

Master List of Amateur Radio Terms and Abbreviations:

A/D – Analog-to-Digital

antenna tuner – Impedance-matching device that matches the antenna system input impedance to the transmitter, receiver, or transceiver output impedance.

AM – Amplitude Modulation See URL: Modulation Modes

AMSAT – Radio Amateur Satellite Corporation

AMTOR – Amateur Teleprinter Over Radio, a version of RTTY

antenna – a device that intercepts or radiates radio frequency energy

antenna tuner – device that matches the antenna impedance to the receiver or transceiver output impedance

APRS – Automatic Packet Position Reporting System – See URL: APRS

ARA – Amateur Radio Association

ARC – Amateur Radio Club. Military Designation for Avionics (Aviation Radio Composite)

ARES – Amateur Radio Emergency Service

ARRL – American Radio Relay League

balanced line -A feed line with two conductors having equal but opposite voltages, with neither conductor at ground potential

balun – balance to unbalance, a device used to couple a balanced antenna to an unbalanced feed line

band – a range of frequencies allotted for a particular use

barefoot – transmitting with a transceiver alone and no linear amplifier

beacon – A station that transmits one-way signals for the purpose of navigation, homing, and propagation condition determination

BFO – Beat frequency oscillator. Used to mix with the incoming signal to produce an audio tone for CW reception

BNC – Coax connector commonly used with VHF/UHF equipment

BPL – BroadBand Over Power Lines

bps – Bits per second

BPSK – Binary Phase Shift Keying, digital DSB suppressed carrier modulation

boat anchor – antique ham equipment

calling frequency – A standard frequency where stations attempt to contact each other

capacitor – an electronic component composed of two or more conductive plates separated by an insulating material. A capacitor stores energy in an electric field

carrier – a pure continuous radio emission at a fixed frequency, without modulation

CC&R's – Covenants, Conditions, and Restrictions

chassis ground – the common connection for all parts of a circuit that connect to the negative side of the power supply

coax – A type of wire that consists of a center wire surrounded by insulation and a grounded shield

code – usually refers to Morse code, but used for others such as baudot

coil – a conductor wound into a series of loops

color code – Colored stripes painted on the body of resistors and other components to show value

condenser – old term for capacitor composed of two or more conductive plates separated by an insulating material to store energy in an electric field

control operator – the Amateur Radio operator designated to “control” the operation of the repeater, as required by FCC regulations

core – the material used in the center of an inductor coil, where magnetic fields is concentrated

CQ – calling any amateur radio station, may be sent in CW, phone or some digital modes

CSCE – Certificate of Successful Completion of Examination (U.S.) issued when amateur radio license examinations passed

CTCSS – abbreviation for continuous tone-controlled squelch system

current – a flow of electrons in an electrical circuit

CW – Continuous Wave, an unmodulated, uninterrupted RF wave used with Morse code

dB – Decibel (1/10 of a Bel); unit for the ratio of two power measurements

de – Morse code for “from” e.g., AC6V de WA0PPP

diplexer – A frequency splitting and isolation device to couple two transceivers to a single or dual band antenna

dipole – the basic wavelength antenna consisting of a length of wire or tubing, open and fed at the center

downlink – Channel used for satellite-to-earth communications

DPSK – Differential Phase Shift Keying, a form of BPSK

DSP – Digital Signal Processing – allows for filtering, noise reduction, audio equalization, etc.

DTMF – abbreviation for dual-tone multi-frequency, the series of tones generated from a keypad

dual-band antenna – antenna designed for use on two different Amateur Radio bands

dummy load – a device which substitutes for an antenna during tests

duplex – mode in which a radio transmits on one frequency and receives on another

duplexer – device which allows a single antenna to transmit and receive simultaneously

DVM – Digital voltmeter

DX – a distant station or to contact a distant station

DXCC – award for contacting and confirming 100 or more different countries

dynamic range – How well a receiver can handle strong signals with overloading; any measure of over 100 decibels is considered excellent

earth ground – a circuit connection to a ground rod driven into the earth

elmer – a mentor; an experienced operator who tutors newer operators

eleven meters – currently the CB band, once a Ham band

EME – Earth-Moon-Earth; using the moon as a reflector for a signal path; moonbounce

EMF – Electromotive force; voltage

EMI – Electromagnetic interference

emission mode – the form of a radio emission, such as AM, FM, or single sideband

ERP – Effective Radiated Power

ether – Old theory for the medium once believed to conduct radio waves

Eu – Europe

FCC – Federal Communications Commission, US governmental body that regulates the radio spectrum

feedline – wire or cable connecting a radio to an antenna

FET – Field-effect transistor

field day – Amateur Radio activity in June to practice emergency communications

field strength meter – a test instrument used to show the presence and strength of RF energy

filter – A circuit or device that will allow certain frequencies to pass while rejecting others

final – The last transmission by a station during a contact. Also the last amplifying stage of a radio transmitter

FM– Frequency Modulation

fox hunt – a contest to locate a hidden transmitter

frequency – the rate of oscillation – audio and radio wave frequencies are measured in Hertz

FSK – Frequency-shift keying

full-break in (QSK) – allows a station to break into the communication without waiting for the transmitting station to finish

full duplex – a communications mode in which a radios can transmit and receive at the same time by using two different frequencies

gain, antenna – increase in effective power radiated or received by an antenna in a certain desired direction

GHz – gigahertz – billion (1,000,000,000) hertz

gray line – a band around the Earth that separates daylight from darkness

green stamp – U.S. dollar bill sent along with a QSL card

ground – Common zero-voltage reference point

ground-plane antenna – a quarter-wavelength vertical antenna with several radials extending horizontally from the base

ground wave propagation – radio waves that travel along the surface of the earth, even beyond the horizon.

half duplex – mode in which a radio transmits and receives on two different frequencies but performs only one of these operations at any given time

half-wave dipole – basic wavelength antenna consisting of a length of wire or tubing, open and fed at the center

hand-held – portable transceiver small enough to be carried easily

hamfest – event at which hams meet to buy, sell, and swap equipment

Hertz – the standard unit used to measure frequency (one Hertz equals one complete cycle per second)

HF – High Frequency – 3 MHz to 30 MHz

hi hi – ha ha (laughter) the Morse equivalent of a laugh

high-pass filter – a filter designed to pass high frequency signals, while blocking lower

frequency signals

Hiram Percy Maxim – AKA “The Old Man” 1AW, ARRL founder. See also:

homebrew – term for home-built, noncommercial radio equipment

horizontally polarized wave – an electromagnetic wave with its electric lines of force parallel to the ground

HSMM– High Speed Multi Media. An ARRL working group and individual Amateur effort as well. Primary to High speed Voice, Video, and Data transmission on the Amateur allocations within the 2.4GHz and 5.8GHz bands using commonly available WiFi equipment with High Gain Directional Antennas. Often referred to as the “hinternet” hinternet- Slang term often used in reference to HSMM.

HT – Handheld Transceiver, also known as a Handy-Talkie or Walkie-Talkie. A radio small enough to be held in your hand. Typically used with radios that operate on the VHF ham bands or above.

IF – Intermediate Frequency — Intermediate frequency, resultant frequency from heterodyning the carrier frequency with an oscillator, mixing incoming signals to an intermediate frequency enhances amplification, filtering and the processing signals

image – A false signal produced in a superheterodyne receivers circuitry

impedance – opposition to the flow of electric current and radio energy measured in ohms

inductance – a measure of the ability of a coil to store energy in a magnetic field

inductor – a component composed of a coil of wire wound on a central core that stores energy in a magnetic field

input frequency – the frequency of the repeater’s receiver (and your transceiver’s transmitter)

I/O – Input/Output

ionosphere – electrically charged region of the atmosphere 40 to 400 miles above the surface that refracts radio signals

IRC – International Reply Coupon, used for pre-paid postage to foreign locations [IRC](#)

IRLP – Radio Linking Project using VoIP

isotropic – theoretical “Single Point” antenna used calculate gain

ITU – International Telecommunications Union, the body which specifies worldwide guidelines for use of electromagnetic spectrum for communications purposes

J antenna (J pole) – a mechanically modified version of the zepp (zeppelin) antenna

K- index – A measure of the Earths magnetic field as measured at Boulder, Colorado

keyer – device for sending Morse Code semi-automatically

kilocycles – thousand cycles per second, replaced by kiloHertz (kHz)

kilohertz – one thousand hertz (see “hertz”)

ladder line — open wire transmission (antenna) line

landline — ham slang for telephone lines

LCD – Liquid Crystal Display

LED – Light-emitting diode

LF – Low Frequency – 30 kHz to 300 kHz

lid – a poor operator, one who does not follow proper procedures or sends sloppy morse code

linear – an amplifier used after the transceiver output named for its purity of amplification

line-of-sight propagation – term used to describe straight line propagation

LSB – Lower Side Band

LW – Long Wave 150 – 300 KHz

magnetic mount or mag-mount – antenna with a magnetic base

mA/h – milliampere per hour

MARS – Military Affiliate Radio System

MCW – Modulated Continuous Wave, a fixed audio tone modulates a carrier

megacycles – million cycles per second

megahertz MHZ – million hertz (see Hertz)

meteor scatter – ionized trails of meteors used as a reflecting media

MF – Medium Frequency – (300-3,000 kHz)

mic (mike) – microphone

microwave – the region of the radio spectrum above 1 gigahertz (GHz)

mW – milliwatt (1/1,000 watt)

mobile – an amateur radio station installed in a vehicle

mode – (see emission mode)

modulate – create a radio emission so that it contains information (voice, Morse code, music, binary)

MUF – Maximum Usable Frequency, the highest frequency that will support transmissions off of the ionosphere

mV – millivolt (1/1,000 volt)

MW – Medium Wave – 300 – 3000 kHz

NCS – Net Control Station

net – A group of stations that meet on a specified frequency at a certain time

NiCad – Nickel Cadmium, generally refers to a type of rechargeable battery

NiMH – Nickel Metal Hydride, generally refers to a newer type of rechargeable battery

NIST – National Institute of Standards and Technology. US Government Standards Body for Time, Frequency, Measures, Weights. Formerly known as The National Bureau of Standards

NODE – A remotely controlled TNC/digipeater – used as a connect point in packet radio

NPN – A type of transistor that has a layer of P-type semiconductor material sandwiched between layers of N-type semiconductor material

OFDM – Orthogonal Frequency – Division Multiplexing. Common modulation type used in HSMM work.

Ohm – The fundamental unit of resistance offered when a potential of one Volt results in a current of one Ampere

OM – friendship term, friend, pal or buddy

open repeater – (Repeater Term) a repeater whose access is not limited

OSCAR – Orbiting Satellite Carrying Amateur Radio

oscillate – vibrate, generate an AC or other periodic signal

oscilloscope – an electronic test instrument used to observe wave forms and voltages on a cathode-ray tube. Displays time on the X-axis and amplitude on the Y-axis, Z-axis is intensity of the CRT spot

packet radio – a system of digital communication whereby information is transmitted in short bursts

paddle – Morse code key

PC – Printed Circuit

PCM – pulse code modulation based on the Shannon's communication theory

PEP – Peak envelope power – the average power of a signal at its largest amplitude peak

peak-inverse-voltage (PIV) – the maximum voltage a diode can withstand when it is reverse biased (not conducting)

phase – the time interval between one event and another in a regularly recurring cycle

phase modulation – varying the phase of an RF carrier in response to the instantaneous changes in an audio signal

phone – voice modulation

phone patch – A connection between a two-way radio unit and the public telephone system

picket fencing – condition experienced on VHF and above where a signal rapidly fluctuates in amplitude causing a sound akin to rubbing a stick on a picket fence

pico – the metric prefix for 10^{-12} , or divide by 1,000,000,000,000

pileup – multiple stations calling a DX or contest station

pirate – Station using an existing callsign and illegally operating on the air

PL – Private Line with repeaters, same as CTCSS– low frequency audio tones used to alert or control receiving stations

PLL– Phase-lock loop

PM – Phase Modulation, similar to Frequency Modulation

PNP – a type of transistor that has a layer of N-type semiconductor sandwiched between layers of P-type semiconductor material

propagation – the means or path by which a radio signal travels from a transmitting station to a receiving station

PSK31 – A digital transmission mode — Phase Shift keying with 31.25 baud rate – See PSK31

PTT – Push To Talk, the switch in a transmitter circuit that activates the microphone circuitry

Q-signals or Q Codes – a set of three-letter codes which are used by amateurs as abbreviations – See Above for list of Q Codes

QSL Manager – A person, usually an Amateur Radio operator, who manages the receiving and sending of QSL cards for a managed station)

RAC – Radio Amateurs of Canada, a national amateur radio organization in Canada – See leagues

RACES – Radio Amateur Civil Emergency Service

ragchewing – chatting informally via radio

RDF – Radio Direction Finding

reactance – opposition to current that a capacitor or inductor creates in an AC circuit

reading the mail – to listen to a QSO without participating

repeater – a receiver/transmitter that listens for transmission and re-transmits them

resonance – condition where $X_c = X_L$, establishing a resonant circuit – used for selectivity (parallel circuit) or a maximum impedance circuit (series)

Rettysnitch – See definition of Wouff-Hong

RF – Radio Frequency, emissions in the radio portion of the electromagnetic spectrum

RFI – Radio Frequency Interference

rig – a radio (transmitter, receiver, or transceiver)

RIT – Receiver incremental tuning. Also known as a Clarifier

RMS – Root mean square

roger — I understand – Received 100% In CW: “R”

rotor – (see “rotator”)

rotator – a device attached to an antenna mast which rotates it

Rover – A station that operates from several grid squares or counties during a contest

RST – “Readability, Signal, and Tone”, a three-digit report indicating how well an operator’s emissions are being received

RTTY – radio teletype – A form of digital communications

SASE – Self-addressed, stamped envelope

selectivity – Ability of a receiver to reject signals adjacent to tuned signal

sensitivity – A receiver’s ability to receive weak signals

separation or split the difference (in kHz) between a repeater’s transmitter and receiver frequencies

series circuit – an electrical circuit in which all the electrons must flow through every part of the circuit

shack – Ham station operating area

SHF – Super High Frequency 3 – 30 GHz

short path — in degrees – the direct great signal bearing path between two locations. Long path is the reciprocal bearing

signal – a radio emission

silent key – a deceased amateur operator

simplex – a communications mode in which a radio transmits and receives on the same frequency

SK – Silent Key, an amateur term for indicating that a ham has passed away. Also one of the prosigns — meaning “end of contact”

skip zone – dead zone, too far for ground wave propagation and too near for sky wave propagation

skyhook – antenna

sky wave propagation – the transmitting of radio waves which reflect off of the ionosphere

S-Meter – Signal Strength Meter

S/N – Signal-to-noise ratio

speech processor – A circuit that increases the average level of the modulating signal applied to a transmitter

splatter – a type of interference to stations on nearby frequencies

split – DX stations often operate split – that is transmitting on one frequency and listening at a different frequency

SQL – Squelch – A circuit that mutes the receiver when no signal is present, thereby eliminating band noise

squelch tail – (Repeater Term) A brief bit of noise heard between the end of a radio transmission and the reactivation of the receivers squelch circuit

SSB – Single Side Band

SSTV – Slow Scan Television

straight key – a non-electronic Morse code key with one paddle

superheterodyne – a radio receiver scheme which beats or heterodynes a second radio frequency to the incoming radio signals. The combined frequencies form an intermediate (IF) third frequency

SW – Short Wave

SWL – Short Wave Listening

SWR – Standing Wave Ratio, a measure of how much radio energy sent into an antenna system is being reflected back to the transmitter

SWR meter – a device used to determine the Standing Wave Ratio of an antenna system

telegraphy – the transmission of information in Morse code format

telephony – the transmission of information in voice format

third-party communications – messages passed from one amateur to another on behalf of a third person

TI – Talk-In Frequency

ticket – slang for an amateur radio license

tone pad – an array of 12 or 16 numbered keys that generate the standard telephone dual tones

TNC – Terminal Node Controller, a device which interfaces a computer to a transceiver and performs a function similar to a modem

TNC – Threaded Niell-Concelman (standard connector type used on Coax cable, named for its inventors)

top band — 160 Meter Ham Band (highest number meter band)

traffic – a message or messages sent by radio

transceiver – a radio that both transmits and receives

twisted pair – ham slang for telephone or telephone lines

two-tone test – A method of testing a side-band transmitter

UHF – Ultra High Frequency 300 – 3000 MHz

Uncle Charlie – The FCC

uplink – Channel used for earth-to-satellite communications

USB – Upper Side Band common for the 20, 17, 15, 12, and 10 meter HF amateur bands, VHF and UHF bands

UTC – Coordinated Universal Time

utility stations – Stations other than broadcast, or amateur stations not intended to be heard by the public including aviation, radiotelephone, marine, embassy, and military

VA – Volt Amperes – measure of apparent power

VAC – Volts Alternating Current

varactor diode – a component whose capacitance varies as the reverse bias voltage is changed

VCO – Voltage-controller oscillator

VEC – Volunteer Examiner Coordinator, an amateur radio organization empowered by the FCC to recruit, organize, regulate and coordinate Volunteer Examiners

VFO – Variable Frequency Oscillator

VHF – Very High Frequency 30 – 300 MHz

VLf – Very Low Frequency 3 – 30 KHz

VMOS – Vertical metal-oxide semiconductor

VOA – Voice Of America.

VOM – Volt-ohm-meter

VOX – Voice Operated Transmit

VSWR – Voltage standing wave ratio

VTVM – Vacuum tube voltmeter

VXO – Variable crystal oscillator

W1AW– Official ARRL station callsign, also transmits Amateur Radio News Bulletins, Propagation Conditions and Forecasts, and Morse Code Practice. Former Call of Hiram Percy Maxim, ARRL founder.

WAC – Worked All Continents award from the IARU, administered by ARRL

wallpaper – QSL cards, awards, special event certificates

WARC – World Administrative Radio Conference

WARC Bands – An expression to indicate the bands allocated in 1979 — 17M, 12M and 30M

WAS – Worked All States award from ARRL

WAZ – Worked All Zones award from CQ magazine for confirmed contact with each of 40 zones

WEFAX – Weather facsimile, reconstructed satellite images and photographs

wireless – radio (As opposed to wired – telegraph)

WIRES – (Wide-coverage Internet Repeater Enhancement System) is an Internet communication system which expands the range of amateur radio communication. **WIRES-X** – an amateur node station connecting to the Internet is used as the access point and connects the wireless communication to the Internet.

WPM – Words per minute; as in Morse code or typing speed

WWV – NIST radio station (time signals)

WWVB – NIST radio station (broadcasts time signals)

WX – weather

XCVR– Transceiver

XFMR – Transformer

XTAL – Crystal

XYL – Ex-Young Lady, wife

Yagi – “beam” directional antenna array

zero beat – Adjust the frequencies of two signals so that they are exactly equal and in phase

Zepp antenna – simply a weighted wire reeled down and up from early lighter-than-Zeppelin air-ships

Zulu – Coordinated Universal Time. Also the phonetic for the letter Z