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MOTOROLA "WALKIE TALKIE" 2-WAY RADIO

"The Fightingest Radios in the War"

1944  
(see p 20  
the Handie  
Talkie)

While war in Europe was raging and before the United States was involved, the United States Army Signal Corps knew that present-day warfare of lightning movements, mechanized equipment and highly mobile personnel units demanded the best there was in two-way radio communications of a certain limited range. Specifically, the Signal Corps was not thoroughly satisfied with the performance of the small portable battery operated 2-way radio carried on the back of one man.

This old type set was designed for both sending and receiving 2-way radio-telephone messages for distances up to five miles, but it was an A-M set and static and other electrical disturbances interfered and the message did not always get through. Tests were then made of the comparative advantages of using F-M and A-M sets with F-M eventually getting the Signal Corps' approval. It was revealed that F-M had a range advantage over A-M under identical operating conditions. At extreme range, F-M was 4 to 3 above A-M in intelligibility while at medium range F-M was 3 to 2 over A-M in intelligibility.

Due to their long and successful experience with F-M police radiotelephone systems (26 states are now using Motorola Radio statewide police systems), the Galvin Manufacturing Corporation of Chicago was called upon by the Signal Corps to help them develop a new F-M two-way portable unit.

Out of this cooperative action, the present two-way portable transmitter and receiver known as the SCR-300 Motorola "Walkie Talkie" came to life. The present "Walkie Talkie" developed by Motorola in cooperation with the Signal Corps is smaller, more compact and efficient, yet more powerful than the previous A-M and F-M models. It is used by our fighting forces on every battle front and next to the "Handie Talkie" is the first radio to be used on beachhead landings and in offensive actions.

The Motorola F-M "Walkie Talkie" is in itself a complete broadcasting and receiving unit. It has its own sending and receiving units and its own collapsible antenna. It weighs a little over thirty-five pounds, is carried on the back of one man and has facilities for plugging in a hand set and also an earphone head set so two may listen in. It is simple to either send or receive vocal radio messages over fairly long distances. The Motorola "Walkie Talkie" has been proven dependable and reliable on every battle front. Messages come through clearly and distinctly and the operating life of the batteries has exceeded the original expectancy.

"Walkie Talkies" are used by troops for all types of limited-range radio communications; the directions of artillery, reports of advance, of enemy positions, of other battle and supply conditions, in fact, for an almost limitless number of applications.

The operation of the "Walkie Talkie" is simplicity itself. Its wave length may be easily varied, and this wave is picked up by a receiver tuned to the same frequency. The receiver may be either another "Walkie Talkie" or a central station tuned to the "Walkie Talkie" wave length. In other words, one "Walkie Talkie" cannot talk to another "Walkie Talkie" unless both are tuned to the same wave length. The advantages of this on a battle front are not difficult to imagine.

Governmental agencies such as police departments, fire departments, forestry departments, etc., will surely find the "Walkie Talkie" very valuable, and in many cases industrial firms and public utility companies may be permitted to use it.

The Federal Communications Commission has proposed a Citizens' Radiocommunication Service in the 460 to 470 megacycle band of the spectrum. According to a recent FCC press release, "Small portable radios may be used, for example, to establish a physicians' calling service, for communication to and from trucks and tractors operating in and around large plants, on farms and ranches, on board harbor and river craft, in mountain and swamp areas. Sportsmen and explorers can use them to maintain contact with camps. Department stores, dairies, laundries and other business organizations can use the service to communicate with their delivery vehicles".

However, there are many problems which must be overcome despite this liberal ruling of the FCC. "Walkie Talkies" are powered by batteries inasmuch as they are portable sets. Using such low power in such an ultra-high frequency will not permit communication over a very great distance -- and long distances plus low cost is what is usually wanted by anyone using radio communication. Some day "Walkie Talkies" will be utilized for the Citizens' Radiocommunication Service. At first dry battery operated portable sets will not be used. Power will have to come from central stations or 6-volt wet batteries, but later on, when new tubes and stronger, longer-life batteries are developed, then there will be common use of "Walkie Talkies".

The licensing control will be handled by the Federal Communications Commission and it will be necessary for them to decide who shall and who shall not utilize 2-way radio communication.

The "Walkie Talkie" has played a vital role in the invasion and the success of the invasion was greatly enhanced by the modern communications equipment used by General Eisenhower.

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