

blies described were restricted to some of the designs evolved at the Radiation Laboratory and cannot, therefore, be considered to be the only practical ones. However, the examples cited are sufficiently varied to fire the imagination of the designer and give him a starting point.

The chapter on "Crystal Rectifier Units" does not cover crystal rectifiers in great detail. However, a sufficiently complete discussion is presented to lay the groundwork for a better understanding of the remainder of the book. A linear-network analysis of crystal frequency conversion, a description of noise-temperature measurements, and a table of commercial crystal types are included in this chapter.

The origin of superheterodyne receiver noise arising in the local oscillator is examined, and means for minimizing its effects by proper mixer design are treated. The design of balanced mixers is developed in detail.

A lengthy chapter, authored by Eric Durand, on "Local Oscillator Frequency Control" covers A.F.C. principles, suitable discriminator types, various hunting systems, and oscillator control circuits. Since it may be easily overlooked in this volume, it appears that this subject would be more in place in the volumes of this series devoted to receiver and oscillator design.

Descriptions of measurement techniques peculiar to microwave converters conclude the volume.

The book as a whole is well written and concise. Because of the limited subject and the very specialized subject matter, it may be considered a valuable reference source rather than a text.

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Scientific Book Register

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