

THE CHANGING FACE OF MARS:

Military readiness of amateur system is target of important new program

Recently developed concepts of atomic warfare have lifted MARS --- the Military Affiliate Radio System --- to a place of new importance in the thinking of the Signal Corps, and plans for the immediate future include a program of continuing action to improve that system's military readiness and the over-all reliability.

A factor basic to the program is the geographical coverage afforded by a properly constituted and supported MARS. This is recognized as a vital resource for which there can be no substitute, now or in the foreseeable future. Obviously it is not feasible to install military operated facilities in every State and local community where Army assistance could be needed under foreseeable disaster conditions. But MARS, as it exists today, provides a **basic** structure for accomplishing that mission, and plans are going forward for enhancing its effectiveness.

"How can we be sure that MARS members will be on the spot ready and able to perform a mission?" The answer is based upon experience. The **interest** and ability shown by MARS members during the Tobacco Leaf exercises conducted annually by Second Army are taken as conclusive evidence that the planned integration of MARS is both feasible and **worth-while**. On **the other** hand, the versatility of the individual amateur operators and their flexibility has been clearly demonstrated in past emergencies. In hundreds of storm, flood, and earthquake disasters since 1913, amateur radio has been the principal and, in many cases, the only means of outside communication. The amateurs, hastily mobilized, were on the scene with their portable equipment. And these same amateurs are **the** people who form the backbone of MARS. In theory, voluntary status may appear a detriment. In practice, it means that someone will always be there to do the job.

It **was** in the light of these considerations that the Chief Signal Officer distributed to **all** major commands the current operational plan for MARS (Army). This plan provides for the selection and designation of Military Affiliate Radio System Emergency Command (MARSEC) stations. Such a MARSEC station is designed to serve as a centralized facility manned by MARS members living in the vicinity. By fostering group participation instead of relying wholly upon stations owned by individuals, the plan creates a probability that a percentage of **personnel** will be available at all times to operate **the station**. The result can only be to greatly strengthen the dependability of MARS.

The MARSEC stations are also intended to **provide** a network nucleus to support interim communications during the initial phase of a local or national emergency. To this nucleus other stations can be added as they become available. It is to be understood, however, that the establishment of MARSEC stations in no way limits the function or the usefulness of the

basic MARS networks as presently constituted. The existing structure works, and it may be capable of doing the whole job alone when the time comes. The MARSEC stations simply represent an effort to reinsure the result.

System-wide Tests and Drills

Also featured in the new program are frequent test exercises and drills for portions or all of MARS. These are being planned with a view, particularly, to stimulating interest as well as improving the system's effectiveness.

Since 1948, membership in the Army portion of MARS has increased to its present level of about 5,000 member stations. In these years MARS has effectively contributed to emergency communications in practically all disaster-stricken areas. As a secondary role, it handles a considerable number of personal messages passing **between** servicemen overseas and their families and friends in the **CONUS**. The traffic capacity of the MARS overseas circuits is limited, but the experience and training afforded by the processing of such traffic is considered highly valuable.

Pre-induction Certificates

To secure recognition for MARS members about to enter the Armed Forces, pre-induction certification is authorized by SR 615-25-38 (Selection of Specialists). This certification gives the classification interviewer **information** that may pave the way to a Signal Corps assignment.

Another aspect of the MARS program was implemented when civilian members of Army MARS were invited to enroll in selected extension courses of The Signal School. The widespread response to this offer was taken to indicate the high quality of the membership of **MARS**.

Uniform and understandable reference material and procedures, which could be placed in the hands of all members, have been needed ever since classification difficulties made it necessary to withdraw a former procedure manual. A new communication manual for MARS has been drafted with a view to overcoming these and other difficulties, and this is due to be printed and distributed to all MARS members before the close of 1956. The procedural **instructions** in the new manual are such as to permit efficient interchange or joint operation between MARS and other military activities.

Progress in the field of new equipment has also been made. To take advantage of the gains resulting from single-sideband suppressed carrier operation, both Army and Air Force MARS have been instrumental in the development and procurement of a commercially built single-sideband transmitter designed specifically for **operation** on MARS and amateur frequencies. This transmitter is expected to be available for issue to MARS military unit stations before the end of 1956. It uses a full-lattice crystal filter with balanced modulator and notch crystals to attain better than 65 db carrier and 55 db unwanted sideband attenuation. Such performance exceeds considerably the degree of attenuation realized with phasing **type** transmitters, and makes it possible for two separate nets to operate **simultaneously** on the same assigned frequency by using upper and lower sidebands respectively.

EDUCATIONAL OPPORTUNITIES OPENED TO RESERVE OFFICERS

Advanced training in universities or with industry is now being offered to Reserve as well as to Regular Army officers who qualify in communications-electronics, sciences, **business** administration and certain other areas. For full information see **DA Pamphlet 11-9, Signal Corps Officer Training Program**, and AR 350-200.