

PRACTICAL TELEVISION

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Practical television by E. T. Larner

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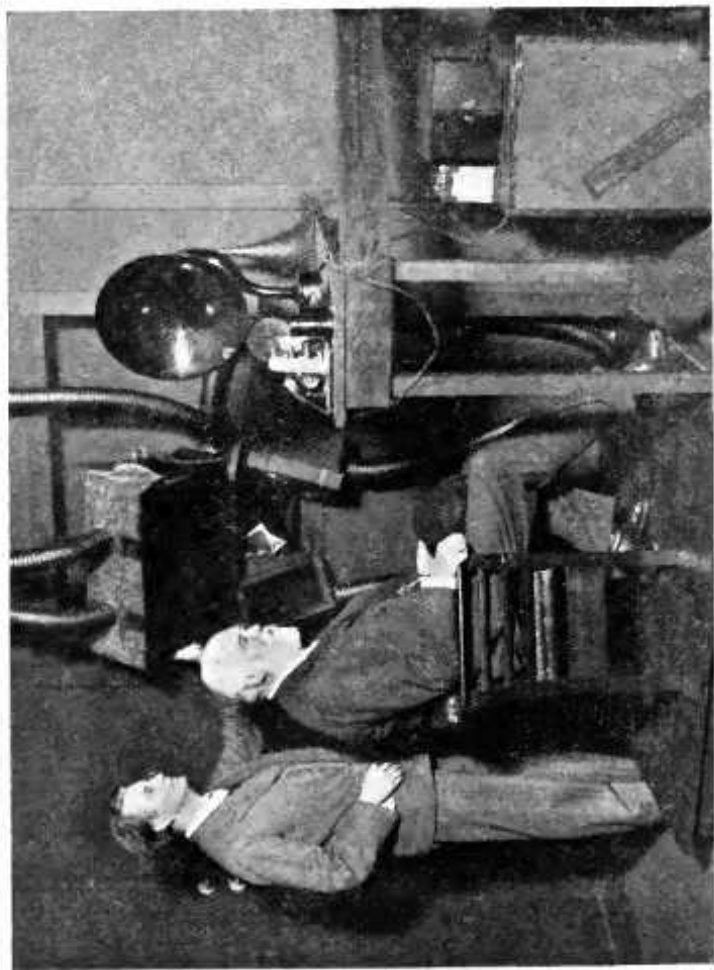
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E. T. LARNER

**PRACTICAL
TELEVISION**



Sir Oliver Lodge "Seeing-in."

[From *Science*].

PRACTICAL TELEVISION

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WITH A FOREWORD BY
JOHN L. BAIRD

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FOREWORD

THE present generation has seen the birth and growth of wireless telegraphy from a scientific novelty to a vast industry.

From the first experiments of Hertz in 1888 to the present day covers a period of forty years, and during those forty years it can be said that the whole outlook of the man in the street towards science has undergone a fundamental change. We have at the present time a great public interested, and intelligently interested, in scientific subjects, and a new literature has sprung up catering for this body of people. This literature deals almost exclusively with the many branches of wireless and depends for its appeal upon the listener-in. If no other benefit has been conferred upon humanity by the development of radio communication, the introduction of this interest in science to a public which had hitherto been apathetic would in itself be no small benefit.

The Shorter Catechism defines man's chief end as the glorification of God, the American Constitution more prosaically defines it as the pursuit of happiness, while in these days we might prefer to describe it as the pursuit of truth. Where better can we seek for truth than in scientific research? Sport, Business,

Art, Music, and all the other avenues into which man directs his energies, are tainted with commercialism, self-interest, passion, and emotion.

In introducing the public to science, wireless broadcasting has somewhat regrettably, but inevitably, given a preponderating, in fact an almost exclusive, interest to the study of phenomena connected with high-frequency electrical oscillations. Other branches of science unconnected with wireless have been almost completely ignored. To-day it would be difficult to find a household in which at least one member could not give a lucid distinction between a volt and an ampere, but the same state of affairs does not by any means prevail regarding optics, chemistry, and mechanics, and the young gentlemen who are so familiar with volts, amperes, microfarads, and henries are frequently totally ignorant of the most fundamental principles of those other branches of science, and would, for example, be unable to define the functions of a lens or a prism. Television, unlike Wireless, covers optics, chemistry, mechanics, in fact every branch of science, and introduces its devotee, not only to physics, but also to physiology, demanding, as it does, a knowledge of the physiology and psychology of vision; indeed, but for a purely physiological phenomenon, retentivity of vision, Television, as we know it to-day, would be an impossibility, and a study of the human eye is essential to a clear understanding of the principles underlying the electrical transmission of visual images.

Photo-electricity is another branch of the subject which is of intense interest and importance. We are still in ignorance as to the true nature of light. In some respects it behaves as if it were a corpuscular emission; other phenomena would appear to prove conclusively that it is a form of wave motion. The key to the elucidation of this outstanding problem may well be found in the study of photo-electric phenomena.

In the present work the author deals very fully with the fundamental principles from which Television was developed, and deals with them in such a way as to interest the general reader without departing from strict scientific accuracy. It is to be hoped that the book will prove of the greatest assistance to those who are commencing the study of a subject which perhaps offers to the young scientific worker the most promising prospects of any avenue of research.

J. L. B.

1928.

