Amateur radio : Callsigns, Phonetics, Q codes and emergency signals

Presented By

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International Telecommunications Union

- ITU is an specialized agency of the UN, that plays a vital role in the management of the radio frequency spectrum and satellite orbits - finite natural resources which are increasingly in demand from many services such as, broadcasting, amateur, space research, meteorology, global positioning systems, environmental monitoring, and communication services that ensure safety of life at sea and in the skies; It is headquartered at Geneva, Switzerland

- It has 193 member states and is divided into 3 regions for the effective management of the global radio spectrum – India falls under ITU Region 3

- In India, the Wireless Planning and Coordination (WPC) wing of the Ministry of Communications is responsible for allocation and management of the radio frequency spectrum
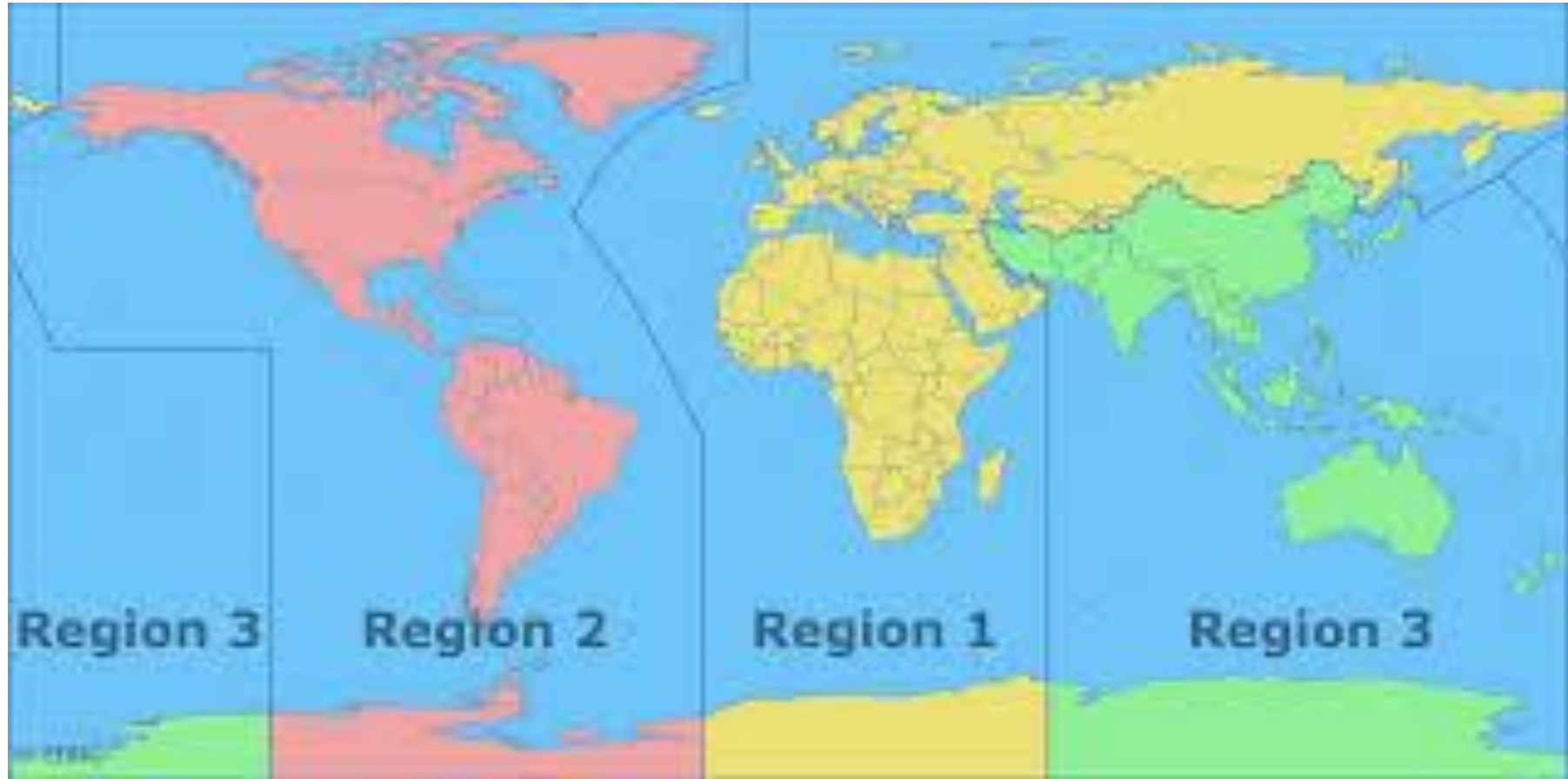
What is a callsign?

- A callsign is a unique identifier allotted to licensed users of the radio spectrum – it identifies the station who is broadcasting and provides some basic details about the station such as the country of origin, license class, etc. ; can be thought of as amateur radio "number plates"

- The callsign consists of numbers and alphabets that are used to denote certain information about the holder of the callsign

- The International Telecommunications Union, ITU, is responsible for allocating callsign blocks to countries

- In India, callsigns are issued by the Ministry of Communications

What is a callsign?

- Every callsign has a prefix and a suffix; the prefix usually denotes the country, and the suffix denotes the unique identifier – Ex: VU3XYZ VU3 is the prefix, with VU indicating country, 3 indicating license class, and XYZ is the suffix, which is the unique identifier

- Each country has its ITU allocated callsign blocks from which they allot callsigns; For India, the allocated callsign blocks by the ITU are ATA-AWZ, VTA-VWZ, 8TA-8YZ

- Out of the ITU allocated callsign blocks for India, VU is used for amateur radio callsigns, VT is used for aeronautical callsigns, VW for marine callsigns, etc.

Callsigns ..

- In India, VU is the allocated prefix for all amateur radio callsigns; VU2 or VU3 are granted to citizens from the mainland; VU4 for Andaman and Nicobar Islands ; VU7 for Lakshadweep Islands

- Currently, there are 2 grades or classes of amateur radio license in India – Restricted (VU3) and General (VU2) grade amateur radio licenses

- During special events, the government allots special callsign prefixes, such as AT or 8T for radio amateurs in order to popularize the event; Ex: AT7 LH was granted during the International Lighthouse and Lightship weekend – an event to celebrate the importance and significance of lighthouses and lightships around the world

Callsigns …

- Countries worldwide follow as similar system for allocating callsigns from their ITU allocated callsign blocks - Ex: Sri Lanka 4S ; Germany DA-DR; USA K or W or N; England G or M; Japan JA-JS

- The allocated callsign is only valid within the country and its territorial waters and international waters; A callsign allocated in India cannot be used in say, Singapore. A Singapore wireless license or reciprocal license is required

- Reciprocal licenses are issues when countries have agreements to allow for amateur radio operators to operate freely within both countries with their allocated callsign with slight modifications – India does not have reciprocal agreements!

Q Codes

- The Q code is a standardized collection of three-letter message encodings, also known as a brevity code, all of which start with the letter "Q", initially developed for commercial radiotelegraph communication, and later adopted by other radio services, especially amateur radio

- Although Q codes were created when radio used Morse code exclusively, they continued to be employed even after the introduction of voice transmission

- Q codes are commonly used invoice communications as shorthand nouns, verbs, and adjectives making up phrases

- A Q code sent with a question mark is considered a question, whereas a Q code sent without a question mark is a reply

Commonly used Q codes

- QRL : Are you busy? / I am busy
- QRM : Do you have any interference? / I have interference (Man made)
- QRN : Are you troubled by static? / I am troubled by static (Natural)
- QRO : Shall I increase power? / Please increase power
- QRP : Shall I decrease power? / Please decrease power
- QRQ : Shall I send faster? / Please send faster
- QRS : Shall I send slower? / Please send slower
- QRT : Shall I suspend operation (or) turn off the radio? / I am suspending operation (or) turning off the radio

Commonly used Q codes

- QRU : Any messages for me? / No messages for you
- QRV : Are you ready? / I am ready
- QRX : Shall I standby ? / Please standby
- QRZ : Who is calling me? / You are being called by _____ on ____ MHz
- QSL : Can you acknowledge receipt? / I acknowledge receipt
- QSB : Are my signals fading? / Your signals are fading
- QTH : What is your position (in Lat. And Long.)? / My location is _____
- QSY : Shall I switch to another frequency? / Please switch to ____ MHz

Phonetics

- In voice communication, it is very easy to mishear words and numbers due to various factors such as noise, fading signals, etc.

- In order to prevent confusion between alphabets and numbers, amateur radio operators use the ITU phonetic alphabet and figure code

- The code is devised in such a way that it allots a distinct sounding word for every alphabet and for numbers zero to nine so that they can be copied down without any errors

A – Alpha	J – Juliet	S – Sierra
B – Bravo	K – Kilo	T – Tango
C – Charlie	L – Lima	U – Uniform
D – Delta	M – Mike	V – Victor
E – Echo	N – November	W – Whiskey
F – Foxtrot	O – Oscar	X – X-Ray
G – Golf	P – Papa	Y – Yankee
H – Hotel	Q – Quebec	Z – Zulu
I – India	R – Romeo	

SIARS

Emergency communication

Emergency conditions are classified in accordance with the degree of danger, or hazard as follows:

- Distress: A condition of being threatened by grave and/or imminent danger and requiring immediate assistance

- Urgency: A condition concerning the safety of an aircraft or other vehicle, or of someone onboard or within sight, but which does not require immediate assistance

- Safety: An indication that the station calling is about to transmit a message concerning the safety of navigation or important meteorological warnings

Emergency : Distress signal

- It is used when there is a threat to human life and immediate assistance is needed, for example, by a sinking ship or a damaged aircraft

- The distress call has the highest priority over all transmissions – all stations must stop transmitting and listen to the distress traffic once they hear it to avoid interfering with the station in distress

- For voice transmissions, the word "Mayday" is used and for Morse code transmissions, "SOS" is used

- Example (VOICE) : Mayday, Mayday, Mayday, this is VU2ABC VU2ABC VU2ABC calling Mayday; My location is XYZ, XYZ, XYZ; Fire in the engine room, need fire and medical assistance; Seven souls onboard and can remain afloat for a few hours; Over. Message is repeated until a response is heard

Emergency : Urgency signal

- It is used when a very urgent message needs to be transmitted concerning the safety of a station or a person, but does not require immediate assistance , for example, a ship with one engine damaged and one engine functional

- The urgency signal has the highest priority over all transmissions, except a distress call –stations in communication with the station transmitting the urgency signal must stop transmitting and listen; stations that do not interfere can continue as usual

- For voice transmissions, the word "Pan" is used and for Morse code transmissions, "XXX" is used

- Example (VOICE) : PAN, PAN, PAN, All stations, this is VU2ABC VU2ABC VU2ABC; My location is XYZ; port engine failure, need mechanical assistance; Over. Message is repeated until a response is heard

Emergency : Safety signal

- It is used to transmit a message concerning the safety of navigation or important meteorological warnings . The safety signal has the highest priority over all transmissions, except the distress and urgency signals –stations listening to a safety signal shall continue to listen on the frequency on which the message was transmitted until they are satisfied that the message is of no interest to them

- For voice transmissions, the word "SECURITE" is used and for Morse code transmissions, "TTT" is used

- Example (VOICE) : SECURITE, SECURITE, SECURITE, All stations, this is VU2ABC VU2ABC VU2ABC; LOG BOOM ADRIFT AND BREAKING UP SIX MILES SOUTH OF MERRY ISLAND; Over/Out.

Thank you

Questions and comments in the chat box!