

WORLD OF WIRELESS

FM FREQUENCY ALLOCATIONS

THE Federal Communications Commission has finally decided upon its recommendation for the frequency allocations in the 44-108 Mc/s band. It will be recalled that this band was not assigned until the results of FM tests to determine sporadic E interference were known.

The primary concern in the allocations in this portion of the spectrum was FM as this service is not assigned frequencies in any other band, whereas the other services for which provision is made have other allocations.

Of the three FM bands proposed, 50-68, 68-86 and 84-102 Mc/s, the second was dismissed as "completely unfeasible." The primary objection to the first was the amount of sky-wave interference. The F.C.C. report states that "interference among 50 kW FM stations at 58 Mc/s from sporadic E transmissions . . . might be expected for 140 to 480 hours per year at the 50 microvolt contour from stations 900 and 1,000 miles distant." It is pointed out that this interference would be concentrated in two or three summer months. In contrast at 84 Mc/s interference under these conditions "would be anticipated for only 6.5-25.5 hours per year."

The final allocations are:—

FM—educational 88-92 Mc/s, commercial 92-106 Mc/s.

Facsimile—106-108 Mc/s.*

Television—44-50, 54-72 and 76-88 Mc/s.

Non-Government—42-44 and 72-76 Mc/s.

Amateurs—50-54 Mc/s.

* This will eventually be occupied by FM when facsimile uses a higher frequency.

During the F.C.C. investigation considerable emphasis was placed on the hardship to the 400,000 owners of sets covering the old FM band of 42-50 Mc/s. It has, therefore, been decided to permit "interim operation" from 42-44 Mc/s.

RADAR TRAGEDY

DURING Sir Stafford Cripps' address at the Radio Industry Council luncheon on August 31st, when he paid "tribute to the industry's outstanding contribution in the development of Radar—that great war invention," he referred to the "sad tragedy which accompanied the birth of H2S." He then recalled that it was whilst trying out the apparatus in the air that five of the small team working on it were killed in a flying accident in 1942.

Amongst those killed were "two of the most prominent engineers in the British television industry,

A. D. Blumlein and C. O. Browne, with their assistant F. Blythen."

Both Blumlein and Browne were on the staff of Electric and Musical Industries prior to being lent to the Government for research work on Radar.

C. O. Browne, who was a contributor to our sister journal, *Wireless Engineer*, was largely responsible for the E.M.I. television equipment installed at Alexandra Palace.

AMATEUR LICENCES

IT is announced by the Radio Society of Great Britain that the G.P.O. has agreed to accept applications for radiating licences from amateurs who held Artificial Aerial Licences at the outbreak of the war. It is stressed, however, that some considerable time may elapse before licences are issued.

When making application to the Radio Branch W2/6 Engineer-in-Chief's Office (Alder House), G.P.O., London, E.C.1, applicants will be required to submit proof of their ability to send and receive the morse code. A Discharge Leave Certificate carrying testimony that the applicant served during the war in one of the recognised radio trades in one of the Services may be taken as proof of proficiency in morse.

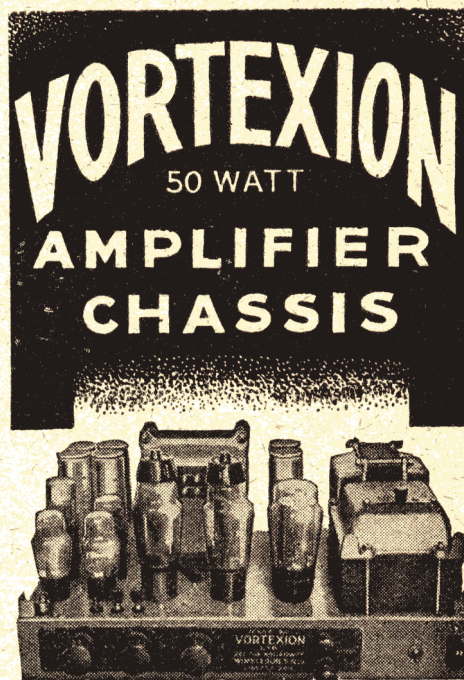
Among the trades listed by the R.S.G.B. a few months ago as likely to carry exemption are: Naval telegraphists, Fleet Air Arm air gunners and observer officers, Royal Signals wireless and line operators and R.A.F. wireless operators.

EXPERIMENTAL B.B.C. TRANSMISSIONS

IT is known that experimental transmissions on the television sound channel, 41.5 Mc/s, have been radiated by the B.B.C. for some weeks and it is understood that FM experiments are now being conducted on 46.3 Mc/s.

On enquiry from the B.B.C. it was officially stated that "normal experiments in broadcasting on ultra-short waves are being carried out by our own Research Department from Alexandra Palace but these experiments are not intended for public reception."

A further test transmission has now been called for by the Television Development Committee of the Radio Industry Council. It has made formal application to the Government for "the immediate introduction of a still pattern picture transmission from Alexandra Palace." This, it is stated, is



The new Vortexion 50 watt amplifier is the result of over seven years' development with valves of the 6L6 type. Every part of the circuit has been carefully developed, with the result that 50 watts is obtained after the output transformer at approximately 4% total distortion. Some idea of the efficiency of the output valves can be obtained from the fact that they draw only 60 ma. per pair no load, and 160 ma. full load anode current. Separate rectifiers are employed for anode and screen and a Westinghouse for bias.

The response curve is straight from 200 to 15,000 cycles in the standard model. The low frequency response has been purposely reduced to save damage to the speakers with which it may be used, due to excessive movement of the speech coil.

A tone control is fitted, and the large eight section output transformer is available to match, 15-60-125-250 ohms. These output lines can be matched using all sections of windings, and will deliver the full response to the loud speakers with extremely low overall harmonic distortion.

PRICE (with 807, etc., type valves) £18.10.0

Plus 25% War Increase

MANY THOUSANDS ALREADY IN USE

VORTEXION LTD.
257, THE BROADWAY,
WIMBLEDON, — S. W. 19.
'Phone: L1Berly 2814