

RADIO

TV Interference Fought

Local "task forces" seek causes of television interference. Scheme goes into operation when streaking or other bad reception reported.

► INTERFERENCE THAT may streak up the television screen is being fought by local "task forces" composed of TV set distributors, TV servicemen, radio amateurs and Federal Communications Commission experts.

Some of the television interference is admittedly due to the emission by amateur transmitters of harmonic and other spurious frequencies. But much of the TVI, as interference is called, is due to the TV sets themselves, which are not selective enough and let through amateur signals of proper quality. FM sets have similar troubles. And some TV sets do not do well because they are too close to transmitting and receiving stations.

The radio amateurs, banded together by the American Radio Relay League, were occupying the high frequency or short wave areas of the radio spectrum long before TV. Formerly the amateur stations were working on communication bands higher in frequency than the broadcast bands. Then TV came along and the amateurs found themselves using frequencies mostly lower than the TV sets of their neighbors.

The amateurs wish to prevent interference by proper and careful operation and

it is the duty of the government's radio monitoring staffs in the FCC to see that all use the radiowaves effectively.

The FCC has obtained the cooperation of the TV set manufacturers in installing high-pass filters or modifying existing sets when it is found that interference is caused by deficiency in the TV receiver. This is being done without cost. Both the FCC and the ARRL have helped organize community interference committees which will treat as "doctors" individual cases of reported interference.

A person receiving interference sets the scheme in operation by reporting it. Then the committee of experts gets on the job and gets a solution.

Manufacturers are building their sets to prevent them from taking in signals that they should not receive. And amateurs are regulating their transmitters so that they stay on the band.

Dallas, Texas, and Dayton, Ohio, have made good starts on the interference problem. George S. Turner as FCC chief of field engineering and monitoring is the key person in the government's cooperation.

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GENERAL SCIENCE

ACLS Opposes Conant

► THE AMERICAN Council of Learned Societies—made up of 24 scholarly organizations—has taken issue with Harvard President Dr. James B. Conant and the Educational Policies Commission of the National Education Association over draft deferment policies.

The ACLS said that Dr. Conant's statement, "Education and National Security," issued recently, showed a confusion between two elements of the problem which could easily lead toward accepting procedures of draft deferment that would prevent what Dr. Conant and his commission wanted to accomplish.

Pointing out that the Educational Policies Commission had stressed the need for strengthening the schools in the fields of history and geography of other lands, their economy, their art and literature, languages other than our own, the ACLS declared that the deferment policies proposed would defeat this purpose.

The questions asked and the alternative policies proposed by Dr. Conant and the

Commission, the ACLS asserted, might well leave control of deferments in the hands of the military and produce a policy of deferring students for study of only those subjects considered immediately useful by the military.

The ACLS saw little difference between selection and deferment as operated at present by local draft boards and as they would be operated by the Commission's proposed National Special Manpower Board. It saw danger, however, in changing from the present system of draft deferment for students who demonstrate an ability to complete college education no matter what field of study they pursue.

"The experience of World War II," the ACLS declared, "shows that no man or group of men can foresee which fields of inquiry will be vital to national security in time of war and which will not. Our safety lies more in cultivating all fields of inquiry."

The ACLS concluded that the proposals of Dr. Conant and the Educational Policies

Commission ignore "the wide variety of functions which education must perform if it is completely to serve the safety of the nation."

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GEOLOGY

Samples of Arctic Frozen Ground Help Defense

► PAPER THIN sections of permanently frozen ground from the Permafrost area of Alaska are helping to give military men and others a better idea of how to build airfields and roads in the far North.

These paper-thin sections of frozen land were studied for over a year at Point Barrow, Alaska, in a walk-in ice box that was his laboratory experiment room, Robert F. Black of the U. S. Geological Survey reports. He told members of the Geological Society of Washington that the same stresses of the earth that have twisted and turned certain kinds of rocks, known as metamorphic, could be found in the ice crystals.

Mr. Black drilled many feet down in ice to bring up the cores from which he cut the thin sections he studied. Sections from many hundreds of ice wedges of all sizes were examined. When placed in a microscope between Nicol or polaroid prisms, the structure of the ice shows up as multi-colored bands that can be photographed and analyzed.

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ENTOMOLOGY

Virus Sprays Provide Insect Control Method

► HERE IS a new twist on biological control by which scientists use "bugs to kill bugs."

Sprays, made from the remains of diseased insects that have succumbed to a virus, are proving to be a revolutionary method of controlling alfalfa caterpillars in California.

In field tests last year Clarence G. Thompson, of the division of biological control in the University of California's College of Agriculture, Berkeley, got almost 100% control with the new virus sprays.

Deadly to the alfalfa caterpillars, the virus is harmless to man, animals, and beneficial insects.

The virus dissolves the insides of the caterpillars. The resulting liquid is teeming with virus particles. Dying caterpillars, collected in alfalfa fields during the summer, are used to make more virus sprays.

Only one pint of the diseased caterpillars, when mixed with water, will furnish enough virus to treat 100 acres of alfalfa. The material can be sprayed from airplanes.

Since there are several generations of caterpillars a year, more than one application may be necessary. The younger the caterpillars are sprayed, the better.

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