

Ham Radio Acronyms and Abbreviations annotated by W4ZST

see AC6V.com 'glossary' and tinyurl.com/RC-acronyms

There are many abbreviations and short-cut initials or words that we use in Amateur Radio. Many more seasoned hams use these freely without thinking about the newcomer, who invariably is confused by our 'HamSpeak' language. Fear not, for you will get used to it in time and here is a list that may help the situation some.

Antenna/Aerial/Vertical/Horizontal/Skyhook/Dipole/End Fed/Off-Center Fed

Yagi/Beam: Reflector (rear), Driven Element (feed) and Director(s)

AF audio Frequency (sound waves) / RF Radio Frequency (electromagnetic waves)

ELF/VLF/LF/MF/HF/VHF/UHF/SHF/EHF

AGC/AVC/ALC Automatic Gain (RX), Volume (AF), Level (TX) Control

Modes: CW Morse Code, Continuous Wave, No modulation carrier /AM Amplitude Modulation

/FM Frequency Mod /PM Phase Mod /SSB Single Side Band (USB)(LSB)

(DSB) is amplitude modulation with suppressed carrier resulting in narrower bandwidth

/RTTY Radio Teletype ('Ritty') either FSK (frequency shift keying) or AFSK (audio fsk)

/PSK (Phase Shift Keying) /BPSK (binary psk)/ WSJT (JT-65x, FT8, MSK, etc)

APRS Automatic Packet Reporting System (a subject for another presentation)

A fixed/mobile locator/contact/reporting system in general use. good for EM use

Alligator/Elephant: A station with (too) strong transmit and/or not so good receive

(also can be true of a repeater)

ATU/TU Automatic Tuning Unit, Antenna Tuner, Matchbox, Antenna Match, etc.

ATT: Attenuator

AZ Azimuth (radial direction) AZ-EL Azimuth Elevation (up/down direction)

used for general directions or rotators in particular

ATV Amateur Television, can be Slow Scan (SSTV) which is similar to FAX or Fast Scan

which is our recent analog television in contrast to DTV (Digital Television) the current

standard. Amateurs can use SSTV on HF and upper bands. Fast Scan only can be used

above 420MHz. There is some digital amateur TV being developed and in use now.

AWG American Wire Gauge. a standard for the diameter of wire that we use. e.g. 12 awg

Balun/UnUn Balanced to UnBalanced or Unbalanced to Unbalanced. Transmission lines are

unbalanced like coaxial cable (coax) or balanced like ladder/parallel/balanced/twin line

Balanced means the impedances in the conductors is equal between them and to ground

Unbalanced impedances (or currents) are unequal to ground

Devices to convert between balanced and unbalanced transmission lines

Bands we refer to our allocated ham bands either by frequency or wavelength, sometimes

indiscriminately and mixing in the same sentence, confusing the newcomer. We don't

do this on purpose but is just the normal ham-speak we've picked up from the old-timers

where the early usage was wavelength, both amateur, commercial and military.

e.g. the 20 meter band is from 14.000 MHz to 14.350 MHz with various segments set

aside for different license classes and for different modes (CW/Voice/etc)

Frequency and Wavelength are directly related by the formula $f \times \lambda = c$ where

c is the speed of light in meters/second. Frequency is in Hz (Hertz) or /sec and the

Wavelength is in meters. λ is the greek small letter L, universally used for wavelength.

Interestingly, only one band is actually correct, 6m is 50 MHz. All the others are

rounded off or approximations.

BFO Beat Frequency Oscillator. Older radios have this adjustable externally but it is used within any transceiver to produce or demodulate SSB and CW

Birdie an unwanted frequency heard in a receiver due to mixing products from the many oscillators inside the radio. designs try to minimize them. more prevalent in older radios

Bird A satellite to the satellite operating crowd

BNC One of the many coaxial cable connectors. A separate presentation is called for to really appreciate the various connectors like TNC, N, UHF (SO & PL), SMA, 7/16, C, SC, etc. Most used are the oldest type called UHF, although not good for or used at UHF. We say SO239 for the chassis mount socket connector and PL259 for the cable end mount mating connector. Some hams say "SO" and "PL". The PL259 is used with 1/4" cables like RG-58, larger like RG8X, and the 0.400" sizes like RG-8 and RG-213.

BreadBoard A term used now for constructing a test model of a circuit before committing to PC board making. Originated from early hams stealing the wooden kitchen breadboard to build their project receivers and transmitters. Many stayed that way rather than being built on a chassis or in a cabinet. OSHA would have a heart attack!!

Bug/Paddle (Single/Double)/straight key/keyer/wpm/HI-HI/ The bug is a semi-automatic mechanical CW key to produce dits automatically and dahs singly. A paddle is used with an electronic keyer to produce machine quality dits and dahs automatically when the paddle(s) are pressed from left or right. The keyer takes the mechanical input and produces perfect length and spaced dits and dahs for you. The sender is responsible for some character spaces and all word spaces. wpm is words-per-minute code speed HI-HI is CW laughter, some say it even sounds like it. See also F entries.

Break-In a method of transmitting CW by sending with the key and not having to PTT. Semi break-in usually has a longer hold time after transmitting than full break-in or QSK where the operator can hear the receiver between characters or words. In the days of traffic handling, it was used so that the transmitting station could be interrupted by the receiving station in case something was missed and needed to be repeated.

Buro/Bureau/lotw/others The QSL Bureau sends and receives QSL cards for you in bulk to foreign locations, saving on individual postage. A service to ARRL members. LOTW is the new on-line way to exchange contact info without the expense of postage, if both stations are participating. Awards can be done directly with lotw without paper cards. LOTW is 'logbook of the world' and is very popular and easy to use.

Bootlegger An illegal operator or station infringing on the amateur bands (or shortwave too)

Busted Call An incorrectly copied call sign that makes the QSO invalid

CAT Computer Aided Transceiver: A port on the transceiver (Serial or USB) to connect to a PC using 'CAT' software to control or monitor the transceiver functions. Many programs give complete control of all functions and you can put the transceiver 'under the table' if you wish. Examples are logging programs like N1MM, N3FJP, WriteLog and operating programs like Ham Radio Deluxe (HRD). Also most external SDR's connect by CAT.

California Kilowatt 'buzzword' for beyond the legal limit. Legal limit is 1500 Watts now but when it was 1000W, the terms 'gallon' or 'full gallon' were commonly used

Candy Store A ham radio store like HRO. Where you take your 'sweet tooth' for satisfaction!

Cans Headphones. also known as just phones or headsets.

CAP/POT/FET/JUG so many components we use have shortcut names like these for Capacitor, Potentiometer, Field Effect Transistor, Vacuum Tube (or just Tube or Valve in England Related are the many units of electrical quantities like volts for voltage, amps for current, ohms for resistance, impedance and reactance, Henrys for inductance, Farads for capacitance, etc. And they all have one or two letter abbreviations that we also use.

CPS cycles per second. Now we use Hertz Hz for frequency but you will see older radios marked in cycles or cps or kilocycles, megacycles and even kilomegacycles from before the SI abbreviations became to be used universally. More on those at 'Mega' following

Chirp an unwanted change in tone of the CW signal. Indicative of not enough power supply capability or drifting frequency determining components in the oscillator circuits.

Coax Coaxial cable. Transmission line constructed 'coaxially' which is a center conductor surrounded by a concentric shield of braid, foil or even solid conductor material. related: RG numbers; from Military designations originally, now they seem to just be made up or copied. There are hundreds of RG types and many other manufacturers are now using their own designations instead of RG, e.g. LMR 400, LDF4-50, etc. Coax is a subject broad enough for its own separate presentation too.

Cross-Band Contacts made where one station is transmitting on one band, receiving on a different band with the other station receiving and transmitting on the opposite bands. Very common with the satellites and see also the 'Repeater Speak' acronyms and abbrs.

Double When both stations transmit at the same time so that neither knows what the other said. Common on both HF and VHF, especially with repeaters

DSP Digital Signal Processing. Conversion of an RF signal into two audio (or higher) digital signals with an exact 90 degree phase difference where they can be treated mathematically to demodulate (or modulate), reduce noise and other exotic processes. DNR is digital noise reduction, DBF is digital bandpass filter, etc. Some of the newest radios on the market are now DSP based and have little of the analog circuitry we had been so used to in radios for many years. Again, another presentation opportunity topic.

DX Distant stations, usually meaning another country than your own. DXCC is an award from ARRL for working 100 DX countries. The definition of 'country' is pretty loose in amateur radio and the total available is around 340 or so. Big bragging rights if you are in that circle, the DXCC 'Honor Roll'. Many have done it and many are always trying. DXpedition is a group of hams going to an entity that has few or no hams, putting it on the air for others to work. A pretty noble gesture don't you think? Can you imagine how expensive it is to get to an uninhabited island off the coast of Antarctica, set up stations and operate for a week or so in extreme conditions just so your friends and other hams can 'work' that DXCC country? Read about them in the magazines.

E skip signals reflected off the E-layer of the ionosphere. There is also F-layer propagation, double-hop, tropospheric, ionospheric, auroral reflection and other modes. The study of propagation is quite interesting and there are many who do that and report their info.

Farnsworth a method of sending Morse code for learning where the characters are sent at a rate of say 17 words per minute but the word speed is slower, say 5 wpm. With this method increasing your copying speed is considered easier since the characters (letters, numbers and punctuation) will sound the same. Highly recommended as the way to go and most code study these days does rely on the Farnsworth method.

Fist what old timers call your CW sending sound or style. Old time telegraphers could tell who was actually sending by the sound of their 'fist'. Some WW2 CW intercepts of attempted espionage were stopped because the receiving operator knew that the sender wasn't the genuine operator because it wasn't the sound of his 'fist'. All you have to do is listen to straight key or bug sending on the HF bands to hear many different fists. Not so much with paddles and keyers although some operators have idiosyncracies!

Ground whether station ground, chassis ground, electrical ground or earth ground, it is a connection (hopefully) to a conductor at zero potential (voltage) for the purposes of protection from electrical shock, lightning induced currents and noise problems.

Grids 1 degree x 2 degree rectangles overlaying the earth, defined by latitude and longitude
Used extensively by VHFers and more and more on the HF bands too. There are VHF awards for numbers of grid squares worked and ARRL is introducing a new grid 'competition' on HF for 2018 mentioned in the latest QST magazine

Jerry Rig or Jury Rig a commonly used and mis-used slang term for 'non-traditional' methods of circuit construction, station layout, antenna supports and so on. WW2 origin?

Lid No, not the cover of a container, but our term for a bad operator, CW, Phone or Digital makes no difference. Overdriving power, microphone, bad operating practices, etc. You will hear them all on the bands. Fortunately they are not so prevalent.

Linear An amplifier that faithfully reproduces its input without distortion. An amplifier must be linear (i.e. class A or AB 1 or 2) to produce good SSB signals. A class C non-linear amplifier can be used for CW or FM modes. Also known as PA or power amplifier, whether an intermediate or final stage of a transmitter or amplifier.

Metric Prefixes: Giga, Mega, Kilo, 0, Milli, micro, nano, pico, femto are used extensively in Ham Radio. pico is 10^{-12} and before the SI system was in wide use, capacitors were marked and listed as micro-micro farads or mmf. These prefixes were covered in the license study manuals. One which is not a multiple power of 3 is centi or 10^{-2} or 1/100, used in centimeters mostly and very common.

Giga 10^9 , Mega 10^6 , Kilo 10^3 , 0, Centi 10^{-2} , Milli 10^{-3} , Micro 10^{-6} , Nano 10^{-9} , Pico 10^{-12}

Motor-boating A problem signal that had a putt-putt sound overlaid, usually caused by an undesirable feedback or internal oscillation

Multi-mode/All-mode A radio that can do all the typical receive and transmit modes like CW, SSB, AM, etc. in contrast to a single mode radio like an FM mobile or handheld transceiver. Radios with HF, VHF and UHF capability are called 'DC to Daylight'

OM/OB/OT/YL/XYL Old Man/Old Boy/Old Timer/Young Lady/Ex Young Lady (married)

Ping Jockey a meteor scatter enthusiast or the internet chat page for meteor scatter. Meteors (shooting stars) can and do leave ionization trails that amateurs can bounce signals off of and work greater distances than they might on typical ground or sky wave. Very popular during the many named meteor showers over the year and these days routine with just typical daily meteor numbers using the new digital modes.

PTT Push-to-talk. The usual method of causing your transceiver to change from receive to transmit mode. The microphone button or switch is called the PTT switch. Can also be a hand switch or computer controlled by one of the software programs mentioned previously. In contrast to break-in for CW or VOX for voice. VOX is Voice Operated Transmit where there is an audio circuit in the radio that picks up your voice when you talk and automatically puts your radio in transmit. Folks used to frequent (or even infrequent) cussing, coughing spells, screaming kids, etc. should probably avoid VOX operation. You can pretty well tell when someone is using it on the air.

Pull the plug Shut down the station, quitting for the day or night, off the air, etc.

Phonetic Alphabet Used to help make the communication clear and understood. Like Q-sigs below, some folks really get upset when one doesn't use the 'official' phonetics. They have changed since the WW2 era phonetics that some old-timers still use. It seems to be an amateur tradition to make up funny or descriptive phonetics for your call sign or name when you use them on the air but still some object. They probably won't want to work me. I do try to use standard phonetics but if they don't get through after two tries, I've never had anyone ask me to re-say my phonetics after I use Zanzibar-Santiago-Tokyo instead of Zulu Sierra Tango. Somehow Zulu comes over as Sierra and many don't hear Sierra as 'S' either. I use Sugar much more often. as they say, YMMV!!

Q Signals; Originally made up for short hand CW standard messages to save having to send out commonly used phrases or questions. Still used extensively on CW and many operators used to using them for CW carry them over to voice conversation. Some folks don't like that use and complain but the use is pretty overwhelming and isn't going to stop. It's just so common. Lists of all the Q signals in handbooks, operating manuals, study guides and easy to google too. I shall continue to use them for voice also! One you won't find usually listed is QLF, which is a tongue-in-cheek question "are you sending with your left foot?" hopefully meant in a friendly way for not-so-perfect CW sending!! QSO, QSL, QRT, QSY, QRZ, QTH are used a lot on voice.

Rag Chew extended voice conversations between two or more stations. many prefer this to the usually very short and curt '5-9, over' typical DX or contest contact.

Rice Box a Japanese Radio. Most of you are too new to remember when all the amateur radio gear was American made. The Japanese manufacturers brought some new and interesting features to the game. Sometimes derogatory but mostly just in comparison to the older name-brand long time US manufacturers, now gone but fondly remembered. I don't know what we'll use for the new Chinese manufactured radios but I did laugh when I heard the term 'Chinesium' on YouTube!

Rig Your radio(s)!!

RIT/XIT Receiver Incremental Tuning/Transmitter Incremental Tuning also known as Clarifier A separate control used to tune in a contacts voice or CW tone to your liking. Use so that your transmit frequency is not changed during a QSO causing the other operator to change his and ultimately causing both to keep moving up or down the band.

Rover A VHF station who is either mobile or portable moving to different grid squares during a contest or event. Also a mobile or portable HF station for the GA QSP Party e.g. going to less populated or rare Georgia counties.

RS232/Serial/USB Computer communications ports used by amateur radios. Most still have serial/RS232 ports but the top of the line radios are turning now to USB ports. Used to connect the radio to the computer for CAT control or digital modes.

RST The traditional signal report, Readability from 1 to 5 with 5 being 100 percent readable, Strength from 1 to 5 (both pretty subjective) and Tone for CW only from 1 to 9 with 9 being a good pure sine wave tone. Mostly you hear 5/9 or 599 (5NN) on CW these days but there are adherents who want a 'real' signal report from you. It is subjective as mentioned but give it your best shot at accuracy. You'll get better at it as you get more experienced listening to signals. The contesters use 5NN to make the report shorter on CW and they are usually in a hurry, especially the ones trying to score big.

RX/RCVR TX/XMTR XCVR/TRX Receiver Transmitter Transceiver XVTR/Transverter

S-meter S-units Signal strength meter on a receiver. supposed to be 6 dB per S unit or 54 dB for an S-9 signal. Most older radios are uncalibrated as far as the s-meter is concerned
New digital radios are pretty well calibrated but in dBm rather than s-units. Giving a signal report with 20 over 9 from your receiver is also a subjective report. As mentioned before, many operators would rather have a realistic RST report.

Sked a schedule to make a contact ahead of time

Split Operation. Receiving and Transmitting on two different frequencies (on the same band). Used by DX or rare stations to make the pile up on their receive frequency rather than their transmit frequency. either way there is a pile up and some think it unfair that the station is occupying two frequencies. Some Lids will call on the DX stations transmit frequency to no avail since he's not listening there at all. Others keep calling on the receive frequency even when the station is working someone else. What can you say?

SWR/VSWR Meter/Bridge/Analyzer (Voltage) Standing Wave Ratio A measure of the ratio of the incident signal to the reflected signal on a transmission line. much is made of it, many times too much. Signals get out regardless of the SWR but modern transmitters are sensitive to an SWR that is too high, maybe 4 or 5 to 1. Older tube transmitters, tube amps and any manual tuner have Pi networks that can tune much higher SWR's. Either way the signal goes out to the antenna. Required reading: Any edition of 'Reflections' by Walt Maxwell W2DU (SK) will be a proper education in the meaning, use and mis-use of the concept of SWR. Another whole presentation topic.

Ticket Your license: A ticket to fun on the radio

Uncle Charlie The FCC

VOA The Voice of America shortwave broadcasting during the cold war. still ongoing to give news to undercovered countries.

VOM/VTVM/multimeter Originally the VOM Volt-Ohm-Millammeter was the instrument of choice for pretty much all troubleshooting. The VTVM Vacuum-Tube-Voltmeter was an improvement that loaded down the circuits less but didn't measure current. Now an FET input voltmeter has replaced it. The modern multi-meter incorporates the high input impedance voltmeter along with resistance and current measurements. They also add many other funtions such as continuity, capacitance measurement, temperature measurement and even diode and transistor test functions

WAS/WAC/WAZ/WPX Awards from ARRL and others for Working All States, All Continents, All Zones (CQ or ITU), Working Prefixes. There are many other awards. Old timers rememer the WATV award for working all the neighbors TV sets with TV interference! Nowadays, with cable and the filtering of modern radios, TVI is not very prevalent. There is also a Worked all USA counties award for the 3000+counties. Lots of rovers go out to activate sparse or zero poplulation counties around the country, USA-CA.

WallPaper There are countless certificate awards and special event certificates from various countries around the world in addition to the above. Display them and they are "WallPaper"

WWV The National Bureau of Standards (to the old timers), now the National Institute of Standards and Technology NIST, keepers of the standard meter, kilogram, second, etc. WWV broadcasts time and timing signals 24/7 on several shortwave frequencies. They were used by amateurs for years to calibrate their clocks and radio frequencies but todays radios have much more stable oscillators to keep them on frequency and we can even have our own 'atomic' clocks if we want.

Zed The English say 'Zed' for the letter Z, to help differentiate it from B, C, D, E, G, P, T and V. It was picked up from the English hams. Z does get confused sometimes and it sure doesn't hurt to use Zed!

Zero Beat getting on exactly the same frequency as the calling station. Still not so easy to do
Zulu time GMT Greenwich Mean Time, UTC Coordinated Universal Time (Universal Time Coordinated from the French), London Time

Time at the Prime Meridian, Zero degrees Longitude. Greenwich is the location of the Royal Observatory which is on the line in London. We use it so that there is no confusion of the time of a contact (QSO) and in setting up schedules (skeds) with other stations, keeping logs, QSL cards with matching times, etc. We picked up the Zulu from the military. Earth is divided into 24 (hour) time zones starting at the Prime meridian

SOTA/JOTA/IOTA/LHOTA/RR Summits on the Air, Jamboree (scouts) on the Air, Islands on the Air, Light Houses on the Air, Railway stations on the air. Various operating experiences within the amateur community. Some have certificates available for working certain numbers of stations.

Recently there was the National Parks on the Air activity.

ELF 30 Hz to 3 kHz VLF 3 kHz to 30 kHz LF 30 kHz to 300 kHz MF 300 kHz to 3 MHz
HF 3 MHz to 30 MHz VHF 30 MHz to 300 MHz UHF 300 MHz to 3 GHz
SHF 3 GHz to 30 GHz EHF 30 GHz to 300 GHz