

Book Reviews

Sound System Engineering

By Don and Carolyn Davis. Published (1976) by Howard W. Sams & Co., 4300 W. 62 St., Indianapolis, IN 46206. 296 pp., Illus., 8½ × 11 in. Price \$19.95.

In the Preface to *Sound System Engineering*,

the authors point out that the professional audio engineer daily has occasion to realize that he is — in the words of Issac Newton — “standing on the shoulders of giants” who preceded him. The authors mention that by the beginning of the 1930s, following the introduction of “talking” films, physicists and engineers had developed:

condenser and cardioid microphones; a variety of horns (multicellular, radial, folded); the feedback amplifier, sound on film; and numerous other systems. Pioneers mentioned here range from Wente, Thuras and Steinberg to Bode, Nyquist and Olson to Shannon and Dunn and White. (The authors apologize for omitting worthy people from their list of 29 names.) Inventor-entrepreneurs, broadcast industry founders, and architectural acoustic pioneers — as many as possible — are also given their due.

This book represents something *from* all these great names and something *for* every sound engineer and technician.

Chapter 1 is devoted to audio systems and covers such subjects as types of sound systems, system elements and the function of the sound system. The decibel notation system, loudspeaker directivity and coverage, the acoustic environment, designing for acoustic gain and interfacing the electrical and acoustical systems are topics discussed in the succeeding chapters.

Chapter 7 covers installing the sound system. Circuit levels, grounding and shielding, serving cable, useful wiring concepts, impedance matching, fundamentals of time delay and proofing the installed system are explained in depth. The authors next discuss equalizing the sound system, instrumentation, sample design applications and specifications. The many appendices give symbols and abbreviations, recommended installation practices, priority systems, definitions of terms, test questions and answers and other useful reference information. Supplementing the text material this thoroughgoing guide to sound system engineering is filled with drawings, photographs, charts, graphs and tables.

The authors conclude their preface with the observation that they expect the digital technology developed for computers and space programs will, over the next few years “seed a veritable revolution in audio technology.” The book contains much of what the engineer or technicians need to contribute to this revolution and it is to these pioneers who will take and extend the best of the past and present that this book is dedicated. — *Edit.*

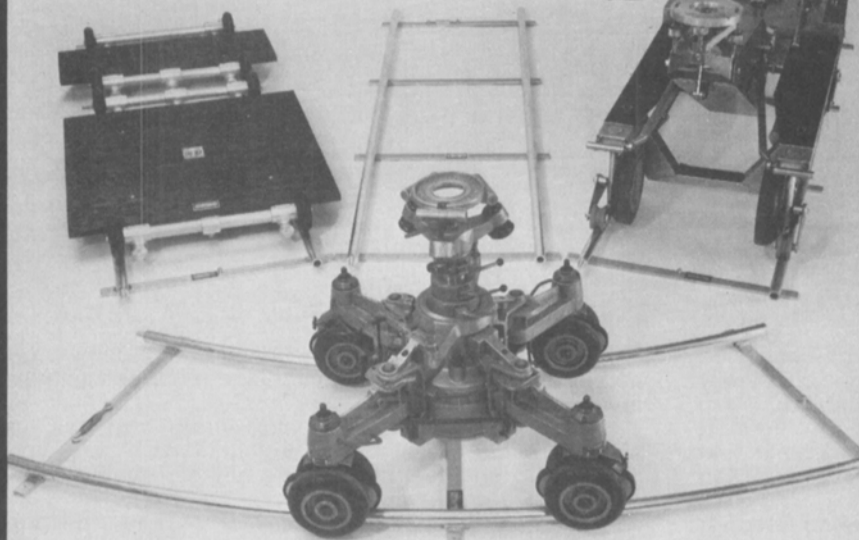
ENG/Field Production Handbook

By C. Robert Paulson (Principal Author). Published (1976) by Broadcast Management/Engineering, 295 Madison Ave., New York, NY 10017. 95 + vii pp. plus 21 unnumbered pages of advertisements. 8 × 11 in. Softbound. Price \$9.95.

Electronic Newsgathering (ENG) or Electronic Journalism (EJ) is not new, it has been an ever increasing segment of television broadcasting since its inception. Some things new have been added within the immediate past. There are the increasing emphasis on news shows by broadcasting managements and the availability of reasonably sized portable electronic cameras, videotape recorders of the ¾-in cassette format, and most importantly the development of microwave equipment of a vastly improved type, particularly in the realm of antennas, which permits live “from the scene” coverage of events as they occur. This has had the effect of adding immediacy as a new daily dimension to news programming.

ENG/Field Production Handbook commences well with case histories of early ventures into the field. The rest of the publication is largely a compendium of data received from manufacturers’ catalogs and/or instruction

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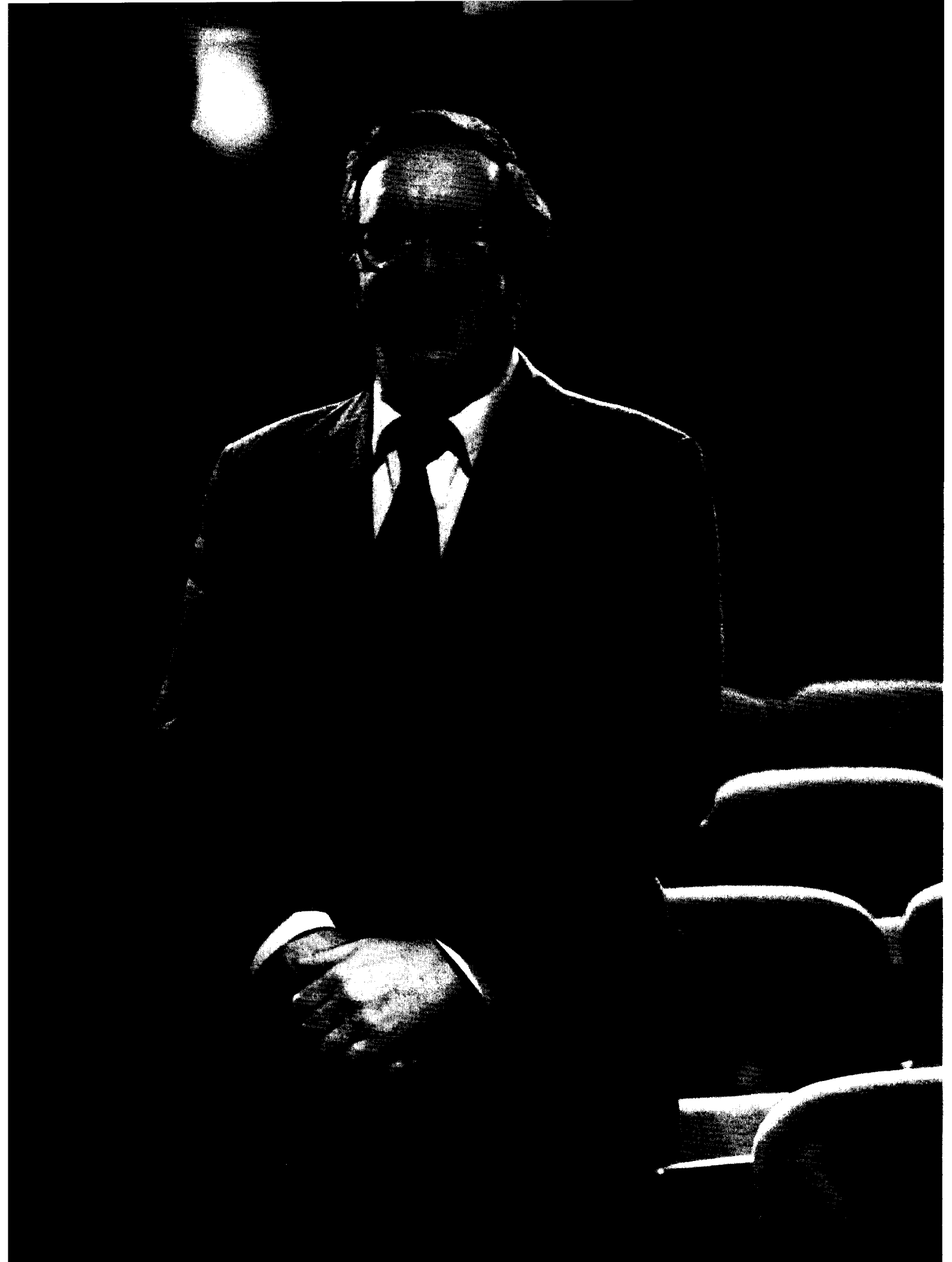
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"The National Association of Theatre Owners (NATO) is the trade organization of motion-picture exhibitors. As large and important as NATO has become, it is still essentially a volunteer organization, manned by thousands of people for whom film is as much a way of life as it is a way to make a living. It has been my privilege to serve two years as NATO's President and currently as Chairman of the Board.

"NATO is involved in more areas than we have time and space to mention. Like Eastman Kodak Company, we are concerned with every aspect of the art and the business. Our new 'containment screen' is only one example of our dedication to the development of new and better sound and projection systems and other technical improvements.

"We spend a great deal of time and energy on Capitol Hill, in State Legislatures, and at the local Courthouses. We're involved in everything from freedom of expression to taxation, building codes, energy conservation, and tax incentives for film production.

"NATO is extremely interested in the American Film Institute because of its dedication to preserving the past and promoting the present and future of film. The Chairman of AFI's Executive Committee and three other Trustees are exhibitors. And AFI is only one of the many similar areas in which we work.

"Yes, we've come a long way in a short time; but the best is yet to be. This is a young and vital industry. Like the showman said, 'You ain't seen nothing yet, folks!'"

Eastman Kodak Company shares the concern of Paul Roth and his dedicated NATO associates for the quality and fidelity of release prints. That's why major research and development programs are devoted to the continuing improvement of quality release prints.

For a free copy of this and other interviews, send for our free booklet.

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2. BVU-200 Broadcast Editing U-Matic

This recorder allows for high speed accurate editing utilizing either control track or SMPTE address systems. It incorporates BIDIREX™, a specially engineered system to move tape in faster or slower speeds in either direction.

When used with the Sony BVE-500 editing console, BIDIREX assures fast accurate editing that is fully frame servoed.

3. BVE-500 Broadcaster Editing Console

The BVE-500 provides a fully automatic editing control for tape-to-tape editing between a pair of BVU-200's. The BVE-500 is a three register editor with digital readouts for both source and record material. Changes in the edit-in and edit-out point can be programmed at a touch of a button. This highly accurate editing system provides both preview and frame trimming at a fraction of the cost of a computer editor. And of course all edits are frame servoed to insure clean picture quality without loss of timing information.

4. BVT-1000 Digital Time Base Corrector (not shown)

Sony's reputation for engineering reliability is combined with transparent picture quality and a wide 4H window to bring broadcasters a new standard of performance in time base correction. Line by line correction, velocity compensation, drop-out compensation, and full processing with standard advance sync, are all standard features of the BVT-1000.

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books. The reader should find the comparative tables listing the salient features of the various equipments of value. However, the uncritical approach followed by the authors throughout this book may well lead astray the reader inexperienced in television engineering matters.

It would have been well if the authors had pointed out the pitfalls of the current generation of 3/4-in videotape cassette recorders, for these are indeed serious. The present-day broadcast user makes use of these "warmed over" consumer products only because these are the only items of suitable format available and because the end result compares favorably with the average 16mm newsfilm product. It is stretching the imagination, however, to consider this present-day 3/4-in videotape equipment as acceptable recording media for commercials, or other applications where quality counts. This, of course,

will change as better videotape recorders become available. However, that day has not yet come.

The book is divided into two sections, Part I—The ENG Revolution Comes on Strong; and Part II—ENG/EFP (Electronic Field Production) Products and Accessories.

There are 10 chapters entitled as follows: 1. ENG What Is It? How Big? Where Is It Going?; 2. ENG Systems in Use: How Broadcasters Are Putting it Altogether; 3. The Significance of All Electronic Systems; 4. Handheld and Shoulder-Mount Portable Cameras Challenge 16mm; 5. Videotape Recorders That Are Truly Portable and Battery-Operated; 6. Editing Tapes: From Engineering Mystique to Mo-viola-Like Manipulation; 7. TBCs: Getting It Edited and On the Air With a Standalone TBC; 8. Instant Broadcast Means Microwave Links;

9. Program Audio and Intercom; 10. Future Developments—*Hugo A. Bondy*, CBS Television in Atlanta, 1551 Briarcliff Rd., N.E., Box 4207, Atlanta, GA 30302.

BBC Handbook 1976

Published (1976) by the British Broadcasting Corp., 35 Marylebone High Street, London W1M 4AA, England. 352 pp. Illus. 5 1/2 x 8 in. Price £1.50.

The *BBC Handbook 1976* contains an extraordinary amount of information about all aspects of the British Broadcasting Corp.'s activities. The information is presented in such polished prose that the *Handbook's* value as a reference volume is equalled only by the reading pleasure it affords.

The Foreword by Sir Michael Swann, BBC Chairman, notes that the *Handbook* "comes out at a time of great national difficulty." He cites the continuing aim and purpose of the BBC which is "to broadcast programs which are as good as we can make them and which offer the widest variety of choice and opportunity to a public, not one member of which is quite like any other."

The book is divided into three parts: Part one, Annual Report and Accounts 1974-75; Part 2, Programme Review, and Part 3, Reference. Part one opens on rather a discouraging note: "Inflationary pressures on a scale never before encountered during 53 years of broadcasting turned a modest surplus of £792,000 on 31 March 1974 into a deficit approaching £19 million by 31 March 1975. But a review of the year showed a sturdy and typically British approach to the problems resulting in the discouraging deficit — "For BBC Television the year was one of considerable achievement despite industrial unrest . . . and the increasing need for economies at every level . . ."

In the section on Educational Broadcasting — "In the autumn of 1974 the BBC marked the 50th anniversary of the first regular educational broadcasting transmission with celebrations . . ."

Another 50th anniversary was noted in the section on Northern Ireland, "... an eventful year; preparations for the inauguration of BBC Radio Ulster; the start of building work on an extension of Broadcasting House, Belfast; two more car bombs outside Broadcasting House; and a second terrorist attack on the Fathom Hill transmitter, this time destroying both the building and the mast."

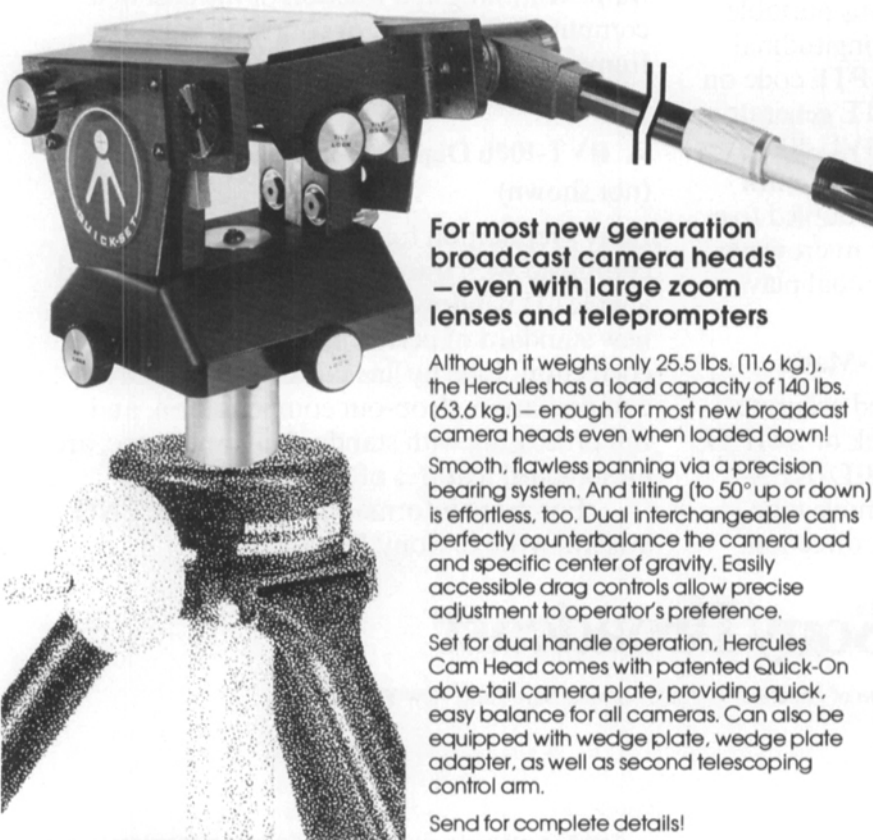
Part 2 (Programme Review) is profusely illustrated in both color and black-and-white and provides a thumbnail description of the programs.

Part 3 (Reference) outlines the BBC aims and policies and provides a summary of essential technical information and a guide to the organization. An important engineering "first" took place on 23 September 1974 when the BBC started regular line transmission of CEEFAX authorized by the government. (See "CEEFAX: A Proposed New Broadcasting Service," S. M. Edwardson and A. Gee, *SMPTE Journal*, pp. 14-19, January 1974.)

It is also noteworthy that many ("an increasing number") of BBC's several hundred transmitting stations are operated automatically without a permanent staff. Designed to operate automatically for weeks on end they are maintained by mobile maintenance teams.

Without a doubt the *BBC Handbook* is a useful and enjoyable addition to the literature of television. — *Edit.*

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Cinematographer—Barry M. Iselin

Cayman Corporation
"OIL FROM THE AMAZON BASIN"
Producer/Director—William P. Hoopes
Cinematographer—David Harford

Chrysler Corporation
"XM1 ROLL OUT"
Producer—Thomas McNamara
Director—Ted H. Horn
Cinematographers—Greg Carver, James Lafer, Jr., William Reed, John Hartigan

Honeywell Inc.
"POISE"
Producer—William J. Steinbicker
Director—Robert C. Hammel
Cinematographers—Charles Bowen, Ray Roberts

Martin Marletta Corporation
"SHARE OUR DREAMS"
Producer/Director—Ralph Bevins
Cinematographer—M. A. McDaniels

McDonnell Douglas Corporation
"THE NEW GENERATION"
Producer/Director—Milton Moline
Cinematographer—Bill Conron

Trans World Airlines
"MANAGEMENT OF IN-FLIGHT ILLNESS OR INJURY"
Producer—John G. Armstrong
Director—Tom Kinsey
Assistant Director—Don Greene
Cinematographer—Jack Sands

U.S. Department of Interior, Mining Enforcement & Safety Administration
"SAFETY ON THE MOVE: TRUCK HAULAGE SAFETY"
Producer—Samuel R. Sappo
Director—Timothy W. Kirby
Director of Photography—Anthony V. Mantia
Cinematographers—Keith A. Gaskill, Daniel L. Gardner



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