

Victor Amateur Radio Association (W2VTM)

Amateur Radio Activities

What do Hams do?

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[ARRL Website - Intro to Amateur Radio](#) | [FAQ Page](#) | [Glossary](#) | [Acronyms](#)
[Other Info Sites](#)

Activity	"Buzzwords"	Web Sites	Brief Description	Special Equipment or Requirements
Alternative Energy Operation	solar, wind, water power	ARRL	Operating amateur radio stations on non-commercial (alternative) and emergency power sources	Alternative energy source (solar, wind, water, etc.)
Amateur Television (ATV)	ATV, television	ATNA , BRATS , BATC	ATV can transmit full-motion video over the air compatible with standard television.	ATV Transmitter, receiver, television
Antenna Design & Building	Antennas, Numerical Electromagnetic Code (NEC), Quads, Beams, Verticals, etc.	NEC Archives , Autek Research , MFJ	The design, construction and testing of homebrew antennas.	Antenna Modeling Software, Antenna analyzer
Antique Radio Collecting & Repair	Boat Anchors, antiques	NJ Antique Radio Boatanchors	Collecting, repairing, and maybe selling old broadcast receivers and other radios.	Manuals, patient spouse
Amateur Radio on International Space Station (ARISS)	ARISS, SAREX, NA1SS	see Space	Students talk with astronauts aboard the Space Station using amateur radio; Also regular ham contacts with astronauts	see Space

Astronomy, Radio	Radio Astronomy, SETI	SARA , SETI	Amateur radio astronomy, and the use of radio to "Search for Extraterrestrial Intelligence" (SETI)	Large-dish antenna, or home computer for SETI
Automatic Position Reporting System (APRS)	APRS, GPS, digital	APRS , findU	Use of the Global Positioning System (GPS) to provide one's location over the air, which can then be plotted on a map on a computer screen.	GPS receiver, laptop helpful
Awards ("Certificate Chasers")	Awards, Paper Chaser, Certificates, Wallpaper, SLY, DXCC, WAC, WAZ, WAS, County Hunters, 10-X / 10-10	ARRL CQ	Collecting awards and certificates for various achievements, such as Worked All Continents (WAC), Zones (WAZ), States (WAS), Counties , club members, etc.	Scrapbook or plenty of wall space; A good logging program which handles awards is helpful
Backpacking Operations	Backpacking, QRP		Backpacking radio/antenna to remote locations to operate, usually low power, usually on mountain peaks, but also to active " grid squares "	Backpacking equipment, light-weight radio and antenna; Good physical condition
Ballooning, High Altitude	Edge of Space, Balloon, Amateur Television (ATV)	EOSS	Use of high altitude balloons, reaching to the edges of space, for experiments and use of Amateur TV , long-distance contacts, tracking , etc.	2-meter, Amateur TV , and/or Slow Scan TV equipment; Ballooning software
Civil Air Patrol (CAP)	CAP, aircraft, flying	CAP CAP links	Assistance in locating downed aircraft and other support functions.	Radio which can be modified for CAP frequencies

Classic Amateur Radio Equipment	Boat Anchors, antiques, classic rigs, vacuum tubes	antique wireless	Collecting, repairing, and use of old two-way radio equipment.	Manuals, patient wife
Clubs	ARC (Amateur Radio Club), ARA (Amateur Radio Association)	ARRL qsl.net	Membership and participation in radio clubs.	Social skills :)
Coast Guard Auxiliary	USCG, Auxiliary	CG Aux	Assisting the United States Coast Guard in various functions, including communications	Love of water helpful; Coast Guard provides training
Community Service (see also Emergency Management , Public Service)	Community Service, walkathon, bikeathon, parades	ARES RACES	Use of amateur radio in support of community activities, such as charity events, civil celebrations, etc.	Mobile or handheld amateur radio equipment (typically VHF/UHF)
Contesting	Contest	ARRL CQ SM3CER	Trying to communicate with as many other stations as possible.	Log book or computer, Contest Calendar , rules of contest
County Hunting	MARAC, County Hunters	MARAC	Attempt to work hams in each county of each state	HF Radio, County List
Digital Modes	Packet, PACTOR, AMTOR, PSK, Clover, RTTY, Olivia	AC6V List TAPR , HAL , PSK31 , Olivia	Digital operating modes that do not use voice	TNC/Modem, Computer, Software
Direction Finding (DF) & Tracking	Amateur Radio Direction Finding (ARDF), DF, Fox Hunt, Homing, Radio Direction Finding (RDF), T-Hunt, Tracking, Triangulation, SAR	BMG Homing In Projects PSRDF IARU Reg 1	Locating a transmitter using direction-finding techniques. Useful for Search & Rescue (SAR), Balloon tracking, and "Fox Hunting" or "Transmitter Hunting" (a competitive game	DF Antenna (can be homebrewed), radio

			where participants compete to be the first to find a hidden transmitter).	
Distant Stations (DX)	DX, DXCC, DXCluster	grz dx dx.qsl.net DX Cluster	Trying to work as many stations in distant and remote locations as possible. "DXCC" refers to working 100 countries or more. An on-air packet network called DXCluster provides "spots" of rare stations.	Amateur or Shortwave Radio
DXpeditions	DX, DX Expedition	NODXA Daily DX	An expedition to a remote location where few or no amateurs already live in order to permit other hams to "work" a new country.	Lots of money & time off, Financial Sponsor, Permission from foreign country
Education	Elmer	ARRL EAD K8ZT's Teachers Resources	Teaching others, especially school children, about amateur radio, and science/electronics in general, often leading to the earning of a license	Teaching skills, text books
Emergency Communications	ARES, RACES, Field Day EMCOM, EMCOMM	links ARES RACES	Using amateur radio to provide backup communications during emergencies and disasters, such as floods, storms, etc.	Handheld radio, battery operation
Emergency Management (see also Community Service , Public Service)	OEM, Emergency Management, Civil Defense, ARES, RACES	links ARES RACES FEMA EMWIN	Planning for and assisting in emergency preparedness for state, county and local governments.	Handheld radio, battery operation

Extraterrestrial Intelligence Search	SETI, ET	SETI SETI@Home	Searching for signs of intelligent extraterrestrial life through detection of radio signals	Extremely sensitive antenna, or your desktop PC (see SETI@home)
Famous Hams	Famous hams	N2GJ	Collecting QSL cards from famous hams	HF radio, or VHF radio and a lot of traveling
Foxhunt (see Direction Finding (DF) & Tracking)				
Hamfest (Flea Market)	Hamfest, flea market, auction, swapfest	ARRL SNJ/EPA/DEL	Flea markets where you can buy or sell used or new equipment, supplies, books, etc.	Pocket money, free Sunday mornings (early!)
HF Fax (Facsimile)	HF Fax	HF-Fax	Sending/Receiving faxes via HF radio	HF radio, modem or PC with sound card
Homebrewing & Kits	Kits, home built, homebrewing	NJQRP	Building one's own amateur radio equipment from scratch or from kits. Often involves original designs.	Electronic Test Equipment, Junk Box
Hurricane Tracking	Hurricanes, weather	watch_net maritime frequencies	Tracking hurricanes & storms, providing health & welfare services	HF Radio, Phone Patch useful
Interference	EMI, EMC, RFI, TVI	ARRL	Tracking down, isolating and suppressing interference from/to amateur radio equipment (and others)	Good Interference handbook , direction finding equipment, test equipment
Internet Linking	Internet Relay Linking Project (IRLP), EchoLink, eQSO, WIRES-II, Voice over Internet	EchoLink eQSO IRLP.net WIRES-II ARRL Book	Use of the Internet to relay amateur radio calls around the world, creating networks linked by VoIP	Internet access, Radio (typically 2-meter)

	Protocol (VoIP)			
Islands On The Air (IOTA)	Islands, IOTA	RSGB	Contacting as many different islands as possible	HF radio
Light, Modulated Light DX	Optical, Laser	VK7MJ	Using optical light to communicate at distances over 100miles	Light source & sensitive receiver; Mountain peaks helpful
Lighthouses	Lighthouses	ARLS	Operating from, and making contact with other lighthouses and lightships around the world.	HF radio
Low Power Operating (QRP)	QRP	NJQRP , NORCAL , QRPARCI	Transmitting using very low power (typically less than 5 watts). Usually uses Morse code.	Patience
Maritime	Maritime mobile, /MM	maritime	Monitoring and communicating with ships at sea using amateur radio, including distress calls.	HF radio
Meteor Scatter	Meteor Scatter	6m world IARU	Bouncing radio signals off ionized trails left behind by meteors	High gain steerable antennas
Microwave Communications	Microwave, Line of Sight	RSGB , San Bernardino	Communicating with or experimentation with microwave band equipment	Microwave test equipment, components
Military Affiliate Radio (MARS)	MARS, Army, Navy, Air Force	MARS links	Health and welfare communications support to the military.	Radio which can be modified for MARS frequencies
Military Radio operating/restoration	Military, AN/SRR, AN/URC, AN/ARC, RT-xxxx, etc.	one-electron	Collecting, restoring and operating old military radios, especially WW-II vintage.	Vacuum tubes, space, test equipment, hamfests

Missionary Support	Missionary	ARMS , MARA , NARF , RadioMinistries	Provide HF communications with overseas missionaries	HF radio
Mobile Operations	Mobile		Communicating via amateur radio while mobile (in car/truck/RV, aircraft, ships, etc.). Also, installation and testing of mobile stations.	Portable amateur radio, mobile platform (car, truck, RV, plane, motorcycle, etc.)
Moonbounce	EME (Earth-Moon-Earth)	W6/PA0ZN	Communicating between amateur radio stations by bouncing one's signal off the moon.	Very large high-gain antennas
Morse Code, Telegraph	CW, Code, key, keyer, bug, straight key	FISTS , W1TP Telegraph	Using telegraph keys to send "dits" and "dahs" to communicate. Also includes collecting old wireless and telegraph keys.	Morse code key
Museums	Museum, collections, antique radios	TPN's list	Collecting and displaying antique amateur radio equipment; Operating amateur radio stations from museums for the public.	Museum, radios
Museum Ship Radio Clubs	Museum Ships, Museum Ship Special Event	BNJARS Museum Ships , USS Salem	Operating radio stations aboard museum ships; Restoration of museum ship radio rooms	Museum Ship, interest in Navy/Marine radios and equipment
Narrow Bandwidth Modes	QRSS (very slow speed CW), Coherent CW (CCW)	QRSS , ON7YD CCW , WOCH	Communications using very narrow bandwidths (sub-1 Hz) at extremely low data rates	PC with sound card, special software

Official Observer	OO, enforcement, "frequency police"	ARRL Field Org.	Individuals appointed by the ARRL section managers to voluntarily observe amateur on-air operations and notify offenders of operating/technical irregularities before they come to the attention of the FCC (Self Regulation)	Amateur Radio station
Packet Radio	TNC, AX-25, Clover, PSK, DX Cluster	TAPR DX Cluster	Using digital communications, where information is transmitted in short packets of data. DX Clusters tell others when unusual stations are on the air.	TNC, computer
Personal Conversations	Rag Chewing		Just passing the time talking with others, either friends or strangers, often in distant or exotic locations.	Lots of time or long commute
Propagation	HF Propagation, MUF, Ionosphere, Gray Line	KA0JPM	Calculating the optimal times, frequencies, and paths for long distance communications	Access to solar data
Public Service (see also Community Service , Emergency Management)	ARES, RACES	ARES RACES	Using amateur radio to assist the general public, such as providing communications to civic organizations, emergency management/police /fire, etc.	Portable radio, jump kit of essential equipment, some training preferred
Radio Teletype (RTTY)	RTTY, teletype, digital, TNC	DXZone links	Communicating using	Teletype and modem, or

			teletypewriters (or modern computer-based equivalent) instead of voice.	computer and TNC (Terminal Node Controller)
Recreational Vehicle (RV) Operations	RV, RV Caravan, Mobile Operation, International RV Service Net	Wally Byam Caravan Club RV Web Network Pacific RV Service Net RV Radio Network	Use of Amateur Radio to communicate while RV camping, touring in an RV, or participating in an RV Caravan	RV with mobile radio setup
Remote Control	RC, remote controlled planes, remote control vehicles		Similar to regular remote controlled devices, but using amateur radio frequencies with greater power/range	Model plane/boat/etc., Remote Controller
Repeaters	Repeater, Controller, Frequency Coordinators	ArtSci directory ARRL directory	Repeaters permit communication over increased distances by retransmitting received signals on another frequency at higher power using high-gain antennas elevated high above the ground.	Repeater, Controller
Satellite Communications	Satellite, OSCAR	AMSAT	Communicating with other hams using amateur radio satellites as an overhead repeater.	High gain, steerable antenna
Scouting	JOTA, Boy Scouts, Girl Scouts, radio merit badge	ARRL BSA Merit Badge	Contacting scouts across the country and around the world (Jamboree On The Air). Boy Scout Radio merit badge.	Registered with BSA to be a Radio Merit Badge Counselor or Girl Scout equivalent
Search and Rescue (SAR)	SAR, CAP, Mountain Rescue	Area-Ham.org SARBC Civil Air Patrol NASAR 1SRG	Searching for lost hikers, children, boaters, downed pilots, etc. Amateur radio can play	Radio equipment, SAR training, Emergency Communications

			critical communications roles	training, EMT/Medical training
Slow Scan Television (SSTV)	SSTV, TV, image, scotty	KB4YZ J Langners WB6FZH/KH6 HF-Fax	Transmission of still photos or images.	Video source (camera or scanner), PC, special hardware or software
Solar Activity	Solar flare, solar flare, A index, K index, CME, sunspots	spacew , Quick Guide	Use of solar activity reports to calculate propagation	Internet access
Space Communications	Space Shuttle, Mir, ISS, ARISS, SAREX, ISSpedition	AMSAT , ARRL , MAREX , NASA , launch info	Use of amateur radio to communicate with astronauts and cosmonauts aboard manned spacecraft.	High gain antenna
Special Events	Special event station, commemorative station	ARRL , CQ (Sp Evt Menu)	Radio station set up to celebrate a unique event, activity, anniversary, etc., usually in a public place	Radio station that can be set up at event site
Sporadic E-Layer	Sporadic-E	Defined Reference	VHF/UHF communications using refractions from the E-layer of the ionosphere (which occurs infrequently and sporadically)	High gain VHF/UHF antenna; radio
Spread Spectrum	SS, spread spectrum, Hedy Lamarr	TAPR , KC6YJY	Using "spread spectrum" techniques to optimize bandwidth utilization and greater immunity to interference	Special SS equipment and wide bandwidth radio
Teaching	Elmer, school clubs, volunteer instructor	ARRL , W5YI	Teaching others about amateur radio so that they may obtain their own	Teaching skills

			license, or introducing kids to the hobby. An "Elmer" is an amateur radio mentor.	
T-Hunt (see Direction Finding (DF) & Tracking)	Transmitter Hunt			
Traffic Handling (message traffic)	Traffic, Nets, National Traffic System (NTS), Official Relay Station (ORS), RadioGram	K2UL's website ARRL NTS NTS Canada	Amateur radio stations that relay voice or data messages, between amateur stations or between hams and non-hams (public service)	HF radio station
Very Low Frequency (VLF) Operation	VLF, Loafer	ARRL VLF	Communications using frequencies below the AM broadcast band.	Very long antenna
Volunteer Examiners (VE)	VE, VEC, Exam	NCVEC , ARRL , Laurel , W5YI List of all VECs Delaware Valley	VE's conduct amateur license exams to others on a volunteer basis. This is the only way to get a license today.	VE certificate
Weak Signal Digital	JT65, WSJT (Weak Signals by K1JT), EME, Meteor Scatter, Tropo Scatter	WSJT , Olivia	Using digital signal processing techniques to communicate at signal levels less than that required for CW or voice. Used for meteor scatter, EME, VHF/UHF, etc., including HF communications where the signal is below the noise floor.	VHF/UHF SSB radio, high gain antenna, PC with sound card, special signal processing software

Weather (WX)	Weather, SKYWARN, EMWIN, Hurricane Watch Net , Maritime Mobile Net, Seafarer's Net	Coast Guard Skywarn EMWIN	Weather watching & reporting on land (SKYWARN), maritime/boating, and Emergency Management (EMWIN)	HF Radio, Weather Training
Weather Satellites	WEFAX	HF-Fax	Receiving weather satellite images	HF Radio, modem or PC with sound card

Who was the first "amateur" radio operator? Einar Dessau of Denmark is regarded as the first ham radio operator with his transmission using a shortwave radio set to communicate with a government radio post six miles away on 18 March 1909. However, very little information is available on Einar Dessau or this event, and web searches result almost exclusively in a short blurb noting this event as a "day in history."

Web Sites Providing Introductory Information on Amateur Radio

[American Radio Relay League \(ARRL\)](#) - National organization for Hams (1-800-32-NEWHAM)

[ARRL Introductory book](#) "Now You're Talking"

[Exam Pool Questions & Answers](#)

[How Stuff Works](#) - General information on the hobby

Other Web Sites Providing Amateur Radio Links

[AC6V's Gateway to Ham Radio](#) (incredible list of links & reference info)

[ARRL Site Index](#) (list of topics on ARRL's web site)

Want to add a category or suggest a web site for this table? [Please e-mail your suggestions!](#)

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Go Back

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