success! *It's not too late to join.*

Dates: **April 7, 2018 -thru- June 9, 2018**
When: **Saturday — 9:00 AM to 12:00 noon**
Where: **Golden Corral - in Aurora**
4270 East New York Street, Aurora, IL

For more info visit our website: <http://www.frrl.org/education.php>
To Register for Class: <http://www.frrl.org/education-registration.php>

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It's almost here.... Mark your Calendar!
ARRL 2018 - FIELD DAY
Sat & Sun June 23 & 24
At: LeRoy Oaks Forest Preserve, St. Charles, IL
We still need help! Come out join the FUN!

To sign up see **Field Day Chairman:**
Dan Harman, WA9YKK

About the FRRL

The **Fox River Radio League, Inc.** is a general interest Amateur Radio club serving the central Fox River Valley area in Illinois. Club Records indicate the club has been in existence since at least 1924, and it has functioned continuously ever since. We are an ARRL Special Service Club, an Illinois not-for-profit corporation, and a 501 (c)(3) tax exempt organization as specified in Federal IRS Statutes.

FRRL sponsors: Training Classes for new Ham Radio Operators, License Examination Sessions, and participate in other various local Public Service Events. If you have a specialized amateur radio interest, chances are you share it with one or more of our club members.

The **Fox River Radio League** meets on the **2nd Tuesday** of every month at **Bethany Lutheran Church**, located at: **8 S. Lincoln St.** in **Batavia, IL**. The meeting begins at **7:30 PM** and includes a short business portion, social time and a program presentation of interest.

Meetings are Open to the Public. Anyone interested in the amateur radio hobby are invited to attend. Family members are welcome.

Please welcome our newest members to the club!

CALL	NAME	LICENSE CLASS
WB0LKA	Mike Bronoski	General
KB9ANL	Patrick Brod	Technician

ArcOver FRRL Newsletter

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The **FRRL ArcOver Newsletter** is published Monthly by the Fox River Radio League Inc. Any and all Amateur Radio Articles, Information and Letters are *always* welcome! Deadline for articles, materials and information is the **20th of each Month** in order to be included in the *Next Month's ArcOver* newsletter. News Articles and Information can be sent - by email to: newsletter@frrl.org - or via the U.S. Postal Service Mail to: FRRL Newsletter PO Box 673 Batavia, IL 60510.

Contact the Newsletter Editor for details and submission guidelines.

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Fox River Radio League

Founded 1924

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Web Site: <http://www.frrl.org>

President:

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Vice President:

Roger Bara, W9YU

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Treasurer:

Dan Harmon, WA9YKK

Directors:

- 1 - Jim Nevitt, Jr., N9XP
- 2 - Jason Burzynski, NX9Y
- 3 - Allen Nelson, KB9VO
- 4 - Lance Clarke, W9QB

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FRRL Annual Dues are payable **no later** than the **January** Club Meeting each year. New Members joining during the year will have their first year's dues prorated to the nearest yearly quarter.

Regular **Dues** are **\$25.00** - Family-**\$35.00**
Senior Citizen **\$15.00** - Sr. Family **\$20.00**
Student (full time under 22) **\$15.00** a year.

Members can help support FRRL Repeaters by making an annual \$10. donation.

For more information visit our website:
<http://www.frrl.org/membership.php>

ARRL Test Pool Questions:



Good Luck!

The ArcOver is going to test your knowledge...

Each month the ArcOver will post 3 ARRL Test Pool questions to challenge you. One question from each of the Technician, General, and Extra License Classes.

(Keep a look out while reading the ArcOver, to find the Answers)

Technician Class

T1D05

When may amateur radio operators use their stations to notify other amateurs of the availability of equipment for sale or trade?

- A. When the equipment is normally used in an amateur station and such activity is not conducted on a regular basis
- B. When the asking price is \$100.00 or less
- C. When the asking price is less than its appraised value
- D. When the equipment is not the personal property of either the station licensee or the control operator or their close relatives



General Class

G8A06

What is one advantage of carrier suppression in a single sideband phone transmission versus full carrier amplitude modulation?

- A. Audio fidelity is improved
- B. Greater modulation percentage is obtainable with lower distortion
- C. Available transmitter power can be used more effectively
- D. Simpler receiving equipment can be used

Extra Class

E7E12

What is a frequency discriminator stage in a FM receiver?

- A. An FM generator circuit
- B. A circuit for filtering two closely adjacent signals
- C. An automatic band-switching circuit
- D. A circuit for detecting FM signals

Share your thoughts & ideas....

Is there something that you'd like to see added to the ArcOver Newsletter?

Share your ideas with the editor:

Send email to: newsletter@frrl.org

The ArcOver Editor - Cyndi, K9NAX



President's QST

Dan Taddei, W9STS

It is May already and Hamvention is closing in. This year will mark my first pilgrimage to this event. I am looking forward to seeing all of the vendor's new products and I will be looking for the rare finds in the flea market. The forums will require study as well. There is so much happening and so little time to take it all in. If you are going too, maybe we can do lunch or dinner.

Closer to home, I have been attending the Technician class that we are co-sponsoring with BARS. The Golden Coral is a great venue for the class! Not only can you learn but you can eat while you are at it. The class has been well attended. The students are very motivated and come from a wide variety of backgrounds and interests. Common amongst them all, is a strong interest in Amateur Radio. It will be my pleasure to teach the class on May 5th. I am so looking forward to it.

Field Day is quickly approaching. Please plan on attending our site at LeRoy Oaks Forest Preserve Park in St. Charles. We are still looking for people to help in setting up, operating, and to taking down once it's over. You can see Dan Harmon, WA9YKK to put your name on the list. For those that may not have the ability to operate HF at home, this is a great opportunity to get your feet wet and have some fun. If you can't make it to our site get on the air from your home station contact us.

And finally, as I reminded last month, when working on your equipment and/or antennas be safe. I want to see you at the next club meeting.

73,

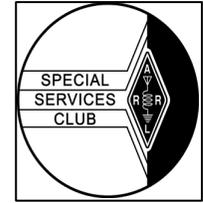
Dan Taddei, W9STS

President, Fox River Radio League

Email: President@frri.org



Fox River Radio League
"Established 1924"
An ARRL Special Service Club
W9CEQ PO Box 673 Batavia, IL 60510



Minutes of the Regular Meeting of the General Membership of the
Fox River Radio League (FRRL) an Illinois not-for-profit Corporation

Held at Bethany Lutheran Church, Batavia, IL

Meeting Minutes April 10, 2018

The meeting was called to order at 19:30 CDT by President Dan Taddei W9STS. Audience introductions: Name, Call, QTH and: "Are you participating in the International Grid Chase"?

Approval of March 2018 Member Meeting minutes: Motion was moved, seconded and accepted.

There were 51 members present at this meeting.

Treasurer's Report, Dan WA9YKK

Dan reported the financial balances as of 4/3/2018

Program, Jason NX9Y

Tonight: Flex Radio – Utilizing the Latest SDR Capabilities, Michael Walker VA3MW. May: Debbie WX9VOR, Amateur Radio Teams who support the National Weather Service. June is reserved for Field Day. If you have any ideas for future programs, please see Jason.

Education, Allen KB9VO

Allen congratulated the Extra class attendees and thanked all the instructors who participated. The Technician class has started with 10 new attendees. General classes are being planned.

Net, Dave N9XU

2m Net is every Tuesday at 7:30pm on the Club Repeater. There will be some new guidelines for the Net when repeater issues are resolved. More control operators are always needed, contact Dave N9XU for details.

VE (Volunteer Examiner) Testing, Paul AC9BS

The next VE session will be May 15th at the Messenger Library, North Aurora from 7PM to 9PM. The testing fee is \$15.00. Bring a copy of your current license if upgrading.

Membership, Chris KC9BKS

Chris KC9BKS reported a total of 134 active members.

ARES, Debby WX9VOR

Debby updated the group on recent ARES events. ARES continues to work with packet (WinLink, APRS, etc). Visit the website at <http://kanecountyares.org> or see Debby for further details on any event happening with ARES.

Old Business:

Field Day Update. Dan WA9YKK

Dan W9STS / Denny W9HI presented a slide with recent Band Captains. All items (truck, power, wash station, etc) have been ordered.

Tech and General Classes

Allen covered the material previously (under Education).

MS Walk Support May 6th

A signup sheet was sent around with the sign-in book. An equipment testing/practice is scheduled for April 29, 11:00 at Potawatomi Park. Members are encouraged to participate. Please see Priscilla KD9ICS for further details.

Farmers' Market Outreach Schedule

The Farmers' Markets are going to be scheduled for Saturday and Sundays this year. More information will be published on the website when the venues and dates become available. A generator and radio gear has been donated.

New Business:

IL QSO Party and IL Bicentennial Special Event

Dan W9STS encourages members to participate in these activities. Website information is available for both of these events.

Announcements

Harry K9DXA asked if anyone was interested in: pcbs and connectors, learning to use HF rigs, operating HF portable, kit building or building your own wire antennas. Send k9dxa@arrl.net and e-mail if interested in doing any of these activities.

Dave K9WDB is looking for 50 feet RG8X coax.

Doug NA9DS has a grid dip meter which can be used by Club Members if interested.

Cyndi K9NAX asked for members to come out for breakfast to help Golden Corral for breakfast.

Roger W9YU is supporting the ARRL Outgoing Card Bureau.

Mary N9NTM updated the club on upcoming Hamfests and other Ham activities in the area.

Pete K9PW does Fox Hunts on Saturday. If interested contact him.

Upcoming Events

April 7th, 14th, 21st and 28th Tech Classes

April 10th FRRL Membership Meeting

May 1st FRRL Board Meeting

May 6th MS Walk

May 8th Membership Meeting

May 15th VE Testing

Adjournment

A motion was received, seconded and carried to adjourn the meeting. The member meeting was adjourned at 20:06 CDT.

Respectfully submitted,

David Booher W9BOO
FRRL Secretary

Technician Class

T1D05

Answer - A

FRRL — Upcoming Events Calendar:

— May —

- ✓ **Tue May 1** — Board of Director's Meeting — 7:00 pm @ Colonial Café in Aurora, IL
- ✓ **Sat May 5** — Technician Class — 9:00 am-12 pm @ Golden Corral in Aurora, IL (half-way)
- ✓ **Sun May 6** — MS Walk — 7:00 am @ Pottawatomie Park in St. Charles, IL
- Tue May 8** — General Membership Meeting — 7:30 pm @ Bethany Luther Church in Batavia, IL
- Sat May 5** — Technician Class — 9:00 am-12 pm @ Golden Corral in Aurora, IL
- Sat May 12** — Technician Class — 9:00 am-12 pm @ Golden Corral in Aurora, IL
- Tue May 15** — VE Test Session — 7:00 pm @ Messenger Library in North Aurora, IL
- Sat May 19** — Technician Class — 9:00 am-12 pm @ Golden Corral in Aurora, IL
- Sat May 26** — Technician Class — 9:00 am-12 pm @ Golden Corral in Aurora, IL

— June —

- Sat Jun 2** — Technician Class — 9:00 am-12 pm @ Golden Corral in Aurora, IL
- Tue Jun 5** — Board of Director's Meeting — 7:00 pm @ Colonial Café in Aurora, IL
- Sat Jun 9** — Technician Class — **VE Test Session** — 9:00 am — @ Golden Corral in Aurora, IL
 - FRRL VEs: Paul Mandrik, AC9BS & VE Team
 - BARS VEs: David Rock, K9DWR & VE Team
- Tue Jun 12** — General Membership Meeting — 7:30 pm @ Bethany Luther Church in Batavia, IL
- Sat Jun 23** — **2018 - Field Day!** — @ LeRoy Oaks Forest Preserve, St. Charles, IL
- Sun Jun 24** — **2018 - Field Day!** — @ LeRoy Oaks Forest Preserve, St. Charles, IL
 - Field Day Set up: Friday June 22nd
 - Field Day Start: Saturday June 23 @ 13:00 (1:00 pm)
 - Field Day End: Sunday June 24 @ 15:59 (3:59 pm)

Mark Your Calendar for — Future Events:

Sun Aug 26 —thru— Mon Dec 3 — 2018 - IL Bicentennial QSO Party

For more info on the *Technician Class schedule* visit our web site: <http://www.frri.org/education.php>

For more info on the *2018 Field Day schedule* visit our web site: <http://www.frri.org/field-day.php>

FRRL - Upcoming Meeting Presentations



General Class

G8A06

Answer - C

May Meeting - Tue May 8, 2018

ARES Presentation on Amateur Radio Teams that support the National Weather Service

Presented by: **Debby Gray - WX9VOR**

June Meeting - Tue June 12, 2018

FIELD DAY — Planning and Discussion

July Meeting - Tue July 10, 2018

TBD

Interested in presenting, or have ideas for a presentation - contact: Jason, NX9Y - program@frrl.org

FRRL & BARS - 2018 Technician Class

The **FRRL** club and the **Bolingbrook Amateur Radio Society (BARS)** club are working together to co-present a Technician License Class this spring. The Technician Class is a **FREE** - 10 week course, held every Saturday Morning at the Golden Corral, in Aurora.



Dates: **April 7, 2018 thru June 9, 2018**
 When: **Saturday — 9:00 AM to 12:00 noon**
 Where: **Golden Corral**
4270 East New York Street, Aurora, IL

VE Testing on: Saturday June 9, 2018 at 9:00 AM

Come and support the Tech Class — Come early and eat breakfast with us!

Class Date	Technician Class	Class Location
April 7 - June 9, 2018	CLASS SCHEDULE	Golden Corral
Schedule: 9:00 AM - 12:00 PM	View the schedule and registration information.	4270 East New York Street, Aurora, IL 60105
April 7	Ch. 1: What is Amateur Radio? Radio Terminology. Getting Started with Your Radio License. Radio Safety and Emergency Communications. Radio Regulations. Radio Equipment.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER
April 14	Ch. 2: Radio and Electrical Fundamentals. Ohm's Law. Power. AC and DC. Radio Frequency.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER
April 21	Ch. 3: Electromagnetic Interference, Components, and Circuits. Resistor. Capacitor. Inductor. Transformer. Diode. Transistor. Vacuum Tube. Types of Radio and Mobile Circuitry.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER
April 28	Ch. 4: Propagation, Antennas, and Feed Lines. Propagation. Antennas. Feed Lines. Antenna Construction. Antenna Tuning.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER
May 5	Ch. 5: Amateur Radio Equipment. Radio Receiver. Radio Transmitter. Radio Test Equipment. Radio Safety and Regulations.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER
May 12	Ch. 6: Communications with Other Hams. Morse Code. Emergency Communications. Emergency Communications. Emergency Communications.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER
May 19	Ch. 7: Operating Procedures. Operating Procedures. Operating Procedures. Operating Procedures.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER
May 26	Ch. 8: Operating Regulations. Operating Regulations. Operating Regulations. Operating Regulations.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER
June 2	Ch. 9: Final Exam. Final Exam. Final Exam. Final Exam.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER
June 9	Ch. 10: VE Testing. VE Testing. VE Testing. VE Testing.	Instructor: JIMMIE COLLIER Collaps: JIMMIE COLLIER

For more info visit our website: <http://www.frrl.org/education.php>

To Register for Class: <http://www.frrl.org/education-registration.php>

ARRL— Hamfests and Conventions



Conventions

May 18-20, 2018 ■ Great Lakes Division—Hamvention® ■ Xenia, Ohio
and featuring ARRL EXPO

June 1-3, 2018 ■ Northwestern Division (SeaPac) ■ Seaside, Oregon

June 8-10, 2018 ■ West Gulf Division (Ham-Com) ■ Plano, Texas

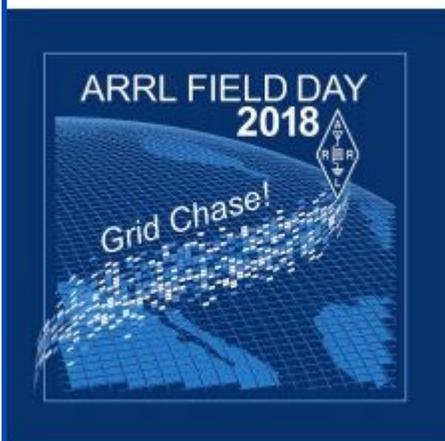
For more info visit the ARRL website at: <http://www.arrl.org/hamfests-and-conventions-calendar>

Extra Class

E7E12

Answer - D

2018 ARRL Field Day -- Gear is Here!



ARRL Field Day -- the most popular on-the-air operating event in Amateur Radio - is June 23-24, and official gear and supplies are now available from ARRL. There are Shirts, pins, patches, stickers, and -- of course -- there are coffee mugs, a great way to acknowledge and commemorate your participation in this annual event. There are two T-shirt color options -- navy blue and white. Order one, or one of each! Pair it with an ARRL hat of your choice, in black, khaki, or red and white.

For more info visit ARRL FD shop at: <http://www.arrl.org/shop/field-day/>



FRRL Featured News

HF Challenge



April 15, 2018				
Limited Class	States	Provinces	DX Countries	Total
Gary K9MMS	50	10	119	179
Operator Class	States	Provinces	DX Countries	Total
Roger W9YU	20	1	5	26
Alan W9AN	24	6	70	100
Jason NX9Y	20	3	13	36
QRO Class	States	Provinces	DX Countries	Total
Joe NA9A	12	2	47	61
Larry K9ARZ	50	12	158	220
Dean KC9EOQ	23	3	28	54
Dean KB9BL	19	5	30	54
Dick AH6EZ/W7	50	13	109	172
Rag Chewer Class	States	Provinces	DX Countries	Total
Joe NA9A	3	2	1	6
Dean KB9BL	17	4	4	25
Gary K9MMS	1	0	0	1
Dick AH6EZ/W7				37

With the Mid-April update, we welcome new participant Dean KB9BL, who has entered both the Operator and Rag Chew classes. Our best wishes to Dean and to all participants as this year's Challenge progresses.

Other participants report continuing improvement of band conditions, which certainly adds to the excitement of the Challenge.

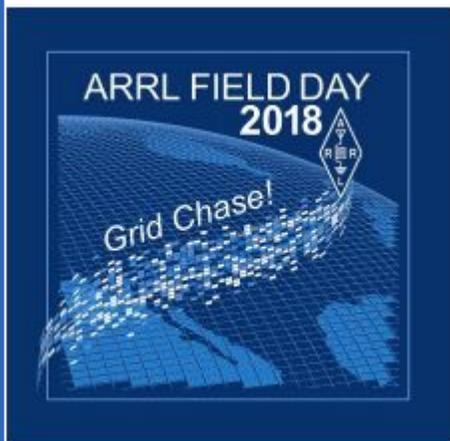
"The 15 and 17 meter bands have been improving with the coming of spring," said Larry K9ARZ. "DXing on 80 meters has dropped off a bit, but 40 meters is open for DX most evenings." This has created a challenge for Larry, who has been working on DXCC/80 meters since November. Larry has 88 confirmed stations worked, and reports that acquiring those last few contacts is getting rough as he nears the end. Let's hope the bands are kind in the coming month so Larry will have some good news to share with the next update.

New DX worked by Larry include Lebanon, Oman, South Cook Isl., Burkina Faso, Turkey, St. Brandon (80 meters), and Sao Tome and Principe. Challenge Administrator Joe NA9A also reported a rare contact with St. Brandon Is.

As always, it's never too late to join the Challenge. Talk to Joe at the next club meeting, or send an email to Challenge [at] frrl.org.

73 de KC9LQS

ARRL FIELD DAY—2018



What is ARRL Field Day?

If you're a NEW HAM Operator, are you wondering what it's all this about...

Field Day is Amateur Radio's Open House. On the 4th weekend in June, over 40,000 hams throughout North America set up temporary transmitting stations in public places to demonstrate amateur radio's science, skill, service to our communities and our nation. ARRL Field Day combines public service, emergency preparedness, local community outreach, and technical skills all in a single event. An annual event since 1933, it remains the most popular event in ham radio. ARRL Field Day is a picnic, a campout, practice for emergencies, an informal contest and, most of all, FUN! Come join us at Field Day, to work your favorite bands or new bands you might not normally work.

Mark your Calendar — **NOW!**

2018—ARRL FIELD DAY Dates:

Start: **Saturday June 23, 2018** - 1800 UTC (1300 / **1:00 pm** CDT) -*thru-*

End: **Sunday June 24, 2018** - 2059 UTC (1559 / **3:59 pm** CDT)

Location: **LeRoy Oaks Forest Preserve, in St. Charles, IL**

FRRL needs people to help on our 2018 Field Day event. If you're interested, even for a brief time, let us know. Contact: **Field Day Chairman: Dan, WA9YKK** Come out, work some new bands, have lots of FUN!

2018 FRRL - Field Day—Band Captains & GOTA Coaches:

75/15 Voice Mike Urso, K9FE

40 Voice Dave Booher, W9BOO

20 Voice Denny Barfuss, W9HI

80/15 CW Mike Bronoski, WBOLKA

20 CW Jason Burzynski, NX9Y

40 CW Bill Capper, WB9LPW

Data/QRP Mike Bingham, WX9SPL

GOTA Coaches Miller Family — Priscilla, KD9ICS - Ken KD9IXM - John, W9JDM

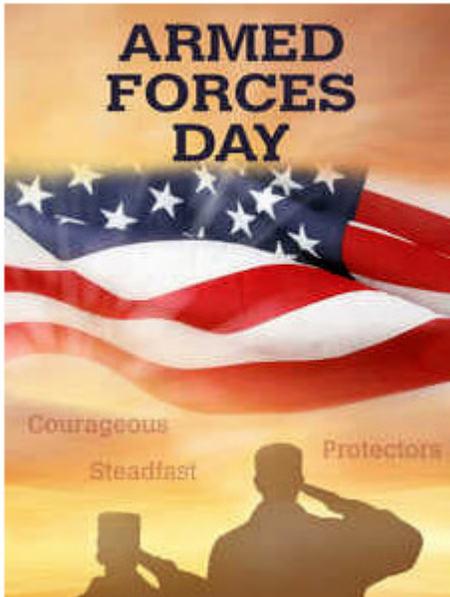
VHF/UHF **TBD—Vacant**



For more information visit ARRL FIELD DAY 2018 website at: <http://www.arrl.org/field-day>

For more information on FRRL FIELD DAY 2018 - visit our website at: <http://www.frri.org/field-day.php>

ARRL NEWS



Annual Armed Forces Day Crossband Communication Test Set for Saturday, May 12

The Military Auxiliary Radio System (MARS) will sponsor the traditional military/amateur radio communication tests to mark the 67th annual Armed Forces Day (AFD) on Saturday, May 12. Armed Forces Day is May 19, but the AFD Crossband Military-Amateur Radio event traditionally takes place one week earlier in order to avoid conflicting with Hamvention. Complete information, including military stations, modes, and frequencies, is available on the [US Army MARS website](#).

The annual celebration is a unique opportunity to test two-way communication between radio amateurs and military stations (authorized under §97.111 of the Amateur Service rules). It features traditional military-to-amateur crossband SSB voice, CW, practice using legacy interoperability waveforms, and the opportunity for participating hams to utilize more modern military modes, such as MIL-STD Serial PSK and Automatic Link Establishment (ALE). Military stations and Amateur Radio stations are authorized to communicate directly on certain 60-meter interoperability channels.

These tests give Amateur Radio operators and shortwave listeners (SWLs) a chance and a challenge to demonstrate individual technical skills in a tightly-controlled exercise scenario, and to receive recognition from the appropriate military radio station. QSL cards will be available for stations successfully contacting participating military stations.

Military stations will transmit (USB, unless otherwise noted on the schedule) on selected military frequencies and will announce the specific amateur frequencies they are monitoring. MARS stressed that frequencies used for the test will not impact any public or private communications and will not stray outside the confines of the exercise.

An Armed Forces Day test message will be transmitted utilizing the Military Standard (MIL-STD) Serial PSK waveform (M110) followed by MIL-STD Wide Shift FSK (850 Hz RTTY), as described in MIL-STD 188-110A/B. [Technical information](#) regarding these waveforms is available. The AFD test message will also be sent at 0300 UTC in CW.

Those who want a QSL should complete the [request form](#) on the MARS website.

—end—

ARRL NEWS - continued...



Lunar-Orbiting Microsats with Ham Radio Payloads Will Make Use of WSJT JT4G Sub-Mode

China's twin-launch Chang'e 4 mission to the far side of the moon will place a pair of microsattellites in lunar orbit "to test low-frequency radio astronomy and space-based interferometry." The two satellites, DSLWP-A1 and DSLWP-A2 (DSLWP = Discovering the Sky at Longest Wavelengths Pathfinder) are expected to launch in June. They will carry Amateur Radio and educational payloads, but not a transponder.

Equipped with low-frequency antennas and receivers, the astronomy objectives of the two spacecraft will be to observe the sky at the lower end of the electromagnetic spectrum — 1 MHz to 30 MHz — with the aim of learning about energetic phenomena from celestial sources. They will use the moon to shield them from radio emissions from Earth.

Developed by students at Harbin Institute of Technology (**BY2HIT**), the Amateur Radio payload onboard DSLWP-A1 will provide a telecommand uplink and telemetry/digital image downlink. The open telecommand protocol is designed to allow amateurs to send commands to take and download images. DSLWP-A1 downlinks are 435.425 MHz and 436.425 MHz; DSLWP-A2 downlinks are 435.400 MHz and 436.400 MHz, and they will use 250/500 bps GMSK using 10K0F1DCN or 10K0F1DEN (10 kHz wide FM single-channel data) with concatenated codes or JT4G. JT4 uses four-tone FSK, with a keying rate of 4.375 baud; the JT4G sub-mode uses 315 Hz tone spacing and 1260 Hz total bandwidth.

The microsattellites represent the first phase of the Chang'e 4 mission. The satellites will piggyback on the Chang'e 4 relay package and will deploy into 200 × 9,000 kilometer lunar orbits. The mission involves placing a relay satellite in a halo orbit to facilitate communication with the Chang'e 4 lander and rover, which will be sent to the far side of the moon in December. Because the moon's far side never faces Earth, the satellite is needed to serve as an Earth-moon relay. The Chang'e 4 mission will be the first-ever attempt at a soft-landing on the far side of the moon.

—end—

FRRL & BARS - 2018 General Class

The **FRRL** and **BARS** the (**Bolingbrook Amateur Radio Society**) clubs will continue their co-presenting education classes. The next class will be a **General Class License** scheduled for this fall. The General Class will be a **FREE - 10 week** course, to be held every Saturday at the **Golden Corral** in Aurora.

Dates: **Sept 8, 2018 to Nov 10, 2018**

When: **Saturday — 9:00 AM to 12:00 noon**

Where: **Golden Corral — 4270 East New York Street, Aurora, IL**

We are looking for people interested in being an Instructor for this General Class course. If you think you'd like to help out with the General Class, as an Instructor, or in any other way, please contact:

— Allen, KB9VO - education@frrl.org —or— Cyndi, K9NAX - pr@frrl.org —

General Class Saturday Dates: Sept. 8, 15, 22, 29 — Oct. 6, 13, 20, 27 — Nov. 3, 10



THE ILLINOIS BICENTENNIAL CHALLENGE AWARD

When: Sun Aug 26, — Mon Dec. 03, 2018

Time: 12:01 AM — 11:59 PM

In celebration of the Illinois Bicentennial, the Wester Illinois Amateur Radio Club will sponsor an On-Air operating event to encourage amateur (ham) radio operators all over the world to contact hams in Illinois. The goal for each operator will be to make contact on the air with at least one participating station in each of the 102 Illinois counties. Operators who provide evidence of making contact with at least one station in each county will be awarded a certificate acknowledging the accomplishment. The WIARC will coordinate the activities of amateur stations in each Illinois county. Publishing online the operating schedule for each station.

For more information visit the IL website at:

<https://illinois200.com/events/the-illinois-bicentennial-challenge-award/>

International Grid Chase—2018

Get in the Chase!

The ARRL International Grid Chase is underway! Join in on the newest year-long operating event!

Get in on the Chase!

The objective of the ARRL International Grid Chase is to work stations on any band (except 60 meters) in as many different Maidenhead grid squares as possible, and then upload your log data to the ARRL's Logbook of the World (LoTW).

For more information visit ARRL website:

<http://www.arrl.org/international-grid-chase-2018>



IMPORTANT AMATUER RADIO WEB PAGE LINKS

Visit our website – FRRL Website: www.frrl.org

www.arrl.org

www.qrz.com

www.colpage.org

www.twit.tv/hn

www.dailydx.com

www.dxspots.com

Follow FRRL on Facebook:

FRRL Facebook Page: <https://www.facebook.com/foxriverradio/>

FRRL Facebook Group: <https://www.facebook.com/groups/foxriverradio/>



FRRL Repeaters:

W9CEQ – 147.210 MHz +600KHz Offset, 103.5 PL

W9CEQ – 444.300 MHz +5 MHz Offset, 114.8 PL

FRRL Digital Voice/Data Repeaters: (Contact Kermit, W9XA for information)

W9CEQ – B D-Star–442.10625 MHz (+ 5.0 MHz offset)

W9CEQ – C D-Star–147.225 MHz (+ 0.6 MHz offset)

Other Local Area Repeaters:

Kane Co. Repeaters:

KC90EM – Owned by Kane County OEM:

KC90EM – 145.470 MHz -600 KHz, 103.5 PL

(2 meter is primary Kane Co. SKYWARN/ARES Frequency)

W9DWP – Kane Co. Amateur Public Svc. Repeaters:

(Both repeaters are dual mode APCO-25 NAC-293)

W9DWP – 145.270 -600 KHz 107.2 PL

W9DWP – 443.025 +5 MHz 114.8 PL

W9XA – 6 meter:

W9XA Input: 52.210 Output: 53.910 Carrier Access FM (W9XA 6-meter repeater)

W9ZGP – NIARC:

W9ZGP – 147.060 +600 KHz, 103.5 PL

K9BAR – BARS – Bolingbrook Amateur Radio Society Repeaters: (education partner)

K9BAR – 147.330 +600 KHz, 107.2 PL - (EchoLink: K9BAR-R Node # 261875)

K9BAR – 443.525 +5.0 MHz, 114.8 PL & NAC-293 - P25/Mixed-Mode Analog

K9BAR – 443.700 +, Color Code 1 TS1 & 2 - DMR Repeater

Weekly Nets:

Ten Meter Net: Monday at 8:00 pm 28.150 MHz CW

Monday at 8:30 pm 28.720 MHz SSB

FRRL 2 Meter Net: Tuesday at 7:30 pm on W9CEQ (except Tue meeting nights)

ARES & Skywarn Net: Wednesday at 6:30 pm on KC90EM 2 meter repeater

Illinois DStar Net: Wednesday at 8:00 pm on the DStar 2 meter repeater