

## **Ham Radio Terminology**

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## **Ham Radio Terminology**

Amateur radio operators have quite an interesting vocabulary. This "ham-speak" may be called terminology, lingo, or jargon and it often includes many abbreviations. If you don't understand a term, just ask the person using ham-speak to explain it. Don't worry, you will figure these out over time.

A lot of the words are technical because hams use radios and electronics and antennas and cables and power supplies and meters and...well, quite a few gizmos that involve big and fancy words.

Other forms of ham-speak are more cryptic and non-technical. Hams are equal-opportunity obfuscators; we can make an unintelligible mess out of anything! Just kidding—there is often good reason for all of this terminology and abbreviation.

The technology part of ham-speak is largely unavoidable; there are no good alternatives for transceiver, impedance, modulation, propagation, and such terms. There are, however, slang terms for some of these technical words and plenty of abbreviations. For example, the word rig is used to describe a station's radio, usually a transceiver.

Many of the abbreviations, shortcuts and code words derive from the early days of ham radio when Morse code was predominant. All sorts of ways to simplify the sending of Morse characters were developed. Besides brevity, some terms came about simply due to the memorable way they sound in Morse code (alliteration or palindrome). Some of these Morse shortcuts are commonly used by voice even today.

A couple of excellent references for ham-speak (lingo/jargon, abbreviations, terminology) can be found here

?	"Slashed Zero" - distinguishes a ZERO from the letter "O". Intended to resolve ambiguity in callsigns like ""W?OF". Not needed for callsigns like "W0RK". Can be produced by pressing Alt?216 on your PC keyboard (Note: you must use the numeric keypad, not the numbers across the top row of the keyboard. This method should work in most PC-based editors such as e-mail clients, word processors, etc.)
73	"Best Regards" (Source: "Morse Code: The Essential Language", 2nd Ed., ARRL Publishing)
807	An old glass vacuum tube, several inches tall and around. Also, slang for a beer, as in "there's nothing like a cold 807 on a hot Arizona afternoon" (thanks to W7QY). According to our friends in Ireland, a pint of Guinness is known as a "Black 807" (thanks to GI4FUE).
88	"Hugs" and/or "Kisses"
ACSB	Amplitude Compandored Sideband modulation
AGC	"Automatic Gain Control"; a circuit in a radio which automatically adjusts the overall gain of the receiver
A-Index	Linear index for measuring the disturbance level in the earth's magnetic field. The index is defined over a period of one day (Courtesy of IPS Radio and Space Services, Sydney, Australia).
AM	"Amplitude Modulation"; slang often used is "Ancient Modulation" (courtesy of VE3FFK).
AMTOR	"Automatic Teleprinting Over Radio"; popular digital mode on HF
Antenna Gain	The ratio of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength at the same distance (def. courtesy of Telecom Glossary 2000)
Antenna Party	A long-standing tradition among hams where several gather to assist a fellow ham in mounting antennas and/or towers. Often accompanied by malt consumables and lies AFTER the tower and the antennas are up and workingwell, the consumables anyway (thanks to WD5CTQ).
AOS	"Acquisition of Signal" from a satellite; occurs when the satellite becomes "visible" to the antenna as it comes up from the horizon.

APRS	Automatic Packet Reporting System (Uses GPS + Packet Radio)
ARRL	"American Radio Relay League"; A U.Sbased organization which exists to support Amateur Radio. For more information, please visit http://www.arrl.org.
ATV	"Amateur Television"; typically found on the 430 MHz and 1.2 GHz bands; see http://www.hampubs.com/atv.htm for more information (thanks to KG4LXA for the suggested link).
AWG	"American Wire Gauge"; a system of describing the diameter of wire by which the wire size increases as the gauge number decreases.
Barefoot	Refers to running your transmitter without an amplifier (in other words, the "power out" is being produced entirely by the transmitter, without any assistance from an amplifier).
BFO	Beat Frequency Oscillator
Bird	<ol> <li>nickname for "satellite", in the case of Amateur Radio, examples include RS-12/13 (Radio Sputnik) and AO-40 (AMSAT-OSCAR). See http://www.amsat.org/amsat/sats/n7hpr/satsum.html and http://www.hampubs.com/satellite.</li> <li>brand name of a high-end, high quality directional wattmeter.</li> </ol>
Birdie	A signal produced within a radio, typically by it's microprocessor or related circuitry, that appears at specific intervals across the tuning dial of a receiver. Usually it is a product of mixed intermediate frequencies within the radio. Considered bad form.
Boat Anchor	Slang for a large, heavy, usually old radio, typically restored (courtesy of VE3FFK).
BPSK	"Binary Phase Shift Keying"; a modulation technique used in LowFER and MedFER operation, as well as HF operation. For more information, seehttp://www.computerpro.com/~lyle/watsbpsk.htm (courtesy of K?LR).
Brass Pounder	Refers to someone who sends telegraphy by old fashioned "straight" key, i.e., without any keyers, etc., or paddles.

Bug	A mechanical keying device for transmitting Morse Code semi-automatically.
Bureau Buro	See "QSL Bureau"
Channel Guard	General Electric's trademarked name for CTCSS. (RCA called it Quiet Channel, or QC)
СВА	Call Book Address
CC&R's	"Covenents, Conditions, and Restrictions"; an extensive set of rules drawn up by homeowner's associations and their lawyers which, among other things, typically restrict or completely prohibit a homeowner from having most forms of antennas on his/her property. Such regulations are formed and placed upon the property before the home is initially sold, and typically remains in effect for the life of the home.
CG	See "Call Guard" (Also CTCSS)
Coax	Coaxial cable; RF transmission line; used to connect an antenna to a radio; "coaxial" indicates that the conductors are about the same axis, with a center conductor being on that axis, and the "shield" wrapped around the axis (dielectric separates the center conductor and the shield wires).
CTCSS	"Continuous Tone-Coded Squelch System", also known as "PL" ("Private Line", trademarked term by Motorola), "Call Guard" (trademarked by GE), or "subaudible tone". A means of transmitting a tone along with your signal. This tone tells a receiver to open up its squelch so that the signal is received. This method is commonly used with repeaters.
CW	"Continuous Wave"; popular digital mode on HF which utilizes Morse Code; regarded by many as the *first* digital mode.
DCS	Digital Coded Squelch
DE	"From" in CW-speak
Deviation	The resultant frequency swing of a signal that is frequency modulated (FM).

Dielectric	A non-conductive material used to separate the center conductor and shield (conductor) in coaxial cable; typically made of foam or plastic.
Dipole	Likely the most common wire antenna amongst hams, the easy-to-homebrew dipole consists of two legs (each 1/4 wavelength) which typically extend horizontally and away from each other. One leg connects to the coax's center conductor, and the other leg connects to the coax's shield as a counterpoise. The dipole antenna is usually strung in a horizontal fashion between trees, and works best when at <i>least</i> 1/4 wavelength above the earth.
DR	A CW abbreviation for "dear", used as a respectful salutation. Example "GOOD EVENING, DR JOHN, HW ARE U?"
Driven Element	An "arm" of a yagi antenna to which RF power is fed from the coax.
DSSB	Double Suppressed Sideband modulation
DSW	Russian abbreviation for "goodbye" on CW.
DTMF	"Dual Tone, Multiple Frequency"; a tone that is actually comprised of two different tones sounded at the same time. It is what you hear when you use the pushbuttons on a standard non-pulse telephone in the U.S. It is also a common way to send analog numeric information, since each numeral between ? and 9 has its own separate tone (and also # and *, and in the case of some radios, A, B, C, and D).
Dummy Load	Typically a power dissipating resistor or device substituted in place of an antenna on a transmitter, used for testing purposes.
DX	Long distance; making contacts over long distances. For HF contacts, "DX" is typically considered as such if the station contacted is outside of your country. In some other cases, making a contact over what is considered extremely long distances (for the conditions and band) can be considered "DX" (i.e., a QSO from one end of a state to another, on 2 meters simplex, can be considered "DX").
DXCC	"DX Century Club". An ARRL-sponsored club by which membership is allowed only after showing proof of having made contact with at least 100 different countries. For more information, please see http://www.arrl.org.

DXpedition	Derived from the words "DX" and "expedition", this term typically refers to a trip made by experienced ham operator(s) to a "DX" country for the purpose of providing other hams an opportunity to make a contact (QSO) into that country.
EME	"Earth-Moon-Earth" communication; moonbounce; using the moon as a reflector to "bounce" your signal back down to Earth. For a complete resource, please see http://www.nitehawk.com/rasmit/ws1_1.html
ERP	"Effective Radiated Power"; the power supplied to an antenna multiplied by the antenna gain in a given direction (if the direction is not specified, the direction of maximum gain is assumed).
Eyeball	Face-to-face meeting, as in "eyeball QSO" (to speak to one another in person).
FB	"Fine Business"; cheerful acknowledgement, or adjective for describing a good quality.
Field Day	A once a year contest sponsored by the ARRL where hams go to remote sites and operate for 24 hours. Used to assist hams in emergency preparedness as well and to practice not sleeping, treating insect and other vermin bites and the drinking of cold coffee and the ever present telling of lies. Great fun for all! (thanks to WD5CTQ)
Fist	The sending style of a particular CW operator. In the old days, telegraphers knew each other by their "fists" (thanks to WD5CTQ).
FM	Frequency Modulation
FOC	"First Class CW Operators' Club"; an exclusive CW club based out of the United Kingdom.
Gain	As it applies to antennas, see <b>Antenna Gain</b>
Green Stamp	U.S. dollar bill sent along with a QSL card (instead of an IRC) to offset postage costs of a return card.
Harmonic	1. Children. 2. Secondary RF emission that is a multiple of the fundamental emission.
HF	"High Frequency"; generally regarded as the band of frequencies between 1.8 MHz and 30 MHz

Homebrev	Homebrew Refers to equipment that is "home built"; something you built yourself.		
Hz	"Hertz"; a unit used to measure frequency. Typically used with "Kilohertz" (KHz) to indicate 1,000 Hertz, or "Megahertz" (MHz) to indicate 1,000,000 Hertz.		
Iambic	A method of Morse Code keying. Holding both paddles at same time sends alternating dits and dahs (courtesy of VE3FFK).		
Intermod	Derived from the expression "Intermodulation Distortion" (IMD). A problem caused in the receiver of a radio by a nearby transmitter's spurious signals which may fall on or very near to the receiver's receive frequency. In some cases, a perfectly clean transmitter (i.e., no spurious signals) can produce intermod if it overloads a receiver or if there is some other point for 3rd order intercept. Intermod which is close, but not necessarily right on, the receiver's frequency can cause the receiver to become less sensitive (also known as "desense").		
IOTA	"Islands on the Air"; for more information, please see http://www.islandchaser.com/.		
IQ?	Slang for "IQ of zero"; an idiot (courtesy of GI4FUE).		
IRC	"International Reply Coupon". A system by which most country's postal systems provide a coupon which can be purchased, and then used by a sender in any other country to obtain return mail postage. This system allows you to provide return postage for those in another country, especially useful when you do not have access to that country's postage stamps or currency. IRC's are frequently used to assure return postage for a QSL card. For more information, please see QRZ's "QSL Corner" at http://www.qrz.com/qsl.html.		
J-Pole	An antenna design that is relatively easy to assemble yourself. For more information, see http://www2.arrl.org/tis/info/JPole-V.html ( <i>Courtesy of ARRL</i> ). Note: The basic J-pole design can be applied to any frequency, as long as measurements are proper for that frequency. Furthermore, a 2-meter J-pole will also resonate on the 440 MHz (70 cm) ham band, making for a reasonable dual-band antenna.		
Кс	"Kilocycle"; equivalent to KHz; regarded as an "old fashioned" way of describing frequency.		
Key	Device used by hand to produce Morse Code; can contain either a single, vertically travelling arm (see "Straight Key") or horizontally travelling paddles (see "Paddles") that are used to make ground connection and produce the Morse Code.		

Keyer	Electronic device for sending Morse Code semi-automatically; connects to a key (see above). Dits are sent by pressing one paddle [of the key], dahs sent by pressing the other one (courtesy of VE3FFK).
KHz	See <b>Hz</b>
K-Index	A three hourly index of geomagnetic activity relative to an assumed quiet day curve for the recording site. K index values range from 0 -very quiet- up to 9 -extremely disturbed- (Courtesy of IPS Radio and Space Services, Sydney, Australia).
LID	Slang term, often referring to a CW operator with very poor practices and manners.
LIon	"Lithium-Ion". A type of rechargable battery commonly used with radio equipment.
LOS	"Loss of Signal" from a satellite; occurs when the satellite becomes "invisible" to the antenna as it goes below the horizon.
Lowfer	One who experiments with radio communications at unusually low frequencies (typically 1750 Meters, which is 160-190 kHz and can be used under FCC Part 15). For more information, take a look at http://www.altair.org/lowfer.htm (courtesy of N4YWK).
LSB	Lower Sideband
Machine	Slang for "repeater", and sometimes for rig.
Matchbox	A device placed between a transmitter and an antenna to tune the circuit to resonance. Normally called an <b>Antenna Tuner</b> (thanks to WD5CTQ).
Мс	"Megacycle"; equivalent to MHz; regarded as an "old fashioned" way of describing frequency.
Medfer	One who experiments with radio communications at low frequencies such as those on the edges of the AM broadcast band (under FCC Part 15).
MHz	See <b>Hz</b>

MPR	"Mass Produced Rig"; a radio which is produced in large quantities; often used to describe radios that are NOT originally purchased in "kit" form.
MUF	"Maximum Useable Frequency"; that frequency above which expected propagation no longer exists.
NB	Noise Blanker
NCS	Net Control Station
NiCd	Or "Ni-Cad"; "Nickel Cadmium". A type of rechargable battery commonly used with radio equipment.
NiMH	"Nickel Metal Hydride". A type of rechargable battery commonly used with radio equipment.
N-P Junction	See "P-N Junction".
NPN	See "P-N Junction".
NTS	"National Traffic System". Please see http://www.weca.org/nts.html for more information.
ОМ	"Old Man"; affectionate way to address a fellow ham operator, like saying "Old Buddy!"
00	"Official Observer"; a volunteer of the ARRL's Official Observer program who monitors the airwaves for FCC rules violations. For more information, please see http://www.arrl.org.
Paddles	Short for "Morse Code Key", one that contains small paddles that are tapped in order to produce semi-automatic Morse Code (when connected to a "keyer").
Patch	Short for "Phone Patch".
PEP	"Peak Envelope Power"; used to measure power output of an single sideband signal.
Phone Patch	Device allowing audio from a telephone line to be placed in the audio circuits of a transmitter/receiver (thanks to WD5CTQ).

## P-N Junction

A P-N junction (or N-P junction) is formed by creating two substrate materials of P type and N type on a semiconductor. P type means it is doped with "free holes" (electron depletion) and the N type is doped with electrons. Of course by physics, the free holes and free electrons would like to neutralize each other. A diode is formed with a P-N junction.

Basically, when you have a NPN transistor, you have two junctions ... an NP junction between the collector and base, and a PN junction between the base and emitter. Vice-versa with a PNP transistor. How you bias those junctions controls how the transistor works.

Pink Ticket	FCC Notice of Rule Violation
PL	"Private Line", Motorola's trademarked name for CTCSS.
PM	Phase Modulation or Pulse Modulation
PNP	See "P-N Junction".
PSK31	A digital mode which is rapidly growing in popularity; utilizes phase shift keying (PSK) which is transmitted at 31 baud (speed). For more information, please see http://www.psk31.org.
PTT	"Push to Talk"; a button on a microphone or on the side of a handheld radio which activates the transmitter.
Q	"figure of merit" with regard to a tuned circuit (source: ARRL Handbook). With regard to an antenna circuit, the Q has an inversely proportionate relationship to useable bandwidth (with reasonable SWR). For example, an antenna with "high Q" will not provide a good SWR over a very wide range of frequencies.
QCWA	"Quarter Century Wireless Club", an organization for hams who have held a license for 25 or more years. For more information, see http://www.qcwa.org.
Q-Signals	Originally developed by CW (Morse Code) operators to make certain, frequently used phrases short and concise - a sort of Morse Code "shorthand". Common signals include "QST" (announcement), "QSL" (confirmation), and "QTH" (location), and "QRZ" ("who is calling me?"). For more Q-signals, please see http://en.wikipedia.org/wiki/Q_code.

## **QSL** Bureau

Also known as the "buro"; an organization that provides a collecting and distributing point for QSL cards. In large scale situation, typically broken into an "incoming" and "outgoing" bureaus. A good example is the biggest OSL Bureau representing the U.S., the ARRL OSL Bureau. For more information, see ARRL's Incoming Bureau at http://www.arrl.org/gsl/gslin.html and their Outgoing Bureau at http://www.arrl.org/gsl/gslout.html.

**QSL Card** Often referred to as simply a "QSL"; similar in size to a postcard, it is used to "confirm" (or show proof of) having made contact with another station on the air; applies to both "two-way" and "one-way" (SWL) communications; the OSL card is filled out by the issuer/sender, and by convention it contains (1) the station contacted, (2) UTC date and time of contact, (3) frequency/band, (4) signal report (RST), and (5) callsign and address of issuer/sender. OSL cards are commonly used as proof of fulfilling various operating awards such as DXCC, WAS, etc.

## **QSL** Manager

A person, commonly an Amateur Radio operator, who manages the receiving and sending of QSL cards for a particular Amateur Radio station (the "managed" station). Often, a QSL Manager performs this service because the managed station either has difficulty handling the volume of incoming QSL cards, or the station is geographically located such that it is difficult or impossible for that station to accept and/or send OSL cards. It is very common for "rare" DX stations and DXpeditions to have a OSL Manager.

**Repeater** A system consisting of at least one transmitter, one receiver, and a controller, which receives a signal on one frequency and retransmits it on another frequency. Repeaters are typically located in high locations so that they have greater coverage area. They greatly increase a user's communication range since they can retransmit his/her signal across all of its coverage area. Repeaters are most commonly used on the 2 meter and 70 centimeter bands. See also "Simplex Repeater".

## RF

"Radio Frequency"; typically used as slang for "Radio Frequency Energy".

## **RF Burn**

A painful sensation felt when coming into direct contact with RF energy; can be dangerous when experienced with high levels of RF power.

## Rig

Radio

## **RIT**

"Receive Incremental Tuning"; a common feature on HF radios that allows the user to slightly change the receive frequency while leaving the transmit frequency the same.

RST	"Readability, Strength, Tone"; a system by which a <i>received</i> signal quality is graded, and a signal report is given. "Readability" is judged on a scale from 1 to 5, and "Strength" and "Tone" are judged on a scale from 1 to 9. "Tone" does not apply to a "phone" (voice) signal. A very high quality CW signal is "599" (pronounced "five nine"), and such a phone signal is "59" (pronounced "five nine").
RTTY	"Radio Teletype"; popular digital mode on HF
Rubber Duck	Also known as "Rubber Duckie", a flexible antenna normally found on hand-held tranceivers. Inefficient, but useable, and they don't poke you in the ribs too badly either! (thanks to WD5CTQ).
RX	Abbreviation for "receiver" or "receive".
SASE	"Self Addressed, Stamped Envelope"; for more information, please see QRZ's "QSL Corner" at http://www.qrz.com/qsl.html.
SFI	See "Solar Flux Index"
Simplex	Communicating directly from radio to radio (without the use of an intermediary <i>repeater</i> ). This term is normally used in the context of environments that frequently use repeaters.
Simplex Repeater	A radio that has a digital audio store-and-forward relay system. Produces results similar to that of a conventional repeater.
Slug	A short, cylindrical unit that is inserted into a Bird? Wattmeter (or similar) that allows the unit to read power (watts) for a particular frequency range. A slug always has a finite frequency range and a maximum power rating. By swapping out different slugs, the wattmeter can be used for many different frequencies and power ranges.
Solar Flux Index	A measurement of radio emission from the sun. HF propagation conditions are considered good when this number is high and the A- and K-index numbers are low.
Special Event	A radio operating event, usually on HF, in which a group or organization celebrates an event or holiday by making contacts and offering special QSL cards or certificates to confirm the contact. Ham Radio magazines, such as QST, usually publish a monthly list of Special Events.

SSB	Single Sideband
Straight Key	A device for sending Morse Code, consisting of a single arm making contact with another point to complete a circuit and key a transmitter (thanks to WD5CTQ).
Switching Power Supply	A power supply that uses switching transistors (on-off) to increase the efficiency of the power conversion, rather than the simple transformer/rectifier design of traditional power supplies.
SWL	"Shortwave Listener"; one who enjoys listening to shortwave transmissions, without intention of transmitting.
SWR	"Standing Wave Ratio"; an indication of how well matched an antenna is to its transmitter. A "one to one" (1:1) SWR indicates a perfect match. Anything less than 1:1 (i.e., 2:1) indicates that the antenna is not perfectly resonant for the transmit frequency, and that some RF power is being reflected back down the transmission line into the transmitter. In general, any SWR which is 3:1 or better is acceptable.
Talk- Around	Same as "Simplex" (see definition above).
Ticket	Slang for "FCC License"
Transistor	See "P-N Junction".
TX	Abbreviation for "transmitter" or "transmit"
USB	Upper Sideband
UTC	Coordinated Universal Time; a single time reference to be used worldwide (reduces the confusion that can occur when considering multiple time zones).
VEC	"Volunteer Exam Coordinator". Examples include the ARRL (http://www.arrl.org) and W5YI (http://www.w5yi.org)

VOX	"Voice Operated Relay"; allows the presence of a sound to trigger the PTT.
WAC	"Worked All Continents"; an award issued to those who make, and have proof of, contact to at least one ham on each continent.
Wallpaper	Slang for QSL Cards and operating/contest certificates.
	"Worked All Neighbors"; a station that continually gets complaints about signals showing up on the telephone or televisions at neighbor's houses. Not a desired situation. Polite conversation and changes in operation practices are a common solution. Another is providing simple and often inexpensive filters for the offended neighbor. See the TVI solutions page at the ARRL web site for more information on cures (courtesy of K4GVN).
WARC	"World Administrative Radio Conference"; most commonly associated with the "WARC Bands", those bands added to the Amateur Radio band plan which include the 30, 17, and 12 meter HF bands.
	"Worked All States"; an award issued to those who make, and have proof of, contact to at least one ham in each U.S. state.
WOLF	"Weak-signal Operation on Low Frequency" - for more information, see http://www.computerpro.com/~lyle/wolf/wolf4dummies.htm (courtesy of K?LR).
Hong	An instrument of sadistic torture for hams who do not follow generally accepted rules of courtesy on the air. It looks something akin to a Saguaro cactus with one arm missing (courtesy of AA7VP) Note: [the truth] The Wouff Hong sprang from the imagination of ARRL cofounder Hiram Percy Maxim, W1AW, as a means to combat poor operating.
	A radio station located in Fort Collins, Colorado, that continuously broadcasts standard time of day and other radio and navigation information. For more information, see http://www.lerc.nasa.gov/WWW/MAEL/ag/wwv.htm.
	A radio station located in Kauai, Hawaii, that continuously broadcasts standard time of day and other radio and navigation information. For more information, see http://www.chem.hawaii.edu/uham/wwvh.html.
WX	Abbreviation for "weather"

XCVR	"Transceiver" (a unit integrating both a transmitter and a receiver).
XIT	"Transmit Incremental Tuning"; a common feature on HF radios that allows the user to slightly change the transmit frequency while leaving the receive frequency the same.
XYL	Short for "wife" (i.e. ex-YL)
Yagi	An antenna consisting of two or more elements ("arms" that run perpendicular to a common boom) which are fed parasitically from one or more "driven" elements. The number of elements is proportionate to the gain (more elements means more gain).
YF	short for "wife"
YL	"Young Lady"; meaning varies by context of use. Can infer a girlfriend, or, simply a female e.g. "She's my YL", or "she is a YL operator".
Zed	A way of saying the letter "Z"; considered by many to be a more precise way of expressing that letter "Z"; prevents others from confusing "Z" with "E", "P", etc.
Zulu	Often used to refer to <b>UTC</b> (see above), as in "Zulu Time".

# ACTIVE HAMS PROVIDED FREE BACKUP COMMUNICATION SUPPORT FOR THE INTERNATIONAL FILM FESTIVAL 2018

