



OPERATING PROCEDURES FOR A NEWLY LICENCED HAM RADIO OPERATOR

Once you get your licence and the call-sign, it is time for you to start transmission. Radio waves are nowadays a precious commodity and so the ham should not misuse them for his own ends. It is the duty of the ham to know the correct operating procedure. If a newly licenced ham radio operator is ignorant about the correct operating procedures, he may create nuisance in the band. A ham should also be aware about the **International Code devised by Paul M. Segal**.

CODES FOR A HAM RADIO OPERATOR

The ham is considerate. He/She never knowingly uses the air (radio waves) in such a way as to lessen the pleasure of others.

The ham is loyal. He/She offers his/her loyalty, encouragement and support to his/her fellow hams, his/her local clubs.

The ham is progressive. He/She keeps his/her station (radio equipment) abreast of science. It is well-built and efficient. His/Her operating practice is above reproach.

The ham is friendly. Slow and patient sending when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of other; these are the mark of the ham spirit.

The ham is balanced. Radio is his/her hobby. He/She never allows it to interfere with any of his/her duties he/she owes to his/her home, his/her job, his/her school or community-and lastly his/her knowledge and his/her radio station are always ready for the service of his/her country and his/her community.

CALLING ANOTHER STATION IN RADIO TELEPHONY

A call may be given to another station either in voice or using the Morse code. But before giving a call, it is the duty of the ham to check whether the frequency he is going to use is already in use by other ham/s or not. Even though a particular frequency seems to be idle, it may not be so. Because, there may still be a ham sending his message whose signals are in skip with us (see questions & answers related to radio wave propagation) and another ham at a different location is listening to him. Giving a transmission in the same frequency in such a situation will interfere with the ongoing communication. So, prior to our transmission, it should be ascertained by sending the message-"Is the frequency in use?". This should be repeated two more times and if no reply has been received, then we can occupy the frequency. After occupying a frequency, we can give a 'General Call' or a 'Directional Call'. A 'General Call' is a call given to all the stations. This means that you will reply to anybody from any part of the world. The message sounds like -"CQ CQ CQ this is Victor Uniform Two.... (your callsign suffix in phonetics) calling CQ on 20 metre and standing by". The 'CQ' message may be repeated for three time before giving the 'standing by' message. As you 'stand by', listen carefully for any possible reply. If no reply is received, you can continue giving your CQ call. There is also a 'Directional Call' which is directed to a particular country or a particular station. A call directed to a particular country is like-"CQ Japan CQ Japan CQ Japan this is Victor Uniform Two". This means that you will reply to stations from Japan only. A call may directed to a particular station also. In this case, in place of the country name, the 'call-sign' of the station is put. A person with the true ham spirit does not adhere strictly to his directional call, and as such should not deny reply to a ham from another country replying to his directional call (in the above example) until and unless he is in real emergency. Too much of formalities should be avoided as it may dishearten another fellow ham, also it is against the code devised by Paul M. Segal!

After establishing contact and offering the initial greetings, a signal report should be given to the other station. Your name (Handle) and location (QTH) should then be spelled out clearly in phonetics. If the other ham finds difficulty in copying your voice signal due to poor propagation condition or due to the difference in pronunciation, you should not loose patience and the message should be repeated if requested. You can also give the weather report (WX report) with mentioning of the temperature in degrees Centigrade. After this, discussion regarding the antenna system and equipment (called-"Working condition") begins. Before closing the conversation with a particular station, 73 message

(meaning 'Best of Regards') should be conveyed to the ham and his family and indication should be given whether you are closing down (going QRT) your station, you are changing your frequency (QSYing) or you are still occupying the frequency. This will help other stations to follow you in case they want to make a contact with you. If the conversation takes long time, both the stations should mention their call-sign at ten minutes interval.

SIGNAL REPORT IN RADIO TELEPHONY

When on-the-air contact between amateur radio stations is established, both the stations exchange signal reports. This gives the idea about how strongly the ham radio stations are receiving each other. For telephony (voice), Readability and Signal strength scale is devised.

Readability Scale		Signal Strength Scale	
Q1	Hardly perceptible; unreadable	R1	Unintelligible; barely perceptible
Q2	Weak; readable now and then	R2	Weak signals; barely readable
Q3	Fairly good; readable but with difficulty	R3	Weak signals; but can be copied
Q4	Good; readable	R4	Fair signals
Q5	Very good; perfectly readable	R5	Fairly good signals
		R6	Good signals
		R7	Moderately strong signals
		R8	Strong signals
○	○	R9	Extremely strong signals

A 59 (5 and 9) report is the best report in radio telephony. You should be honest in giving a signal report. Don't give a good report just to please your friend! There may be some problem in the antenna system of your friend's station due to which you are receiving him poorly. Under such a situation, giving a false report will misguide your friend and your friend may not be able to detect/rectify the fault in his system.

SIGNAL REPORTING IN RADIO TELEGRAPHY (MORSE CODE)

In radio telegraphy contact using Morse Code, the RST (Readability, Signal Strength and Tone) system of reporting is followed. This system was devised by W2BSR, New York. Throughout the world, Morse code is still used very affectionately by thousands of ham radio operators. They make conversation as fluently as they do in voice using Morse code. In fact Morse Code has many advantages over voice communication in certain situations as well just for the cheer joy involved in this art of communication which we have discussed in the chapter on Morse code learning. In Morse code also, either general CQ call or directional call can be given. The calling format is given below.

GENERAL CALL IN RADIO TELEGRAPHY (MORSE CODE)

CQ CQ CQ DE VU2XYZ VU2XYZ VU2XYZ AR PSE K

DIRECTIONAL CALL IN RADIO TELEGRAPHY (MORSE CODE)

CQ/VU2ABC CQ/VU2ABC CQ/VU2ABC DE VU2XYZ VU2XYZ VU2XYZ AR KN

In Morse code, long words are usually avoided and hence only the abbreviated form of the words are sent. There are certain Internationally accepted Morse Code abbreviations which you should remember and use during communication. 'AR' is synonymous to saying 'over' in voice (A voice message should be ended with the word 'over to'). 'K' is the invitation to transmit which is synonymous to saying 'go ahead' in voice communication. A message ended with KN

indicates that the message was directed to a particular station only. During an ongoing communication also, the message should be ended with 'KN' which provides the information to the other stations that communication was already in progress between two stations. Each sentence of the message should be separated by 'BT'. Given below is a typical Morse code message.

VU2XYZ DE VU2ABC BT TNX FER CALL BT UR RST RST IS 579 BT MY NAME ISES QTH IS BT OK? AR VU2XYZ DE VU2ABC KN

When you finally close your conversation with a particular station, indication should be given, i.e. the message should be ended with 'VA' (meaning 'over and out with'). A typical closing message may look like-..... VU2ABC DE VU2XYZ VA. This means that VU2XYZ is now free to communicate with other stations.

THE RST SYSTEM

Readability	Signal Strength	Tone
1-Unreadable	1-Faint, signals barely	1-Extremely rough hissing note
2-Barely readable, occasional words distinguishable	2-Very weak signals	2-Very rough AC note, no trace of musicality
3-Readable with considerable difficulty	3-Weak signals	3-Rough. Low-pitched AC note, slightly musical
4-Readable with practically no difficulty	4-Fair signals	4-Rather rough AC note, moderately musical
5-Perfectly readable	5-Fairly good signals	5-Musically modulated note
	6-Good signals	6-Modulated note, slight trace of whistle
	7-Moderately strong signals	7-Near DC note, smooth ripple
	8-Strong signals	8-Good DC note, just trace of ripple
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