

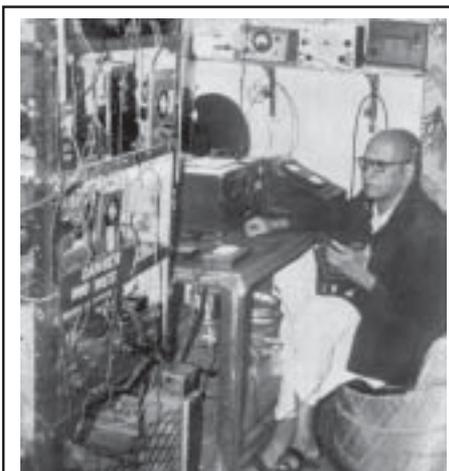
The Essence of Ham Radio

The term 'ham radio' is very often misinterpreted by the common people due to the lack of a proper understanding about this wonderful mode of communication. Sometimes it is considered as a privilege enjoyed by people who are extraordinarily skilled in radio communication. Sometimes it is assumed that 'ham radio' is a radio communication system far superior to the other communication systems, which can do miracles in the event of an emergency situation. Some people believe that a ham radio operator can even 'spy' for the enemies with the help of his radio communication equipment! These notions about ham radio are quite needless and are out of place of times.

It is true that ham radio is one of the superior modes of communication, which employs radio frequencies. A radio transmitter or receiver can be used from anywhere in the world because it is not connected through wires to any other terrestrial installation. Whether you are in the deep sea on a ship, on a boat in the midst of a river, inside a jungle far away from your home, you can always hope to get in touch with your beloved ones if you have a two-way radio communication system available with you. But it would be wrong to say that 'ham radio' can achieve miracles just at the press of a button!

In the days of landline telephones when the mobile telephones were not commonplace, a walkie-talkie type radio transmitting and receiving device was considered an instrument privileged to be used by the law enforcing agencies (e.g. Police) only. So, a person with a walkie-talkie in his hand and who was not a policeman was looked upon with certain degree of awe! This perception has changed very little even today. However, for people living in industrial cities, it is not very uncommon to see the use of such walkie-talkies by the employees of the industries. So, the notion that a wireless device is restricted to be used by the police only has changed in recent times. To use a mobile telephone (which is nothing but a combined unit of a wireless transmitter and receiver only) or to use a walkie-talkie you need not learn much about the technicalities behind their operation. Similarly the policeman carrying his walkie-talkie need not bother how his message reaches its destination. This is because of the fact that there are professional engineers and technicians to look after the government run wireless networks. It is quite intriguing to see that a wireless device like the mobile telephone is no longer considered as a restricted instrument. Anybody can use a mobile telephone without any governmental approval and use it for whatever purpose he wants! One can communicate to anywhere in the world using such a device. Also, by law it is illegal to listen to the conversations of the mobile telephone network except by the people authorized to do so. Mobile telephone of course has its range limited within a particular radius of the place where its service is available. On the contrary, ham radio communication is entirely different from the existing governmental communication network. People very often confuse the term 'ham radio' with some sort of a sophisticated 'wireless instrument'. Of course, this is not the fault of theirs, because a modern ham radio wireless device is no different in its look and use from that of a wireless device

used by the police or the army! Though the term 'ham radio' is used in unison, if we look into any English dictionary, it would be found that it is a single word (ham) used to describe 'an amateur radio operator'. Definitely the word 'ham' (it was not probably an abbreviation) was incorporated into the English language dictionary at a point of time after the advent of wireless communication system. But, who is an amateur radio operator? Why is he interested to operate a radio transceiver (a combined unit of transmitter and receiver) of his own? In this series of articles we shall try to provide you information related to this wonderful scientific activity in which you can also try to take part.



Late Prof. D.R. Paranjape, VU2AU (1967)-an Indian amateur radio operator who was licensed in 1933. This rare photograph is reproduced from the inaugural issue of 'Radio'-Journal of Radio & Electronics Society of India (RESI), January 1967.

Ham radio is an entirely educational down to earth activity. While helping in unleashing the technical creativity in an ordinary human being, it has at the same time been helping an individual to associate in a wider social context, which is somehow different in dimension and has a very noble cause beneath it. The ham radio communication network is maintained by voluntary participation of people around the world who are interested in radio communication technology. It does not depend upon any governmental network. Therefore, the success of such a wireless network in a particular area in the event of a disaster depends largely upon the density of the population of ham radio operators and their dedicated involvement. The one who loves to learn how to overcome the various hurdles of a worldwide two-way radio communication can only adore this hobby.

Ham radio (or more appropriately 'amateur radio') emerged as a hobby (and later recognized as 'Amateur Radio Service') almost hundred years back, at a time when the radio communication

technology was in its infancy. To establish a radio contact with the other parts of the world was considered a great challenge during those days. There were enthusiast people around the world who aspired to communicate with each other using their own radio transmitter and receivers. Construction of radio communication equipment itself was a great challenge. Inexpressible happiness accompanied successes for those who embarked such ventures and so as the thrill accompanied when one could talk to an unknown person located at a distant corner of the world! Thousands of such experimental radio stations came into existence irrespective of geographical boundaries! They are the non-professionals (radio communication is their hobby) who communicate through radio waves.

In the next issue we will discuss about the origin of the term 'ham radio' with reference to the history of radio communication. For more information on ham radio you can log onto the URL <http://www.vigyanprasar.com/ham>. For information on homemade circuits, which are useful for beginners, the following URL may be referred: http://www.qsl.net/vu2msy/homebrew/homebrewing_zone.htm.

□ **Sandeep Baruah**

(a ham radio hobbyist with the call-sign VU2MUE)

sandeep@vigyanprasar.gov.in

Homepage: <http://www.qsl.net/vu2msy>