RADIO RECEIVER DESIGN

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Part I

RADIO FREQUENCY AMPLIFICATION AND DETECTION

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AUTHOR'S PREFACE

An attempt has been made in this book to bring together the fundamentals of radio receiver design. Difficulties were experienced in determining the order of treatment, and it was finally decided to follow introductory chapters on general considerations and valves by a detailed examination of the receiver, stage by stage, starting from the aerial. There are objections to this method from the teaching point of view ; for example, the chapter on aerials is better considered after that on R.F. amplifiers, whilst the chapter on I.F. amplifiers should be read before the latter half of that on R.F. amplifiers. To meet possible criticism a fairly detailed table of contents is given, so that the reader can develop his own plan of campaign.

Owing to war conditions the book has had to be divided into two parts, the first ending at the detector stage, leaving Part II to deal with audio frequency amplifiers, power supplies, receiver measurements, television and frequency modulated receiver design, etc.

The cosine expression, $\hat{E} \cos \omega t$, for a voltage of sinusoidal wave shape is used in preference to the sine expression because it is considered that it leads to a simpler mathematical analysis. For the same reason the grid bias voltage is written as $-E_b$, i.e., E_b represents a numerical and not algebraical value of bias. The advantage of so doing is most evident in Chapter 8.

Part I is practically self-contained, though there are one or two cross-references to sections in Part II. To facilitate cross-reference all sections, figures and expressions are prefixed by the chapter number.

No claim is made to an exhaustive bibliography, and reference is made, at an appropriate point in the text, only to those articles which have proved helpful in its preparation.

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Name of Journal	*Figure Numbers*
Electronics	3.22, 3.25
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Journal of the Institution of Electrical Engineers	5.11*a*
Marconi Review	7.13*a* and *b*, 7.14, 7.15
Mullard Technical Bulletin	6.20
Proceedings of the Institute of Radio Engineers	2.17
	5.23*a*, *b* and *c*
	8.9
Wireless and Electrical Trader (Pye Radio)	5.24*a*
R.C.A. Review	5.8*b*
Wireless Engineer	3.8*a* to 3.19*b*
	4.3, 4.11, 4.13, 4.14
	5.8*a*
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