



The national association for
ARRL AMATEUR RADIO®

www.arrl.org

ARRL EXPO 2012

Dayton Hamvention®

ARRL EXHIBIT & ACTIVITIES GUIDE

May 18-20, 2012

ARRL EXPO – Welcome! ARRL, the national association for Amateur Radio, welcomes members and friends to Dayton Hamvention®. Use this handy guide to find ARRL-sponsored activities, exhibits and program representatives. ARRL EXPO is a large exhibit area located in the Ballarena Hall (near the 400-numbered booths).

Special Guest

John Amodeo, NN6JA – Television Producer

The ARRL welcomes John Amodeo, NN6JA, to Hamvention. John is a working TV producer living in Los Angeles and is the producer of such TV hits as *Arrested Development*, *Sports Night*, *Samantha Who?*, *Titus* and the current hit ABC comedy *Last Man Standing*. In January, episodes of *Last Man Standing* introduced the main character Mike Baxter (played by comedian Tim Allen) as radio amateur KAØXTT. The studio set includes many recognizable ARRL publications and operating awards, as well as a variety of equipment, gear and antennas from well-known Amateur Radio manufacturers. John has used Facebook and other social media outlets to give the Amateur Radio community an insider's look at the planning of the show. When *Last Man Standing* is not being filmed, members of the production staff who have Amateur Radio licenses have delighted hams with radio contacts from the set. **John has been confirmed as a Hamvention forum speaker (see forum schedule elsewhere in this program).**

Sponsored by ARRL.



ARRL Store

Visit the HUGE ARRL bookstore to purchase popular ARRL publications, join or renew your ARRL membership, and pick up official ARRL merchandise.

- FREE Gift when you join ARRL or renew your membership at ARRL EXPO.
- FREE **2012 ARRL Handbook** when you join or renew for 3 years. *Best Deal!*
- FREE ARRL Dayton 2012 Button!

2012 ARRL Field Day Supplies – ARRL Field Day is June 23-24. Gear up for the most popular on-the-air operating event in Amateur Radio. Official T-shirts, pins, hats, Field Day Logbooks (NEW!), and posters are available.

NEW! Presentations on the ARRL “DIY” Stage

ARRL's newest Amateur Radio recruitment campaign shows how “makers” and “hackers” are using Amateur Radio as a tool in “Do It Yourself” projects. Hear from other hams who are doing-it-themselves! A variety of creative projects and cool technology will be demonstrated by today's Amateur Radio innovators. **(A detailed schedule of speakers and presenters will be posted near the ARRL “DIY” Stage).**

ARRL Project Building Booth

Friday 9:00 AM to 6:00 PM

Saturday 9:00 AM to 5:00 PM

Sunday 9:00 AM to 1:00 PM

Join in the fun of homebrewing (or project-building). Live classes will be held. Come-by to build one of the four affordable kits under the watchful eyes of a team of instructors who will mentor you through the activity. Handle electronic components, circuit boards, and try your hand at soldering. Unlock your inner do-it-yourselfer! Choose from the following kits, which can be purchased at the ARRL Store:

- **NEW!** **Digital Interface for Transceiver/Computer** for operating modes such as PSK-31, RTTY, SSTV, etc.
- **Shortwave Radio Kit** – The Ten-Tec 1054 4-band regenerative receiver is a classic “first receiver” project.
- **Morse Code Oscillator Kit** – Produced exclusively for ARRL by MFJ Enterprises, this project is perfect for newcomers, clubs, instructors and teachers seeking a classroom kit-building experience.
- **Digital Clock** – a 24-hour digital clock kit.

ARRL Exhibits...

NEW! **Introducing the Digital Edition of QST** – In June, all ARRL members will have access to the new digital edition of QST—ARRL's popular membership journal. The new online format offers several advantages including enhanced content, convenient access, and a more interactive experience. Drop by this exhibit to see a demonstration!

ARRL Development and ARRL Foundation – Learn about how you can contribute to one of the important ARRL funds that help strengthen ARRL's work on behalf of Amateur Radio, including Spectrum Defense Fund, Education & Technology Fund, W1AW Endowment, Historic Preservation, The Diamond Club, the Legacy Circle and the prestigious ARRL Maxim Society. Information will be available about The ARRL Foundation and it's more than 75 annual scholarships and grants for Amateur Radio groups working to promote Amateur Radio and involve young people in Amateur Radio activities.

TravelPlus for Repeaters™ software demonstration.

ARRL Volunteer Examiner Coordinator – Licensing forms, testing information and more.

Emergency Communications – Meet with program representatives for the Amateur Radio Emergency Service (ARES®) and the National Traffic System (NTS). Learn about opportunities to volunteer, and explore resources and training. Network with other public service volunteers.

ARRL Education Services – See displays of ARRL Education & Technology Program kits, projects, and other resources available to schools and teachers. Obtain information about the Teachers Institute on Wireless Technology, Amateur Radio on the International Space Station (ARISS) and Amateur Radio licensing instruction.

ARRL Media and Public Relations – Learn how to promote Amateur Radio. We'll give you some tips for representing Amateur Radio in all types of media and news outlets. Publication Information Officers and radio clubs: get the tools you need to show and tell our story!

Ham Radio and Scouting – Ham radio and scouting are a perfect pair! Hear from active scouts and scout leaders about resources, programs and activities to interest boy and girl scouts in Amateur Radio.

NEW! 2012 ARRL National Convention – Plan to attend the 2012 ARRL National Convention at Pacificon in Santa Clara, California, October 12-14, 2012. Representatives from Pacificon will be present to answer all your questions.

ARRL Field Organization Volunteers – Visit this gathering area for ARRL Field Organization networking, hosted by ARRL Section Manager for Ohio, Frank Piper, KI8GW.

ARRL Visa® Card (U.S. Bank) – Apply for the ARRL Visa card and earn a free gift. Earn benefits that Keep You on the Air! Already have a card? Bring some current receipts and your ARRL VISA card to get a free gift.

ARRL-Sponsored Insurance Program – ARRL has been providing opportunities for equipment insurance to its members for more than 25 years. A representative from Hays Affinity Group will be available to answer questions about the ARRL-sponsored Equipment Insurance and Club Liability Insurance plans. Enroll online at ARRLinsurance.com

The International Amateur Radio Union – National radio societies throughout the world work together for the good of Amateur Radio through their global federation, the International Amateur Radio Union (IARU). Meet IARU officials including President Tim Ellam, VE6SH; President Emeritus Larry Price, W4RA; Secretary Rod Stafford, W6ROD; Vice President Ole Garpestad, LA2RR, and Ron Szama, LU2AH. Meet representatives from the following national Amateur Radio societies in the ARRL EXPO exhibit area.

- **Deutscher Amateur Radio Club (DARC)** – Germany
- **Japan Amateur Radio League (JARL)**
- **Radio Society of Great Britain (RSGB)** – United Kingdom

Radiosport and DXCC

DXCC Card Checking – Personnel from the ARRL DXCC Branch will be on hand to check applications for all ARRL Award Programs. All cards will be eligible for checking, including old cards, cards for deleted countries and cards for 160-Meters. Applications will be limited to 101 cards (more cards will be checked as time and volunteer Card Checkers are available). See www.arrl.org/awards/dxcc for the latest program information and current forms. Use the new online DXCC tool and save half on your application! Remember to bring with you to Dayton a printout of your application, card list, and your cards in the order in which they are entered into the Online DXCC.

ARRL Contests and Awards – On-air competitions and award-hunting are great activities of Amateur Radio. These are effective ways to boost your technical knowledge and improve your radio operating skills—helping make you a better radio amateur. Ask us about the ARRL Award Program and upcoming ARRL Contests. VHF/UHF Century club (VUCC) and Worked All States (WAS) award applications may also be checked at Dayton.

QSL Bureau – ARRL members will be able to drop off their QSL cards to be sent through the ARRL Outgoing QSL Bureau. If you have QSLs that you would like to send through the ARRL Outgoing QSL Bureau (your QSLs going to foreign stations – no US-to-US QSLs, please), you can save the shipping cost to ARRL by bringing them to Dayton and the League will transport your cards to the Bureau in Newington. In order to take advantage of this exciting benefit, all of the standard QSL Bureau rules must be followed: Cards must be sorted by DXCC country, they must go to countries where a bureau exists and you must be an ARRL member to use the Outgoing QSL Bureau. Cards do not have to be boxed, but should be wrapped with rubber bands.

Japan Amateur Radio League Awards – JARL representative Masa Ebisawa, JA1DM, will be checking applications for certain JARL awards (AJD, WAJA, JCC, ADXA, ADXA-Half and Fuji), as well as the IARU's Worked All Continent (WAC) and 5-Band WAC awards at the JARL table within the ARRL EXPO. Amateurs who qualify for these JARL and IARU awards will be issued the certificates right on the spot. Please see the new JARL English-language web pages for fees and more information, <http://www.jarl.or.jp/English>

ARRL Youth Activities

Youth Activities and Youth Lounge: Drop by the ARRL Youth Lounge to meet and socialize with other young hams. Whether you're 1 or 21, the Youth Lounge is sure to offer something that young hams will enjoy. Come to chat with other hams, grab a snack or participate in one of the many activities, such as fox-hunts, scavenger hunts, Morse code fun, a QSL card designing contest, crafts, prizes and more. Whether or not you're licensed, you're welcome to come by and join the fun! *Special thanks to Andrea Hartlage, KG4IUM, Scott Hartlage, KF4PWI, and Megan McClellan, K5MEM, for organizing the ARRL Youth Activities.*

ARRL Youth Calling Frequencies: If you're looking for other youth during the convention, try calling them on the youth calling frequencies: 145.540 MHz (107.2 Hz CTCSS) primary and 146.430 (233.6 Hz CTCSS) secondary. Not licensed yet? Soon-to-be hams can check-in using FRS channel one.

ARRL Youth Dinner: Saturday night from 5:00 to 7:00 PM. Come to the ARRL Youth Lounge to find out the location of the dinner.

THANK YOU!

ARRL expresses its gratitude to the 2012 Dayton Hamvention® Committee, Dayton Amateur Radio Association, and all the volunteers that contributed to the success of ARRL EXPO 2012 in Dayton, Ohio.

Upcoming Event

October 12-14, 2012 – Santa Clara, California
ARRL National Convention hosted by Pacificon
www.pacificon.org

Got an idea for next time?
Please contact the office of the
ARRL EXPO Coordinator, email expo@arrl.org.



2012 ARRL “DIY” Stage at Dayton Hamvention®

ARRL’s newest Amateur Radio recruitment campaign shows how “makers” and “hackers” are using Amateur Radio as a tool in “Do It Yourself” projects. Hear from hams who are doing-it-themselves! A variety of creative projects and cool technology will be demonstrated by today’s Amateur Radio innovators.

Short presentations on the ARRL Stage (ARRL EXPO area in the Ballarena Exhibit Hall)...

Friday May 18, 2012

11:00 AM	<p><u>Making a Linksys Router into a HSMM-MESH Node</u> Kipton Moravec, AE5IB</p> <p>How to install the HSMM-MESH software into a router, how to set it up and configure it, and where to go next. This is what you need to get started with HSMM-MESH, an Amateur Radio, self-configuring, self-healing, 2.4 GHz Network.</p>
12:00 PM	<p><u>Launching Radios and Other Cool Stuff into the Stratosphere</u> Erin King, AK4JG</p> <p>Have you ever wondered how to plan, prepare, and execute a high-altitude balloon mission? High-school senior and future MIT student Erin King (AK4JG) will give details on the process and experience of putting together and launching a balloon payload, as well as predicting the flight path, tracking it using APRS, and recovering it once it lands.</p>
1:00 PM	<p><u>Kit Building Essentials plus Assembling Coax Connectors</u> Joe Eisenberg, KØNEB</p> <p>Learn some quick tips for building kits, including what tools to use, how to sort and identify parts, and give yourself the best chance for success. Also, how easily to put on a PL-259 connector.</p>
2:00 PM	<p><u>Using Microcontrollers in Ham Radio Projects</u> George Zafiropoulos, KJ6VU</p> <p>This presentation will provide an introduction to microcontroller hardware, software development tools and feature several ham radio project examples. Getting started is easier than you think!</p>
4:00 PM	<p><u>The AMSAT VP for Educational Relations</u> Mark Hammond, N8MH</p> <p>This presentation will describe the different roles that Technical Mentors and Ground Station Operators play in an ARISS (Amateur Radio on the International Space Station) contact. Current opportunities for licensed Amateur Radio operators to become involved as Technical Mentors or Ground Station Operators will be discussed.</p>

Continued to next page for Saturday and Sunday >



2012 ARRL “DIY” Stage at Dayton Hamvention®

Saturday May 19, 2012

10:00 AM	<p><u>EME on a Shoestring – Almost</u> Bill Ockert, NDØB</p> <p>This talk will discuss the minimal station with which you can reasonably expect to have some success with EME. Topics covered will include what is the best band, what equipment is required, who can you expect to work and how do you get started.</p>
11:00 AM	<p><u>Station Automation? Yes, You Can</u> Bruce Jewett, W1GQ</p> <p>This presentation will provide insight to microcontrollers for station automation. What does Contesting and DX'ing have to do with Microcontrollers? A lot, as Bruce will explain in this session.</p>
12:00 PM	<p><u>The Wireless Antenna, Communication Using a Broken Antenna Structure</u> Rhett Spencer, N7DGL</p> <p>Most of today's antennas are still constructed using the same techniques Tesla and Marconi used to concentrate the signal and increase the transmission range. What if there as was a way to increase the antenna performance using the most simple of antenna designs by just eliminating the wire.....</p>
1:00 PM	<p><u>Building Your Next Project with Software</u> John Best, KJ6K</p> <p>Learn to design and build your own projects using the HamStack microcontroller platform and the C programming language. Examples include an iambic keyer, and a timer to perform CW ID, control your sprinklers, or just tell the time.</p>
2:00 PM	<p><u>Hacking with Radios and Arduinos</u> Bernard Van Haecke KI6TSF</p> <p>How you can do keyboard-to-keyboard chat over digital radio, portable telemetry with APRS, or APRN (SSTV + APRS).</p>
3:00 PM	<p><u>UHFSDR - 1.5 MHz to 700 MHz Software Defined Transceiver</u> Dave Brainerd, WB6DHW</p> <p>Design and development of a Software Defined Transceiver for 1.5 to 700 MHz. Discussion will include free development tools and free software.</p>
4:00 PM	<p><u>The AMSAT VP for Educational Relations</u> Mark Hammond, N8MH</p> <p>This presentation will describe the different roles that Technical Mentors and Ground Station Operators play in an ARISS (Amateur Radio on the International Space Station) contact. Current opportunities for licensed Amateur Radio operators to become involved as Technical Mentors or Ground Station Operators will be discussed.</p>

Sunday May 20, 2012

10:00 AM	<p><u>Using Microcontrollers in Ham Radio Projects</u> George Zafiropoulos, KJ6VU</p> <p>This presentation will provide an introduction to microcontroller hardware, software development tools and feature several ham radio project examples. Getting started is easier than you think!</p>
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ARRL-SPONSORED FORUMS

@ 2012 Dayton Hamvention®

Revised April 3, 2012 by Bob Inderbitzen rinderbitzen@arrl.org

A complete list of Hamvention forums can be found at <http://hamvention.org>.

Friday May 18, 2012

9:15 a.m. - 10:45 a.m. – Room 2

ARRL Presents: The Doctor is IN

Presenter: Joel Hallas, W1ZR, ARRL Technical Editor

QST magazine's popular column, "The Doctor is IN," offers readers short, insightful answers to a variety of technical questions. Bring your questions to this session — technical ones are best — and The Doctor will do his best to answer them on the spot!

12:15 p.m. - 1:45 p.m. – Room 3

Ham Radio and the Law: Getting It Up and Keeping It Up

Moderator: Jim O'Connell, W9WU, ARRL Volunteer Counsel

Speakers:

- Fred Hopengarten, K1VR, Author: *Antenna Zoning for the Radio Amateur*

- Dale Schwartz, K4ROZ, ARRL Volunteer Counsel

- Cliff Ahrens, K0CA, ARRL Midwest Division Director and Chair of the ARRL Amateur Radio Legal Defense and Assistance Committee

A discussion by Amateur Radio attorneys on legal issues of interest to hams: how to avoid restrictive covenants, how to present your case for a tower permit, and information on the latest court rulings on RFI, PRB-1 and towers. Updates on the ARRL's Amateur Radio Legal Defense and Assistance Committee.

2:30 p.m. - 3:45 p.m. – Room 2

ARRL Presents: Radios from Galena to GaAs and SDR

Presenter: Martin Ewing, AA6E, ARRL Technical Advisor

It's a perpetual complaint: no one builds their own gear anymore (*QST*, 1916!). Building a SoftRock Software Defined Radio kit is good, but understanding it is better. We present a low-math approach to understanding SDR and an evolution of radio designs from the 1930s to the present day.

2:30 p.m. - 3:30 p.m. – Room 5

ARRL Presents: The DIY Magic of Amateur Radio

Moderator: Allen Pitts, W1AGP, ARRL Media and Public Relations Manager

ARRL's latest media campaign represents the innovative, imaginative and fun ways we "hams" use radio technology in new and creative ways. This presentation from ARRL's national Public Relations Committee (PRC) will provide an overview of how this campaign is being used to reach out to the growing DIY (do-it-yourself) community of makers, creators, hackers and innovators. The session will also include an update on other ARRL projects and resources that help promote the Amateur Radio Service.

3:45 p.m. - 4:45 p.m. – Room 5

ARRL Presents: Getting started in PIC Microcontroller Programming

Presenter: Mark Spencer, WA8SME, ARRL Education and Technology Program Director

An introduction to programming microcontrollers, including examples of projects that you can build for your shack based on the power of embedded controllers (microcontrollers). Mark Spencer, WA8SME is author of the publication, *ARRL's PIC Programming for Beginners*.

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ARRL-SPONSORED FORUMS @ 2012 Dayton Hamvention®

Saturday May 19, 2012

10:30 a.m. - 11:45 a.m. – Room 3

ARRL Presents: Ham Radio in Hollywood

Presenter: John Amodeo, NN6JA

ARRL welcomes John Amodeo, NN6JA to Hamvention. John, a working TV producer living in Los Angeles, knows that the media has not always been kind to Amateur Radio. The portrayal of Amateur Radio in the media is often inaccurate, sometimes ridiculous -- and occasionally mean. Join John, NN6JA as he discusses why we as hams should care about how the media portrays ham radio and ham radio operators. John is the producer of such TV hits as *Arrested Development*, *Sports Night*, *Samantha Who?*, *Titus* and the current hit ABC comedy *Last Man Standing*.

12:00 p.m. - 1:00 p.m. – Room 3

The Lighter Side of RTTY (part of the RTTY Forum)

Presenter: Khrystyne Keane, K1SFA, ARRL News Editor

In the 3.5 years that Khrystyne Keane, K1SFA, has been involved with RTTY contesting, she has set two world records, won six #1 Worlds and placed #1 USA 10 times (not counting her time as part of the K1TTT multi/multi team). In the 2012 RTTY WPX Contest, she broke the #1 North American record set by TI5N in 2003. Join Khrystyne as she delves in to the lighter side of RTTY contesting and discusses in a fun and delightful way how you can become a better RTTY operator.

1:15 p.m. to 2:15 p.m. – Room 3

ARRL Member Forum

Moderator: Jim Weaver, K8JE, ARRL Director--Great Lakes Division

ARRL is the largest national Amateur Radio association in the world. The organization has over 157,000 members worldwide, publishes the popular monthly journal *QST*, and coordinates an extensive all-volunteer field organization. Hear from local and national ARRL officials on key areas of membership interest. Find out how ARRL supports dozens of ways to get involved and get on the air. Members and prospective members are all welcome!

2:30 p.m. to 3:30 p.m. – Room 3

ARES Forum (Amateur Radio Emergency Service)

Moderator: Jack Sovik, KB8WPZ, ARRL Public Information Coordinator (Ohio)

Speakers will include Mike Corey, KI1U, ARRL Emergency Preparedness Manager.

