

Radiolympia 1934

IF the charge be true that the annual Radio Exhibition is increasingly a cabinet-makers' show, yet there is comfort in the disappearance of the worst excesses of the cabinet-maker. The standard of taste in the casing of sets has improved greatly; there are very pleasing models—even a wireless set with a divan built into it is inoffensive. It is certainly not a philologist's show; impressions from different stands may unite into a nightmare which asks whether an all-electric superhet with high note uplift should embody not only a tweeter but also a baffle for the energised dynamic speaker, to eliminate woofiness! The physicist may let himself be soothed by an unqualified assurance that "If Blank is your aerial, even in the most exposed position, there is nothing to fear. Blank is so well insulated, so thoroughly protected that it is impossible for your set to receive a 'direct hit'—the lightning simply cannot get as far as the set—you and your home are perfectly safe from harm". He will certainly be depressed by an offer to measure—for sixpence—an undefined physical quantity (physical since it is read on a dial) called "It".

Turning to the more cheerful aspects of the show, the visitor will find a notable rise in musical quality, no longer wholly obscured by the distressing proportion of loud-speakers retaining an individuality of their own. He will be interested in the pioneer examples of variable selectivity, allowing the user to accept the widest band of frequencies that the disturbance conditions of the moment permit. He will rejoice that the amount of available quantitative data is slowly increasing. He will welcome the emergence of piezo-electric devices from a long sojourn in the laboratory into general use in loud-speakers, microphones, pick-ups (or picks-up). He will note that the extension of the range of acoustic fidelity permitted by the 'tweeter'—the high frequency auxiliary speaker—is a boon, but a boon admixed with accentuated troubles from microphone and transmitter hiss, receiver noise, surface-noise from records, and naturally and artificially generated noise in the medium. All these were benevolently reduced by the loud-speaker's neglect of the high audible frequencies; all come into prominence along with the welcome overtones of the desired sound. He will see another stage in the progress of magnetic materials, marked by the public 'release', in time for the show, of magnets in the nickel-aluminium-iron alloys.

In vacuum tubes, the new 'universal' valves for A.C./D.C. use, and the wide range of multiple valves

for automatic volume control of varying complexity, are the special features of 1934. The 'octode' brings within sight the day when a decision on the appropriate lubricating consonant for a 'dodecahode' and an 'icosahode' will be required. Cathode ray tubes of increased size and of reduced size, with and without gas-filling, are among the rare harbingers of the television show which must be expected about 1936. A very neat and versatile cathode ray oscillograph equipment for direct connexion to mains is a specially attractive exhibit.

The Post Office repeats and extends its valuable demonstration of the interference due to electrical plant, and of its reduction. The somewhat curiously entitled "Physical Exhibit" is supplemented by a cinematograph film which the physicist would not willingly exclude from the category of "physical exhibits".

The Department of Scientific and Industrial Research is a newcomer to the Exhibition, with a special exhibit called "The Radio Weather House". Here the work of the Radio Department of the National Physical Laboratory for the Radio Research Board, is illustrated by a talking film and by experimental demonstrations. The film, made by G.B. Instructional Ltd. in co-operation with the Laboratory, is an interesting and markedly successful experiment in instructional films; it is a well-planned and well-photographed exposition of the principles of the cathode ray oscillograph and its application in radio research. The only obvious break in an exceptionally clear and logical pictorial argument is the evasion of explanation of how the resultant of two equifrequent but not cophasal simple harmonic motions becomes an ellipse. It is understood that the two reels of this film on "The Cathode Ray Oscillograph" are intended as the introduction to a projected series of films on radio research; the further films of the series will be awaited with interest.

The "physical exhibits" of the collision preventer, the course-deviation indicator, the cathode ray compass, and the acoustic analogy of echo-sounding of the ionosphere have been noticed in our columns when they were shown to more specifically technical audiences. They have been ingeniously adapted, and supplemented by animated diagrams, for the present occasion. The Department of Scientific and Industrial Research and the Radio Manufacturers' Association are to be congratulated on the co-operation which has enabled the methods and products of radio research to be illustrated to a considerable proportion of the quarter million visitors to this exhibition.

Epidemiology of the Nosu, Western Szechwan, China*

THE independent Nosu tribes of Western Szechwan, known to the Chinese by the derogatory title of the Lolo, occupy a territory of about 11,000 square miles in the bend of the Yangtze River and according to one estimate number so many as 1,500,000. Politically their country is within the Chinese Empire; but it forms a part of the foothills

* The Nosu Tribes of Western Szechwan: Notes on the Country and its Peoples and on the Diseases of the Region. By Drs. E. I. Cunningham, Leslie G. Kilborn, James L. Maxwell, W. R. Morse and Harrison J. Mullett and F. Dickinson, with a Foreword by Dr. Maxwell. The Department of Field Research, Henry Lister Institute, Shanghai. Supplement to the *Chinese Medical Journal*, March 1933. Pp. 56.

of Tibet. Information about these isolated inbreeding tribes is meagre and vague.

In 1932, an expedition to study the Nosu tribes, and more particularly their epidemiology, was organised by Dr. W. R. Morse, professor of anatomy and anthropology at the West China Union University, on a commission from Harvard University. The report on the work of the expedition, in addition to descriptive notes and a record of the journey, deals with blood pressure, surveys general diseases, and sets out observations on the eyes and teeth. Physical anthropology will be treated separately.