

AUTOMATIC FREQUENCY CONTROL SYSTEMS

BY

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*Perpetual Trouble Shooter's Manual, The Cathode-Ray Tube at Work,
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Series, and other books for the Service Industry*

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**DEDICATED TO
JANET
who has past her
fifth birthday**

AUTHOR'S FOREWORD

THE addition of automatic frequency control to the superheterodyne has added just one more problem that the serviceman must solve. . . . In the main it is true that the functioning of all the AFC circuits has a common basis, i.e., a shifting of the frequency of the receiver's oscillator to compensate for inaccuracies in the setting of the tuning condenser, but as is usual in circuit design, the number of variations of the basic circuit is legion. It is the author's belief in this as in everything, that a complete understanding of the principles on which the AFC circuit is based is the only intelligent and logical way to attack the solution of the problem.

With this thought in mind the first four chapters are devoted to a description of basic principles. We have taken the liberty of including a review chapter covering certain phases of fundamental radio theory for those men in whose minds these very important principles are hazy and without which a thorough comprehension of the remainder of the book would be impossible. The rest of the chapters cover the different types of AFC circuits found in commercial receivers, the alignment, and general servicing notes of this latest radio development.

The introduction of AFC has enabled radio engineers to add semi-automatic and automatic systems of tuning to the superheterodyne and so the serviceman has to turn to things mechanical. While a complete description of the various methods of automatic tuning is beyond the scope of this book, one or two systems, which might be classified as basic, are described, with the thought that a more complete explanation may be had from the various manufacturers' service bulletins.

The author wishes to express his thanks to the several manufacturers who have cooperated with him in supplying data on the AFC systems incorporated in their receivers and for the photographs of their dials and sets used on the jacket.

JOHN F. RIDER.

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