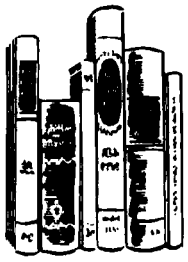

books reviewed

Electronics Engineers Handbook

Ed. Donald G. Fink. Published (1975) McGraw-Hill Book Co., 1221 Ave. of the Americas, New York, NY 10020. 2,146 pp. Illus. Diagrams. 6 by 9 in. Price $42.50.

The essential principles, data and design information on the components, circuits, equipment and systems of all the specialties that make up the field of electronics engineering are brought together in one volume containing more than a million words, some 2,000 illustrations, 2,500 bibliographical entries and 2,100 formulas and equations.

The book is divided into 27 sections. Section 1 defines and explains the basic phenomena of electronics. Section 2 — Mathematics: Formulas, Definitions and Theorems Used in Electronics Engineering — including Boolean algebra and symbolic logic. Section 4 — Information, Communication, Noise and Interference — covers concepts, sources and measures of information; codes and coding; the communications channel, noise and interference. Section 13 — Amplifiers and Oscillators — covers audio-frequency, radio-frequency, broadband, high-power, direct-coupled, operational, servo, nonlinear, microwave, maser and laser amplifiers and oscillators.

Section 19 — Sound Reproduction and Recording Systems — covers speech and sound; room acoustics; microphones, loudspeakers, headphones, disc recording and reproduction; magnetic tape systems. Section 20 — Television and Facsimile Systems — covers television scanning, synchronization and composite-signal generation; cameras, sync generators, control equipment, line amplifiers; image reproducing equipment; video recorders; facsimile methods and equipment. Section 21 — Broadcasting Systems — covers standards, amplitude modulation, frequency modulation, television transmitters and receivers.

Some 129 authorities have contributed to the book. The Editor-in-Chief, Donald Fink, is the author of a number of books, including *Television Engineering* (Reviewed in the April 1952 issue of the *Journal*); *Color Television Standards* (*Journal*, April 1956); *Television Engineering Handbook* (*Journal*, May 1957); and *Computers and the Human Mind* (*Journal*, March 1966). — *Edit.*

The Long View

By Basil Wright. Published (1974) by Alfred A. Knopf, 201 E. 50 St., New York, NY 10022. 710 + xxii pp. 6 by 9½ in. Price $15.

An extraordinarily comprehensive history of film (although the author denies in the Preface that it is "anything more than the record of a love affair with the film medium which began in 1913 . . ."), the book provides a view of films, directors, actors, producers and the great movie-going public all seen in perspective against the backdrop of the social forces and historical events that have shaped our world as we know it today. These same forces were pushing and prodding the creators of motion pictures to make the kind of movies that would reflect the thoughts, hopes, desires, fears and hates of the millions and, perhaps, to alter ever so subtly, the mores of the times.

While it would be a little ridiculous to say that the author had been "influenced" by Dos Passos, Dos Passos' "scrap book" method of juxtaposing significant events to make a kind of mosaic illuminating the shocking reality of what has happened to America has been used with good effect by Wright to show the relation of the kind of movies we (meaning the international movie-going public) see (or want to see) to the realities of the present. But the relationship is a little more subtle than that. And Wright is considerably more subtle and a much better writer than Dos Passos (allowing for the difference in theme and intent), even though the "Signposts" at the beginning of each section have a superficial resemblance to the Dos Passos method.

The book begins with "Signpost 1895 — The Year of the Lumière Brothers." In that year in France, among a number of other significant events, "Dreyfus, falsely convicted of treason and publicly degraded is refused a new trial by President Faure"; in the United States, "Gillette invents the safety razor — President Cleveland, in pursuit of the principles of the Monroe Doctrine, tries to force

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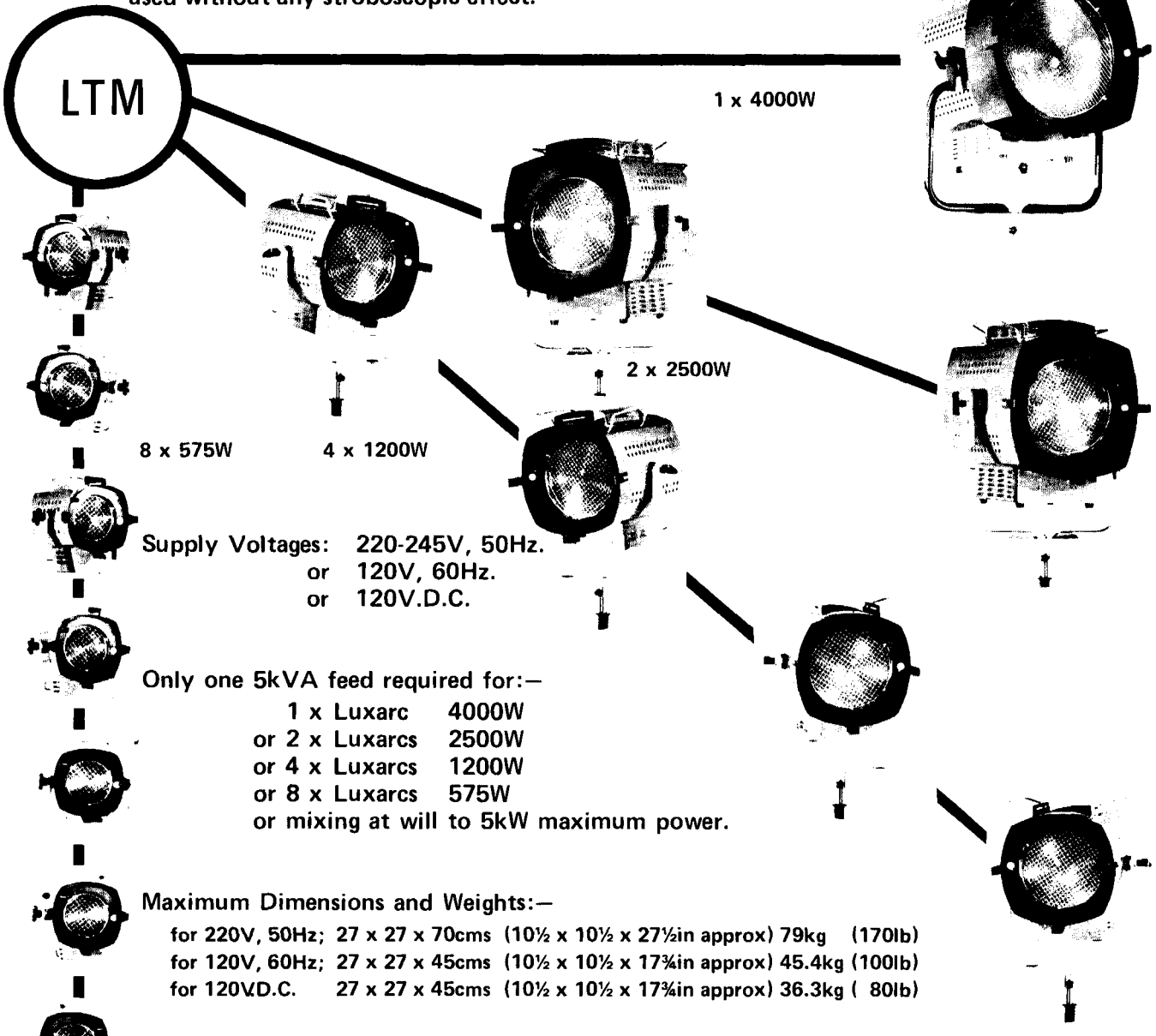

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Britain to submit her dispute with Venzuela to arbitration"; in Germany, "Wilhelm Röntgen discovers X-rays"; in Italy, "Marconi invents wireless telegraphy."

Decade by decade the author shows us what was happening in every filmmaking country in the world, noting the political, social and cultural forces affecting the development of the film.

It is, of course, most unfair to the book to pick out a few sentences from the "Signposts," packed with notations on significant historical events, and expect to convey to the reader anything like the subtle interweaving of historical events, technical advances and inventions in motion pictures illuminated in the book as well as the enormous influence of films on the social climate of each era in the world's history since 1895.

It is also unfair to the book to give the impression that it is a "heavy" social document. It is nothing of the kind, or perhaps it is a little something of the kind, but it is extremely easy to read. In fact, it is difficult not to read it from beginning to end once the first few pages have been glanced at.

The extraordinary number of motion pictures that the author describes is impressive — more impressive is how he manages to convey the whole substance — story, meaning, significance and an evaluation of the quality of the directing and the acting in no more than two or three paragraphs.

The author, Basil Wright, is a film director who has directed such outstanding films as *The Immortal Land* (which won the Council of Europe's Gold Medal) and (with John Grierson) *Drifters* (in 1931, the first documentary film ever made). He is the author of *The Use of Film*.

The Long View is an important book, not only a delight to read but useful as a reference for students and historians. — *Edit.*

Transistor Audio Amplifiers

By P. Tharma. Published (1971) by Van Nostrand Reinhold Company, 450 W. 33 St., New York, NY 10001. 399 + vii pp. Diagrams, 6 by 8½ in. Price $19.95.

Ed. Note: *Although more than three years have elapsed since this book was published its importance as a reference book for the "moderately knowledgeable reader" dictates publication of a review. The lateness of the review is due to circumstances beyond the control of the Editor and the present reviewer. The first promising reviewer failed and subsequent prospects shied away because of the scope of the book, so we are especially grateful to Dr. Mertz who has provided the following review.*

Transistors have had an extensive development in recent years, rendering vacuum tubes substantially obsolete. This book covers transistor characteristics exclusively in their application to audio amplifiers. It really has more of the characteristics of a handbook, prepared for the already moderately knowledgeable reader than for the neophyte. It freely bandies around code numbers, without description, of the various models — although unlike a handbook it does not have long tables of characteristics, but mainly presents these in terms of equations and plots.

The assumed level of sophistication on the part of the reader appears in other ways. Thus, on the very first page the author starts talking about electric charge carriers as "electrons" and "holes" within a semiconductor

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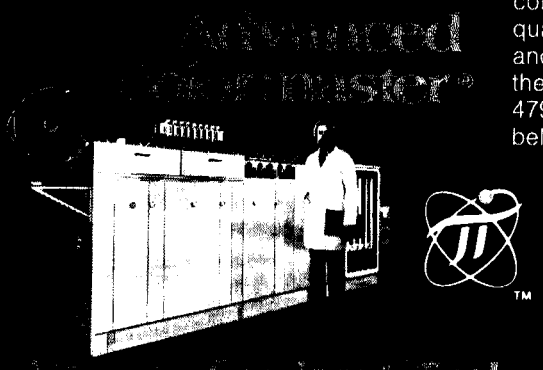

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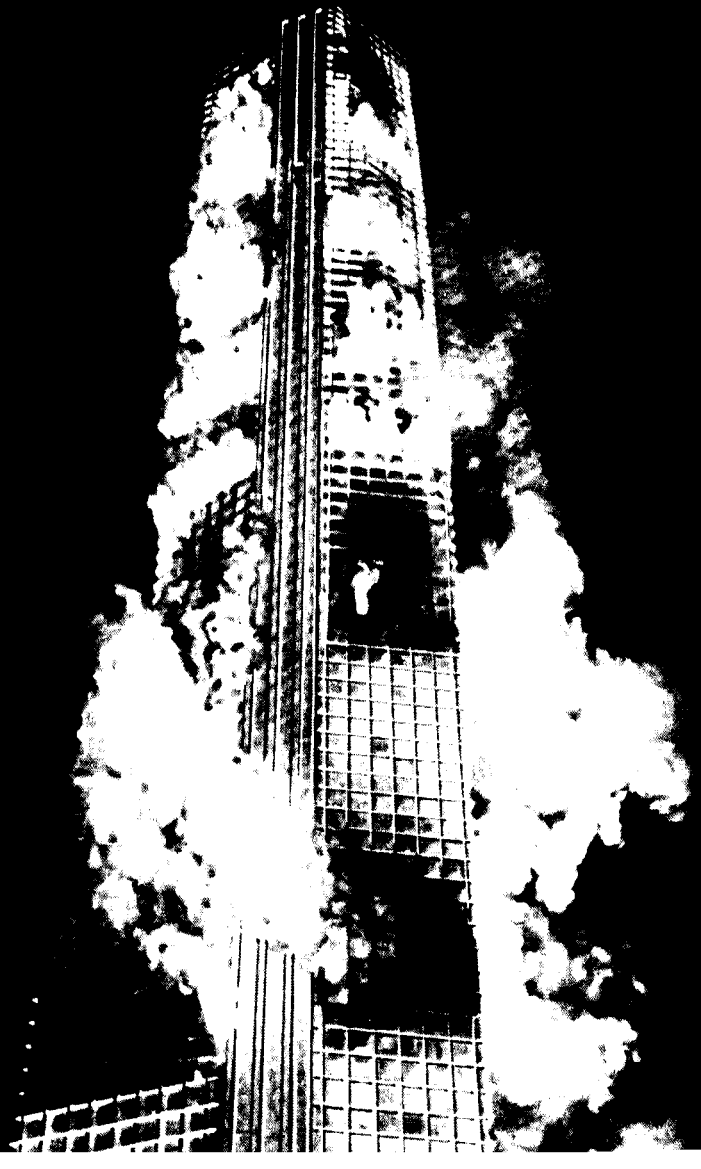

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material. The reader might realize what the electrons are, but no clue is offered as to what the "holes" are. At the top of page 2 the author blandly mentions the *pn* junction without saying what it is. Then he says that "a junction transistor consists of two *pn* junctions back to back," and that "the resulting structure can be either *pnp* or *npn*." This means that the reader must be already fairly well educated in the subject to make sense out of the text.

Again, distinctions are made between the detailed properties of silicon and germanium transistors. These properties are not, however, broadly discussed in any introductory treatment, but the specific individual impacts on details of circuits are scattered throughout the book as these circuit properties come up. In fact the reader is not even made aware of there being both silicon and germanium transistors until the first such case comes up, and even then he is not told this in a general way, but only in the immediately involved detail.

One observes that the longest chapter in the book deals with output stages. This is natural, since for a long time a major problem with transistors was their limited power carrying capacity. A good deal of description is given here of the various classes of operation, A, B, and AB, and the corresponding circuits to fit them, together with the designs which they involve, including the drive and dissipation requirements. This matter leads to nonlinearity discussions and, in another chapter, to negative feedback. A further chapter then discusses permissible limits of nonlinear distortion. One part covers some relatively recent studies by Bekesy. These deal with a perception called "acoustic roughness," an effect heard when two or more pure tones beat together in a nonlinear medium. The author describes a number of examples perceived and described by Bekesy, and presents acceptable levels of deviation. One of the measurement methods for the deviation is credited to the SMPTE.

The remainder of the book deals with transistor noise, small signal amplifier stages, amplifiers for various purposes such as high quality sound reproduction, public address systems, radios, tape recorders, hearing aids, and also power supplies.

In some ways the author is rather hampered by the fast pace of developments that has occurred in the transistor field and integrated circuits. In the preface he says, "It must be realised that although many of the semiconductor devices referred to in this book have now been superseded by more recent types, the basic circuit design principles remain unchanged." But in the very last chapter he says, "By exploiting the full possibilities of integration, it is now possible to design circuits with a performance which cannot be obtained using discrete components . . . Another audio circuit . . . is an amplifier (of) open-loop gain which is typically 100 dB to obtain the closed loop gain (with negative feedback) of 60 dB." Some of the amplifiers, in two stages, have output powers of as much as 1 to 2 W. But the author says that "A detailed discussion of the design of integrated circuits would require considerable space and is outside the scope of this book."

A few occasional misprints were noted in various parts of the book, but none of those noticed affected the sense of the subject matter.

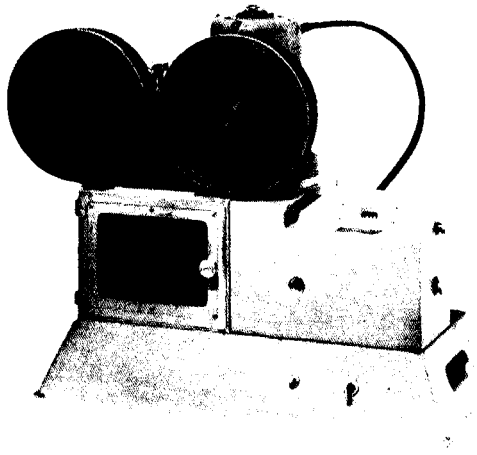
After the several strictures made earlier, one could expect the book to be most useful to readers who would already be relatively experienced, but wanted to learn more about transistor properties. In the preface the author says that the book was designed for an applications group, which has "to have a good understanding of the transistor circuit techniques, and system requirements." It is in that sense that it would make a good self-study book. — *Pierre Mertz*, Meadow Lakes 9-01, Hightstown, NJ 08520

BBC Handbook 1975

Published (1974) by British Broadcasting Corp., 35 Marylebone High Street, London W1M 4AA. 370 pp. Illus. Tables. Foreword by Sir Michael Swann, Chairman of the BBC. 5½ by 8 in. Paperbound. Price £ 1.

The book presents a complete and thorough survey of the British Broadcasting Corp.'s activities in all areas throughout the world during 1974. Sir Michael Swann, BBC Chairman, says in the Foreword that "The last year has not been an easy one for Britain and that inevitably means difficult times for the British Broadcasting Corporation." The entire report, however, reflects a feeling of successful endeavor in most areas and a complete confidence in the future. In the section on Personnel (p. 79) the report notes, "The relationships which have been built up with the recognized unions have generally stood the BBC in good stead during the year. But, as in other sectors of industry, BBC staff have tended to become more fully aware of, and to seek for positive changes in, their total work environment.

SOUND DEPARTMENT PROFITS



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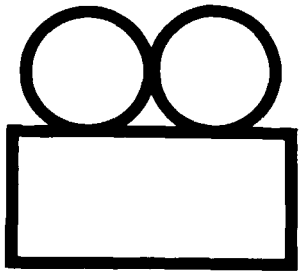

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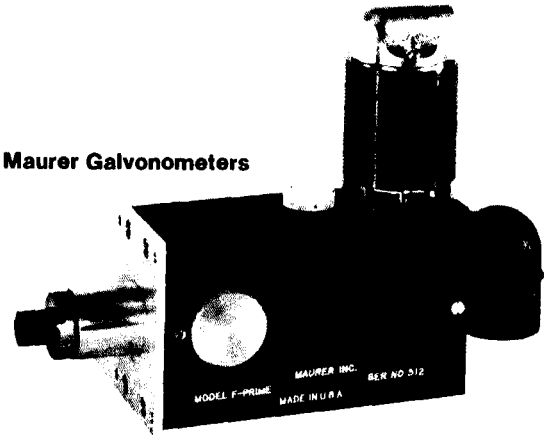

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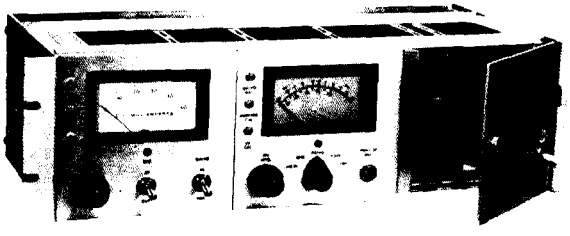
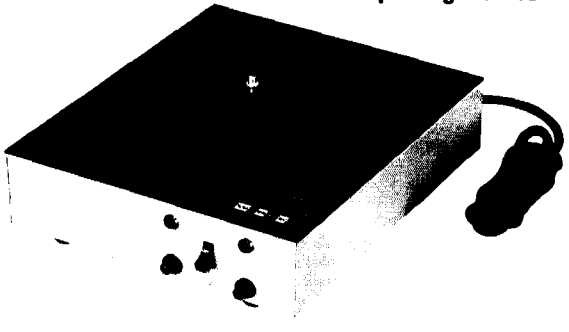


Bulk Tape Degaussers



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The Programme Review 1973-74 section of the *Handbook* (pp. 136-200) is profusely illustrated in both black-and-white and color and provides a list with one- or two-line descriptions of the BBC broadcasts.

The *Handbook* reports on BBC research and development activities. The *Handbook* also contains a number of tables (program analyses, financial, broadcast receiving licenses from 1927 through 1974 and others).

BBC publishes a number of periodicals and during 1974 published some books of general interest; however, the *Handbook* reports a loss of £ 14,000 during the year ending 31 March 1974. The loss was occasioned by steeply rising prices and shortages of material, especially paper, according to the report, and also by some industrial disruption during and following the three-day working week (p. 89).

In its 370 pages the *Handbook* contains an amazing amount of compact, but entirely readable information. Well arranged and well written, it presents in polished fashion everything that the average reader could possibly want to know about the British Broadcasting Corp. Quite likely the chief value of the yearly *BBC Handbooks* is for serious students and researchers. — *Edit.*

Film and the Narrative Tradition

By John L. Fell. Published (1974) by the University of Oklahoma Press, 1005 Asp Ave., Norman, OK 73069. 284 + xx pp. Illus. 6 by 9 in. Price $9.95

Film as an art form did not spring forth full panoplied from the head of D. W. Griffith, rather it was a slow development involving the cannibalization of earlier theatrical melodramas thus bearing out Marshall McLuhan's proposition that "a new medium devours as content the medium it seeks to replace." The development of motion pictures as an art form is related to the cultural climate of the end of the 19th century and to the changing mores of the 20th century. As an art form with its roots in late 19th century America it is related to such isolated events as the first appearance of Nick Carter (1886) and the first telegraph signals sent across the Atlantic (1901).

Motion pictures, as they developed technically from the zoetrope, the phasmatrope and other such antecedents cannot be considered apart from the mise en scéne.

At the beginning of the 20th century while literacy predominated across the country its common level remained minimal," the author reports.

"By 1911 a narrative structure for film had more or less established itself. The devices of any television thriller today are little different in essence from those one- and two-reelers which came from the old Biograph Studio just off Union Square in New York."

The book is witty as well as scholarly. The author's choice of chapter headings adds to the pleasure of the reader as well as setting the scene for the chapter's content. In the heading for Chapter 3 the author quotes from the *Philadelphia Press* (ca 1880), "My son, said a thoughtful father with a fair bald head and a kind blue eye, 'I observe with feelings of deep regret that you have been reading *Bow Legged Jack; or the Road Agent's Retreat*. It is not a good book, my son, and a continued perusal of such literature may wean you from the path which leads to success and honorary position. It would break my poor heart, John Henry, to have you become a road agent or pirate or a burgler for the mere pittance that such callings bring to those who pursue them .... Lay that book aside and be patient, my son, and in time you may be able to steal the entire capital of a great bank.'"

In Chapter 3 the author discusses "subliterature" that is "written frankly for a great market of readers unmolded by refinements of prose tradition" in which he notes that the old-fashioned dime novel commenced a "film genre for which movies seemed to have special affinity."

The relationship of film to "the narrative tradition" including comic strips, painting, sheet music, dime novels, melodrama and the foreshadowing of the control both of space and and of simultaneous sounds in such novels as *Madame Bovary, Sister Carrie* and other classics is fully explored.

This is an enormously interesting book for the student of film, historians of American culture and for the reader whose interests may not be highly specialized but who has an intelligent appreciation of the past as it relates to the contemporary scene.

The book contains 96 illustrations, a selected bibliography, a chronological listing of film titles from 1898 to 1912, an index of names and a general index. It is, undoubtedly, a worthwhile book. — *Edit.*

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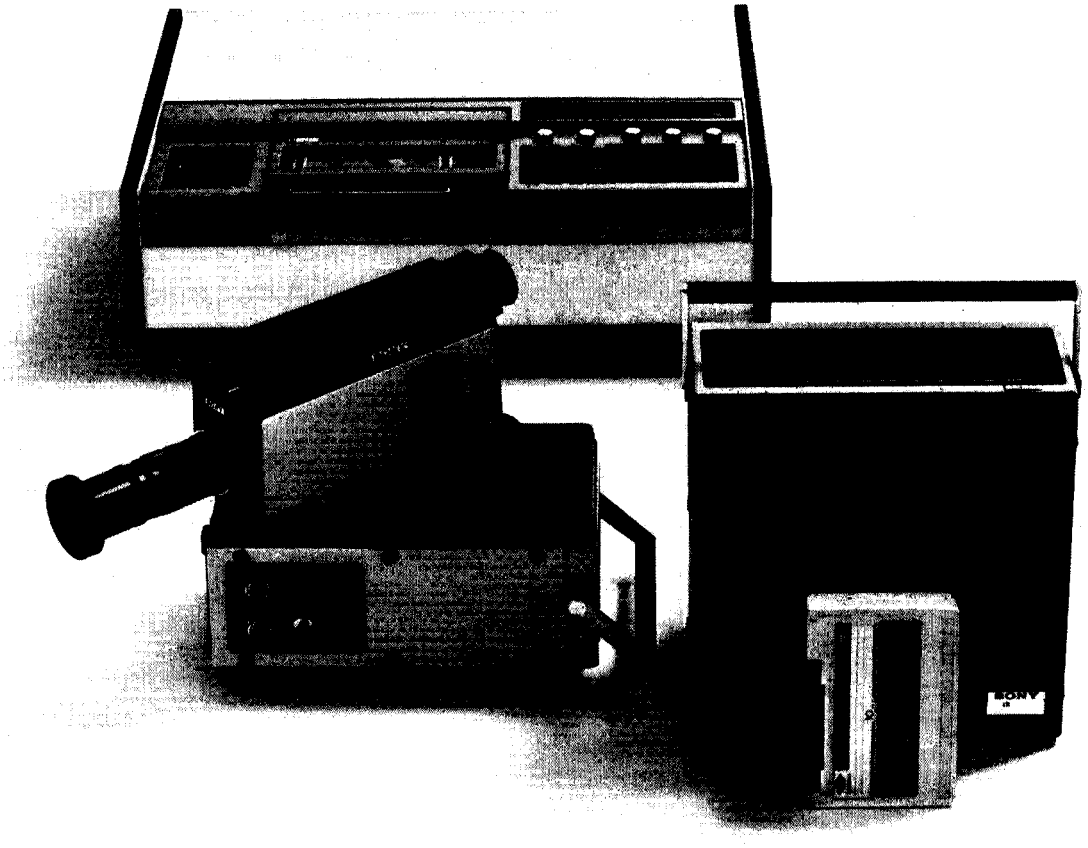

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D. W. Griffith: His Biograph Films in Perspective

By Kemp R. Niver (Ed. Bebe Bergsten). Published (1974) by Historical Films, P.O. Box 46505, Los Angeles, CA 90046. 192 pp. Illus. 8½ by 11 in. Price $10.

With the intention of making a realistic evaluation of the contribution of D. W. Griffith to motion pictures (art and technique), separating the legend from the actual achievements, Kemp R. Niver screened some 350 films directed by D. W. Griffith between 1908 and 1913 for the Biograph Company. (The films had been restored during the Library of Congress Paper Print Program.)

From the 350 films 50 were selected as containing the best examples of Griffith's "lasting film techniques as well as being representations of the essence of the man as a director and filmmaker."

The book consists of illustrations (nearly 200 frame enlargements from the motion pictures together with brief descriptions of the films. The descriptions emphasize the production techniques of those early days — for example in *An Awful Moment* (photographed 19-21 November 1908)"... the gypsy climbs up a trellis to reach the balcony. Griffith increased the drama of that moment by panning the camera up to record her climb. Such camera use seems an innovation for both Griffith and Biograph .... It is the only example of such camera movement in all the Biograph films we looked at."

The information for each film includes the dates it was photographed, the date of copyright, the production location, the cameraman, the cast and the length.

Griffith began directing films in the summer of 1908 at the American Mutoscope and Biograph Company in New York City. Since then he has been credited with inventing or developing nearly every film technique in use today. But, Mr. Niver points out, "the truth is that the majority of these techniques had been developed and used by some predecessor before he ever dreamed of becoming a director." Mr. Niver notes that a check through Biograph bulletins showed that Griffith followed a pattern of making two feature motion pictures and one short comedy per week during the first few months of his career as a director.

Obituaries

Don G. Williams

Don G. Williams, 70, a pioneer in university film production and teaching programs, died 12 April in San Diego after a long illness. Known internationally for his work, he retired in 1968 from the University of Missouri at Kansas City where he was Professor of Education and Director of Audiovisual Services. Earlier, he had held similar positions at Syracuse University and at Indiana University where he had been Director of Motion-Picture Production. During World War II he served in the Training Films Branch of the U.S. Navy. In 1949 he was sent overseas by the U.S. Information Agency to survey existing facilities for local motion-picture production. As a result, the Syracuse University Film Project was set up. Under Dr. Williams' direction, 16mm crews went to Iran, Turkey and Greece under the auspices of USIA to make information films for use in those countries. The films generally dealt with agriculture, health and nutrition, child care and education.

Dr. Williams was a former President of the University Film Association. He had also served as President of the International Liaison Center of Schools of Cinema and Television. He was a founder of the American Science Film Association, the Council on International Nontheatrical Events (CINE) and a founder and secretary of the University Film Foundation.

In 1967 the French Government made him Chevalier of the Ordre des Arts et des Lettres and the following year he was the recipient of the Pioneer Award given by the Association for Educational Communication and Technology.