

RADIO

Lifting of UHF-TV Freeze

Expect that within a year the number of television broadcasting stations will double, following anticipated lifting of government "freeze."

➤ WITHIN A year the number of television broadcasting stations in the United States will double or even triple, it is expected. This great expansion will follow the lifting of the present government "freeze" on television stations, action expected in the near future.

This freeze was imposed by the Federal Communications Commission in September 1948 because of a shortage of wavelength channels in the air. Nearby stations must use widely separated wavelengths or they interfere with each other. The development of new ultra high frequency channels will now permit the installation of many new stations.

At the present time there are 107 television broadcasting stations in the country and while a high percentage of the nation's population is within television range about half the area of the country is outside. Television networks are extending rapidly, using either coaxial cable or relay stations, but broadcasting stations are needed to transmit their programs through the air to home receivers.

The ultra high frequency systems to be used will use channels between 470 and 890 megacycles. A megacycle is 1,000 kilocycles, and a kilocycle is 1,000 cycles. A frequency of 470 megacycles means, therefore, that the transmitter sends out 470,000,000 waves each second. Standard radio, for example, is broadcast on frequencies from about 500 to 1,600 kilocycles.

Present television operates in what is called very-high frequencies (VHF) from 50,000 to 216,000 kilocycles. The present 107 television stations are operating over 12

VHF channels within this range. By proper placement, additional stations can use these same 12 channels. Tentative allocations by the Federal Communications Commission will permit the opening of 450 additional VHF stations.

The FCC proposals for the new ultrahigh frequency (UHF) would permit telecasts by 1,357 stations over 52 additional stations. A considerable number of these will be in cities of perhaps less than 100,000 population. They will be low-power, with a range of perhaps one-fourth or one-fifth of the ordinary VHF television reception range which is usually 40 to 60 miles.

Present VHF television receivers will not be able to pick up UHF telecasts without the addition of some sort of a special device. Most manufacturers of television receivers already have such a device ready for production as rapidly as needed. In a type developed by General Electric, called the G-E translator, adjustment from VHF to UHF reception is made by a flick of a switch.

Science News Letter, August 11, 1951

NECROLOGY

Harry L. Smithton, Trustee, Dead of Heart Attack, Aug. 5

➤ HARRY L. SMITHTON, long a trustee of Science Service and formerly secretary to the late E. W. Scripps, founder of the Scripps-Howard newspapers and Science Service, died Aug. 5 in La Jolla, Calif., from a heart attack. His family requested that those who wished should send con-

tributions to the Scripps Metabolic Clinic at La Jolla, Calif., instead of flowers. Mr. Smithton became a trustee of Science Service in 1928, but his work with Mr. Scripps had brought him into close contact with the beginning and growth of the organization from its start in 1921. For a number of years, Mr. Smithton served as treasurer of Science Service.

Science News Letter, August 11, 1951

Bamboo, instead of steel, is being used experimentally as reinforcing in concrete with apparent success.

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