



Amateur Radio Education, Testing and Training

Montgomery Amateur Radio Club Rockville, Maryland

David Bern, W2LNX
education@marcclub.org

agenda

- marketing
- education
- testing
 - Laurel VEC
- training and mentoring
 - Elmer Lending Library
 - mentoring young hams
- conclusions

every image is a <u>clickable link</u>

marketing

- cards, flyers and AMATEUR RADIO hat
- community Web sites and newspapers
- public workshops
- public demonstrations
 - Rockville Science Day at Montgomery College
 - Field Day amateur radio open house
 - local parks
- public service events
 - Marine Corps Marathon

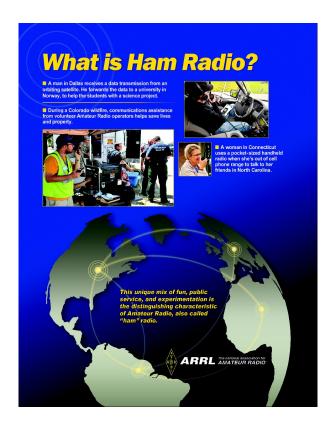
marketing

EDUCATION@MARCCLUB.ORG

MONTGOMERY AMATEUR RADIO CLUB
WWW.MARCCLUB.ORG

DAVID BERN, W2LNX EDUCATION COMMITTEE

MONTGOMERY COUNTY
MARYLAND





advertising

Light Paintir SATURDAY, APRIL 9 LEDs, batteri conductive m cars 'N Coffee Bethesda For car glowing "brus enthusiasts, a weekly meetup to that produce discuss and show off your cars. First are posted o coffee, free. Saturdays at 8-10 a.m. workshop for Corner Bakery Cafe Bethesda. 3-4 p.m. Qui 10327 Westlake Dr., Bethesda. 301-15831 Quino 217-0049. Free. Gaithersburg registration **Montgomery Amateur Radio Club** free class Prepares participants for Rockville S the Technician Class license test. Big Band, w Learn about electronics, radio Stang and S science, technical experimentation songs from and how to operate amateur radio jazz standa equipment safely and legally. Marilyn J. P Sponsored by the Montgomery 14910 Old College Chapter of the Institute of Burtonsville **Electrical and Electronics** vera.ramaty **Engineering and the Montgomery** ov. 240-773 Amateur Radio Club. Saturdays at 9 a.m.-noon, through May 7, **Beatles Si** Montgomery College, Science all ages. Li Center, Room SC 463, 51 Mannakee screen and St., Rockville. 7-10 p.m. (education@marcclub.org. Universalis marcclub.org. Free; registration Lane, Beth required. cedarlane.c

Washington Post announcement

basic soldering workshop

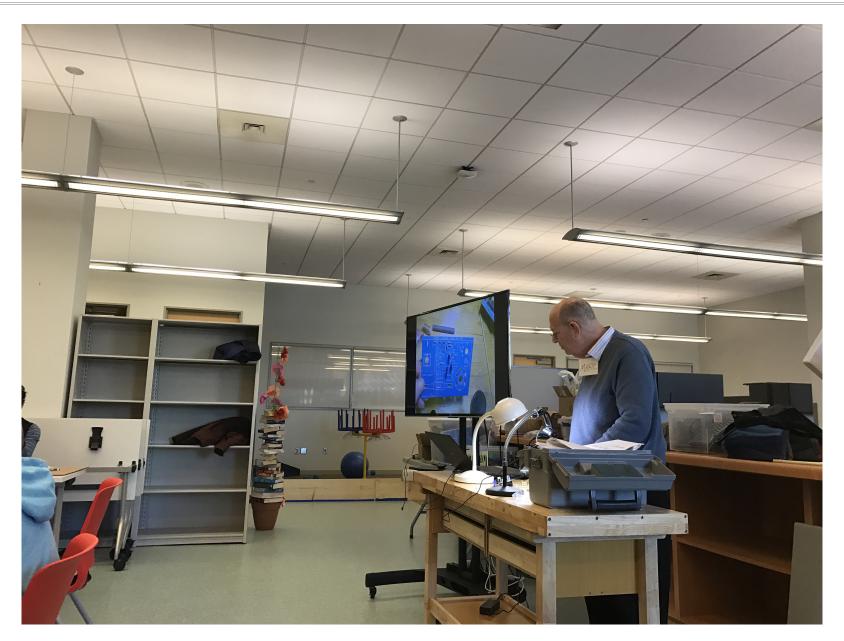


basic soldering workshop



participants watching Marc, N4DR

basic soldering workshop

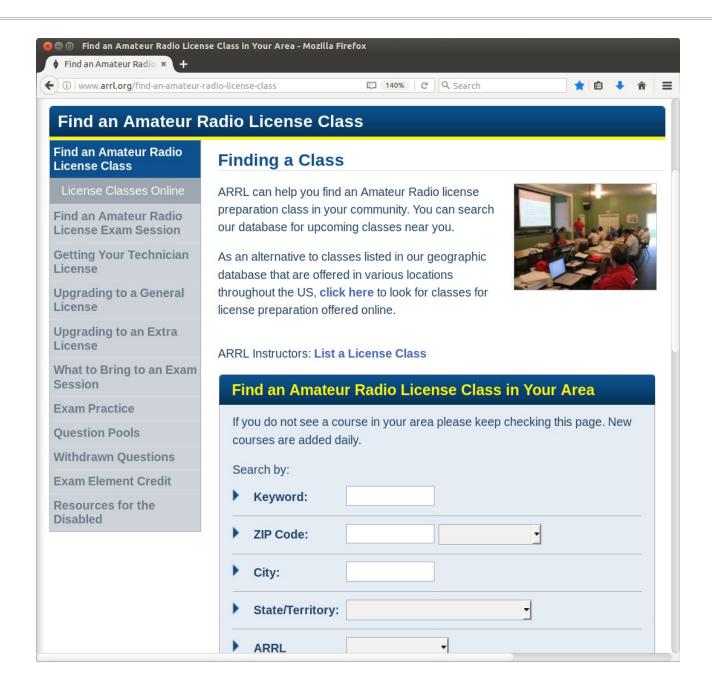


Marc, N4DR showing construction of Elenco AM-780K

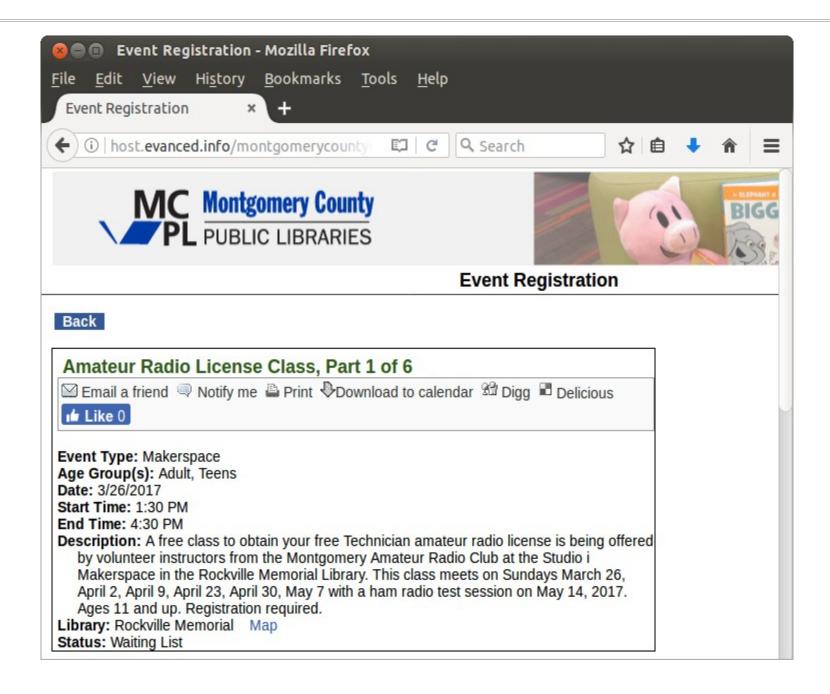
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finding a class



finding a class



Technician license class

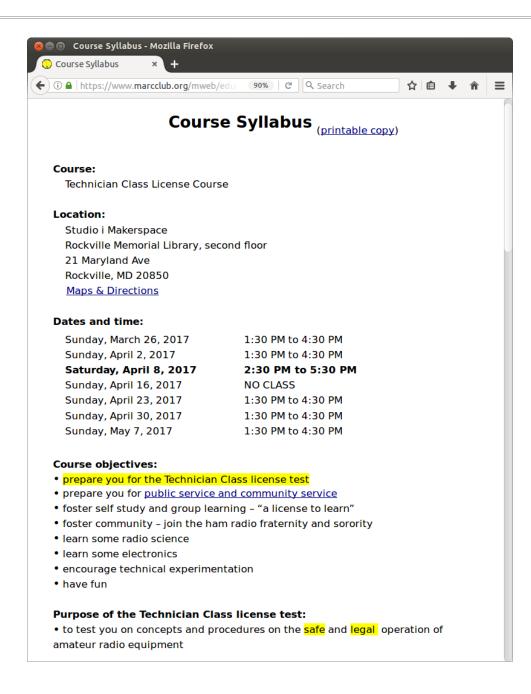
- 6 day free class, free test session and free license
 - different instructor from instructor team
- use ARRL presentation visuals
- conducted 6 Technician classes since 2014
 - 196 students
 - 65 students earned Technician license
- public service events lab part of the class
- accessible to middle school students

Technician class

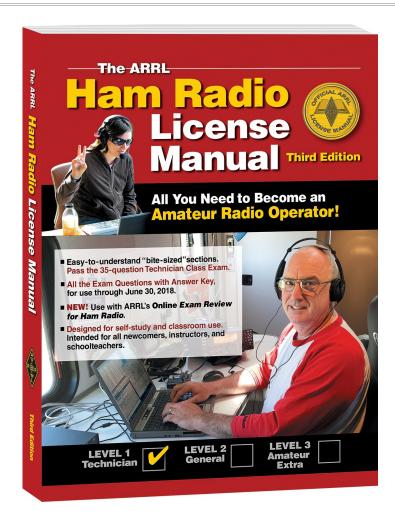


David, W2LNX presenting in Technician class

Technician class



Technician class book



- preparation for the Technician test
- teaches radio theory and science
- catalog of ham radio activities

Technician class planning timeline

beginning of the year [] schedule dates and request makerspace room at RML [] update MARC Web page and notify ARRL [] add test dates to ARRL Web site [] advertise on community Web sites and local newspapers [] request event scheduled on the MCPL calendar Web site [] invite six instructors from instructor team [] start accepting student applications month before first class session [] remind instructors of the course schedule [] update course syllabus with instructor names [] order ARRL license manuals

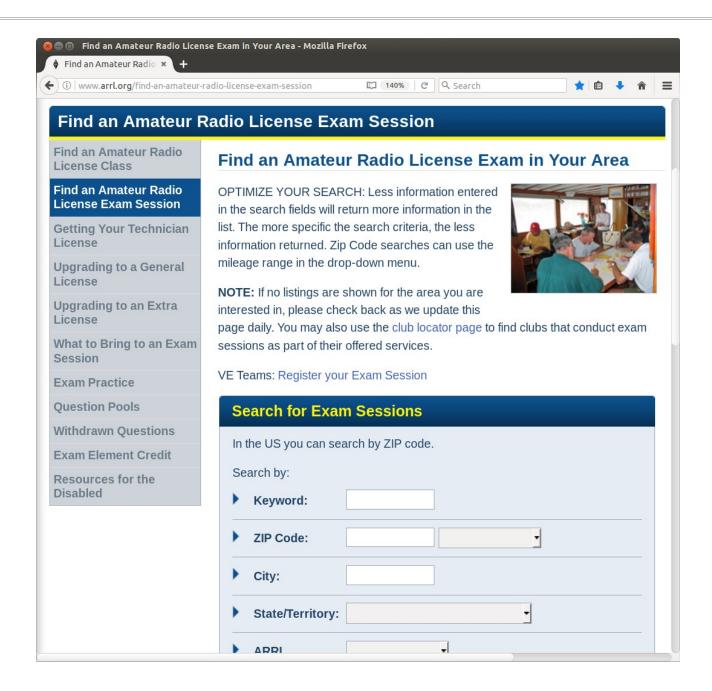
Technician class planning timeline

 week before before first class session [] get roster from RML librarian [] send welcome email to students on class roster week before before each class session [] update class agenda [] remind instructor of class session [] prepare class demonstration [] get ham biography from instructor for introduction [] remind students of the class session dav before each class session [] inform students of the class session agenda [] remind instructor of class session day of class session [] arrive early to set up tables and chairs in room [] set up laptop computer with large HDTV display monitor [] introduce instructor

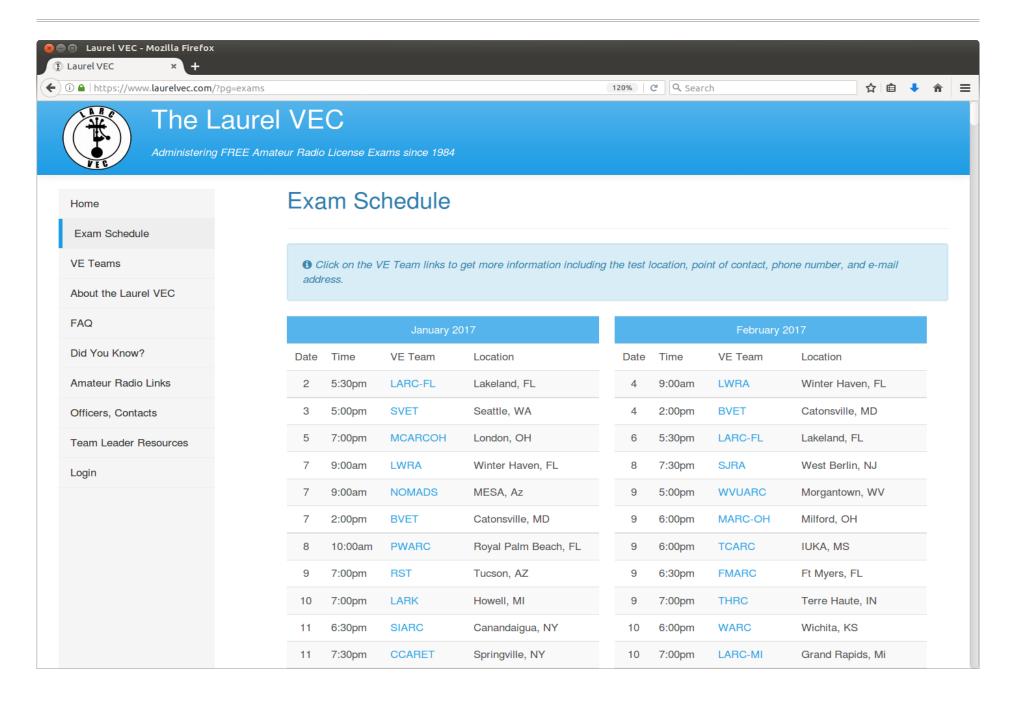
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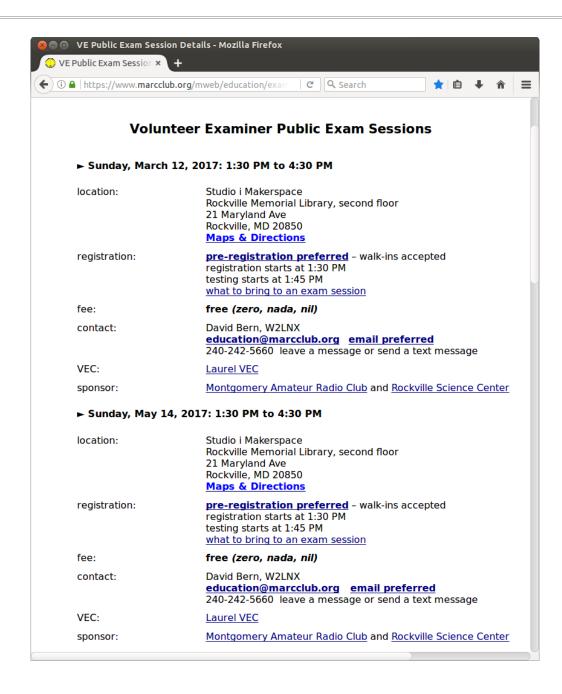
finding a ham radio test



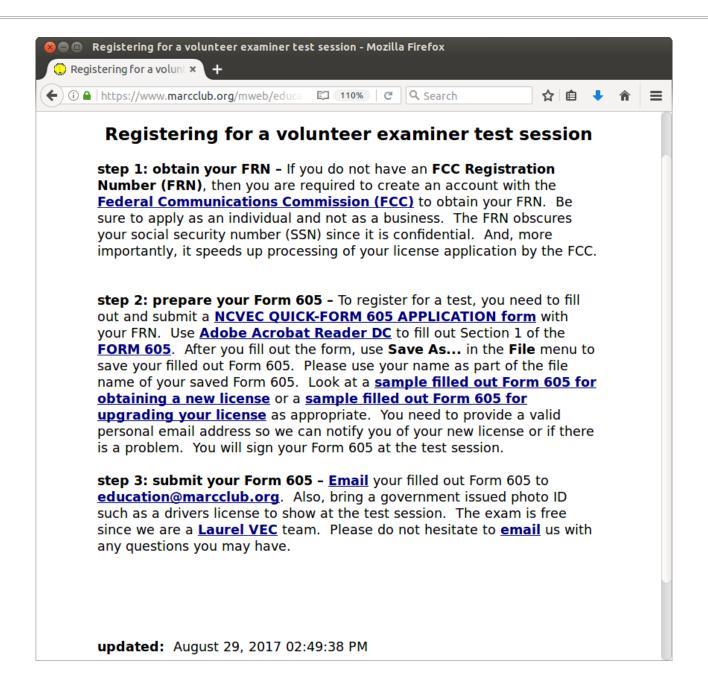
finding a ham radio test



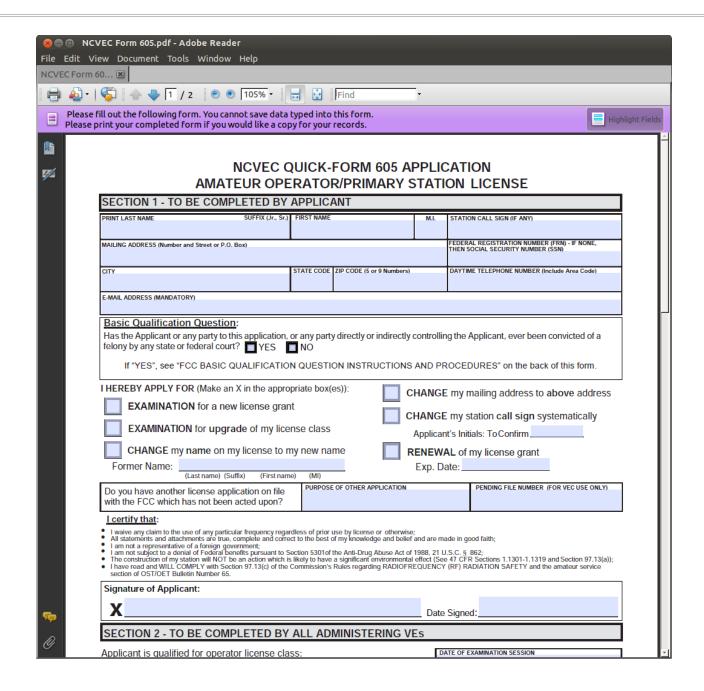
finding a ham radio test



registering for a ham radio test



registering for a ham radio test



Laurel Volunteer Examiner Coordinator

- all volunteers
- administering free amateur radio license exams since
 1984
 - member of the <u>National Conference of Volunteer</u>
 <u>Examiner Coordinators</u> (NCVEC)
- Chairman of Laurel VEC Diane Zimmerman, AA30F
 - reports to the FCC
- 10 Area Coordinators
 - 167 Laurel VE teams in 34 states
- in 2016, Laurel VE teams administered 6,942 exams to
 5,216 applicants

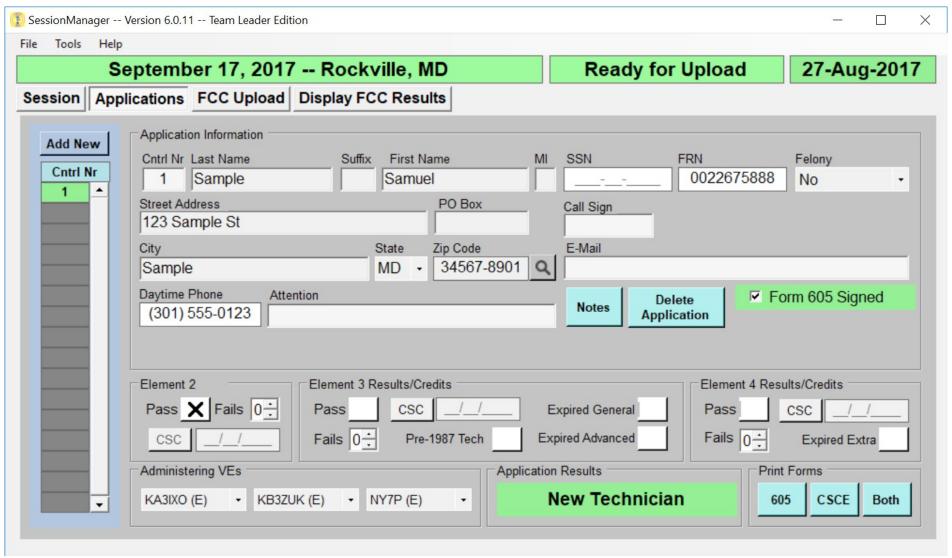
Laurel Volunteer Examiner Coordinator

- test generator Web site
- SessionManager test session software
- VE team manager Web sites
 - support documents and forms
- online upload of test session to FCC database
- Google group announcements and discussions
- email and telephone

MARC-MD1 Laurel VE team

- 30 MARC volunteer examiner team
 - 80/20 rule
- David, W2LNX VE team leader
 - reports to Area 3 Coordinator Bob Rose, AA3RR
- Dave, W3DKL deputy VE team leader
- 6 volunteer examiners 3 proctors, 3 test graders
- administered 16 test sessions for 288 applicants since
 2014
- provide calculators, pens, pencils, erasers and scrap paper
- recruit new volunteer examiners from applicants that pass Extra Class test

SessionManager applicant page



team leader enters applicant data from submitted Form 605

test session equipment



filled in Form 605 and two CSCEs are printed at test session

generated Form 605

SECTION 1 - TO BE CO	OMPLETED BY	APPLIC	ANT		
PRINT LAST NAME	SUFFIX (Jr., Sr.)	FIRST NAME		INITIAL	STATION CALL SIGN (IF ANY)
Applicant MAILING ADDRESS (Number and Street o	r P.O. Box)	Ham R		R	FCC REGISTATION NUMBER (FRN) If no FRN, then SOCIAL SECURITY NUMBER (SSN)
123 Applicant St					0022675888
Applicant		MD	345678901)	(301)555-0123
-MAIL ADDRESS (OPTIONAL)					
Have you ever been co If you answer "Yes", then you will he You MUST answer this question if y You DO NOT have to answer this qu	ave to submit an explana ou are applying for a ne	ation to the FCC	before they will process your existing to upgrade your existing	our applica	ation. (See provided instruction sheet.) or requesting a call sign change.
EXAMINATION for a EXAMINATION for a CHANGE my station Applicant's Initials:	pgrade of my lic	cense class	CHAN	IGE my	of my license grant. y mailing address to above address y name on my license to my new nar s:
		PURPOSE	OF OTHER APPLICATION		PENDING FILE NUMBER (FOR VEC USE ONL
Do you have another license a with the FCC which has not be					
I am not a representative of a fo	reign government:				wise; elief and are made in good faith;
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applicant and volunteer examiners sign filled in Form 605

generated CSCE

Laurel Ama Date: Sep 17, 2017 VE Tear			Rockville, MD	
Date. OF 11, 2011 VB Foot	II I (dillo)	Test site.	TROUNTING, IND	
The Applicant Named Below Has Passed		The Applicant Is Eligible To Receive		
The Indicated Elements:		The Indicated Class License:		
Technician ####################################	##### 1#### ##### ####	Technician ####################################	THEFT HEETE	
This certificate is not valid unle	ss all elements other than th	e ones earned are crossed out. T	his certificate is valid for 365	
days from the date of issue. Ple	ase retain this certificate for	your records.		
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applicant and volunteer examiners sign filled in CSCE

test session results

- VE team leader uses SessionManager to encrypt test session file
- encrypted test session file is emailed to Bob, AA3RR
- Bob uploads test session file to the FCC database
- FCC database returns a results file
- Bob replies to team leader with FCC results file
- team leader notifies test applicants of their callsigns
 - typical turnaround time is one business day

test session planning timeline

•	beginning of year
	[] add test dates to Laurel VEC Web site
	[] add test dates to ARRL Web site
	[] invite volunteer examiners to volunteer for the year
•	month before
	[] ask for more volunteer examiners
	[] remind volunteer examiners of test session
	[] start accepting submitted Form 605s from applicants
•	week before
	[] remind volunteer examiners of test session
	[] remind applicants of test session
•	day before
	[] remind volunteer examiners of test session
	[] remind applicants of test session
	[] enter applicant information into SessionManager

test session planning timeline

	day of test session
	[] update SessionManager with latest software version
	[] update SessionManager with latest FCC amateur radio information
	[] arrive early to set up tables and chairs in room
	[] enter walk-in applicant information into SessionManager
•	day after
	[] email test session file to area coordinator
	[] mail paperwork by Priority Mail to area coordinator
•	week after
	[] wait for results from area coordinator
	[] notify applicants of their callsigns
	[] thank volunteer examiners

agenda

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 - Elmer Lending Library
 - mentoring young hams
- conclusions

Elmer Lending Library



TS-430S



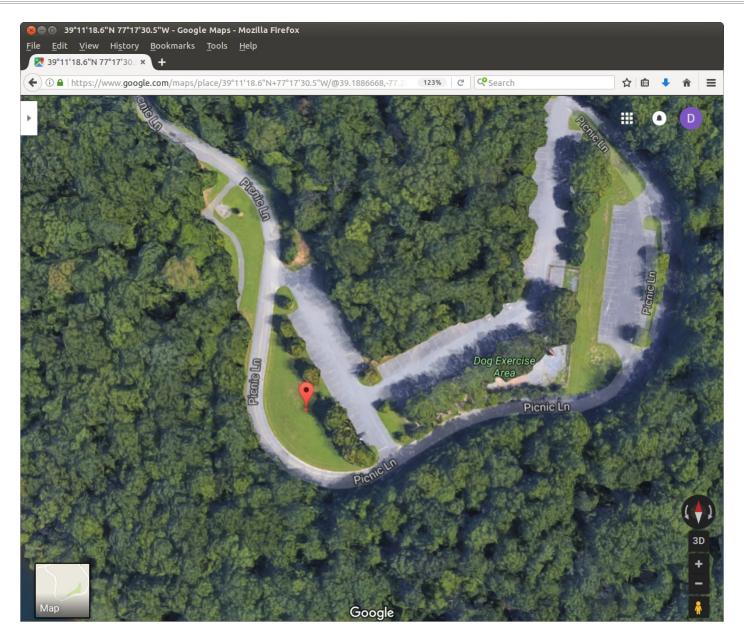
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mentoring new hams



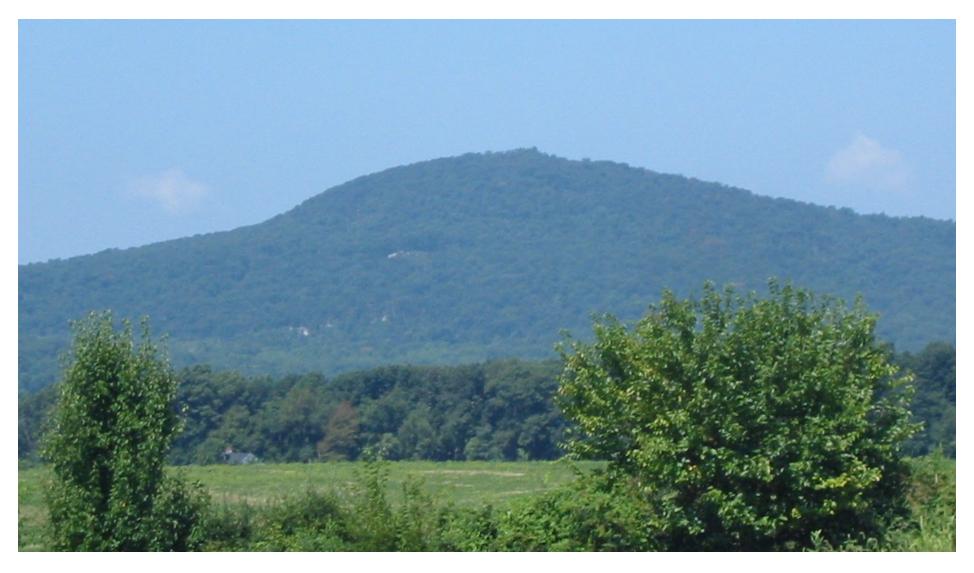
Jamison, K3SNR and Charlie, KC3HTB at MM 15 of the Marine Corps Marathon

mentoring new hams



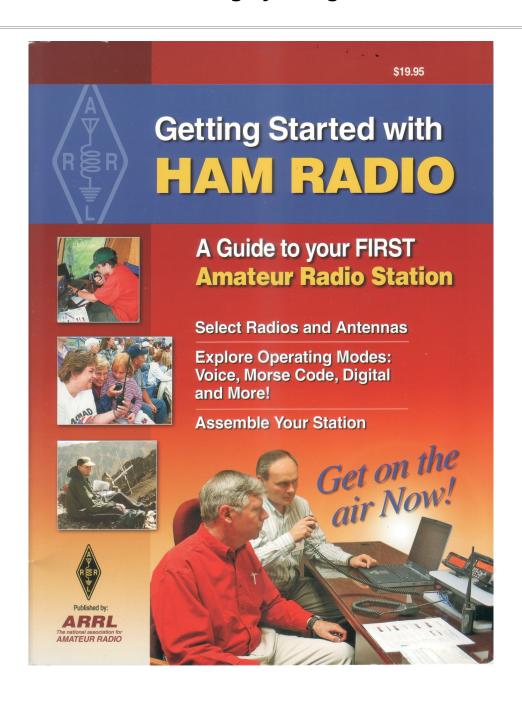
Black Hill Region Park, Boyds, MD

mentoring new hams



Sugarloaf Mountain, Dickerson, MD

mentoring young hams

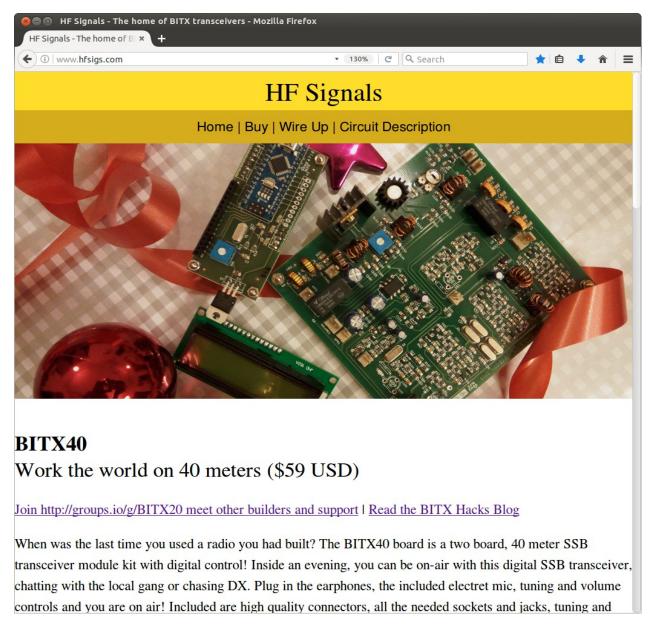


mentoring young hams



inexpensive USB software defined receiver dongle

mentoring young hams



inexpensive 40 m low-power transceiver semi-kit

KID Museum ham station



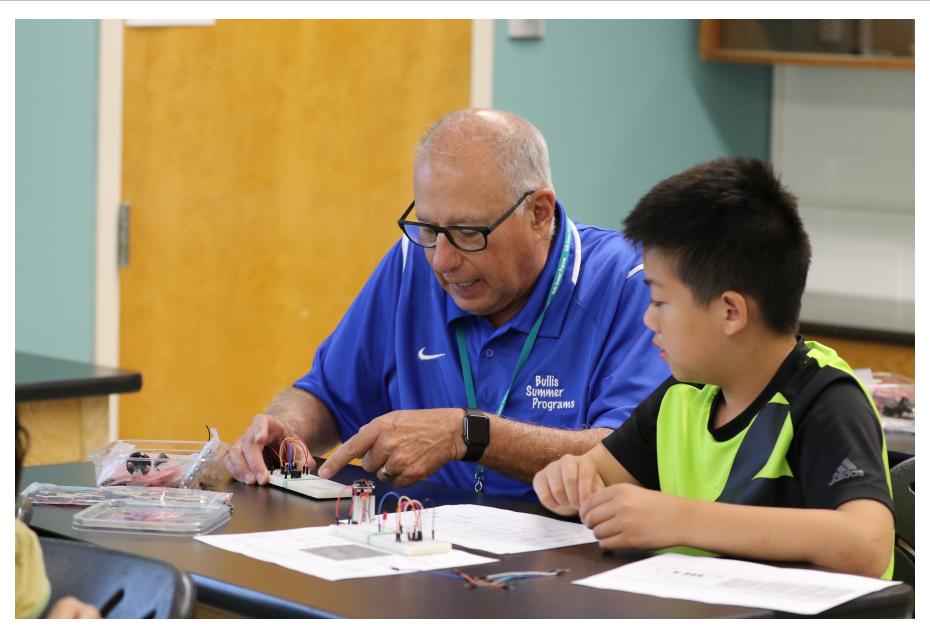
David, W2LNX is showing Joshua, KC3ICM how to use the Ten-Tec Omni V

KID Museum ham station



Jack, KC3JML and Joshua, KC3ICM operating digital modes

Bullis School Summer Program



Richard, WN3R instructing a camper in the Electronics Workshop camp

a success story



Aaron Solomon, KB3MLM UMD Biological Sciences Senior Named 2017 Marshall Scholar

another success story



Valerie Lehmann, KC3HPJ
The ARRL Foundation General Fund Scholarship

building a education and testing team

- ◆ take ownership make it happen
- you will get volunteers if you announce an event with who, what, when, where and for how long
- accept organizer volunteers delegate responsibility
 and authority but follow up
- thank your volunteers give credit where credit is due
- organizing events and activities takes twice as long as you think it would
- it's a numbers game you need to do this a lot
- follow up inquiries and email within 24 hours
- invite and educate parents of children

thank you

- Richard, WN3R mentor and builder of public ham radio stations
- MARC instructor team
- MARC volunteer examiner team
- Bob Rose, AA3RR Laurel VEC Area 3 Coordinator
- Ray Andrews, K9DUR SessionManager developer
- Cory Johnson, NQ1E VE Manager Web site developer
- Scott Zimmerman, N3XCC, Jon Rick, KK6NLW and Cory Johnson, NQ1E — Laurel VEC Web sites managers
- Bob Ekman Rockville Science Center
- Rockville Memorial Library

conclusions

- this important work for the amateur radio community
- this is a way of sharing and giving back

In Memoriam



Prof. Uchechukwu "Uche" Abanulo, KC3ARX 1981 — 2016

Questions



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