



SMPTE Journal®

VOL. 98, NO. 8

AUGUST 1989

EXECUTIVE

Frank J. Haney
Editorial Vice-President

Frederick M. Remley
Chairman/Board of Editors

Lynette Robinson
Executive Director

EDITORIAL STAFF

Jeffrey Friedman
Editor

Joyce R. Hurwitz
Associate Editor

Elizabeth L. Ghaffari
Assistant Editor

Nancy T. Engel
Staff Writer

Mathew V. Kuriakose
Graphics/Production Supervisor

MaryAnn Frusciantie
Production Coordinator

Marilyn Waldman
Editorial/Program Coordinator

MARKETING/CONFERENCE

Anne Cocchia
Marketing/Conference Manager

ENGINEERING

Sherwin H. Becker
Director of Engineering

Mark S. Hyman
Staff Engineer

Ferdinand V. Galli
Staff Engineer

ARTICLES

- A Comparison of HDTV and Film — Overall Light Transfer Characteristics 556
James Gaspar, Henry Mahler, and George Gabritsos
- The Equalization of Channel Noise Visibility in Television 563
Paul Scorer
- Mechanical Considerations in the Design of a Composite Digital VTR 568
N. Kaku, S. Ozaki, S. Yokoo, T. Ozawa, Y. Niguchi, H. Ono, K. Ogiro, and H. Yokota
- The Brain™: A Multi-Axis, Location/Studio Camera/Subject, Robotic Motion-Control System 575
Michael S. Azerad, John Pley, Joseph Dabby, and Ed Zwaneveld
- Adaptive Prediction for High-Quality Television Transmission Coding Based on the LMS Algorithm 580
Michael J. Knee
- Audio Program Metering in the 1980s: The Work of the IEEE Audio Measurements Subcommittee 590
Randall Hoffner

SMPTE REPORTS

- Bibliography: Psychophysics of Image Evaluation 594
SMPTE Working Group on High Definition Electronic Production
Frederick J. Kolb, Jr., Editor
- 24th Annual SMPTE Television Conference 599
- 1989 Sections and Engineering Training Seminar 600
Lynette Robinson and Si Becker
- Ottawa, Montreal/Quebec, Rochester, and Toronto Mini-Conference 602
- The 131st SMPTE Technical Conference and Equipment Exhibit 606

SMPTE NEWS AND DEPARTMENTS

- | | |
|--------------------------------|---|
| Calendar 554 | New Sustaining Members 612 |
| Highlights 555 | Minutes of Annual Meeting 612 |
| Section Meetings 609 | New Products 614 |
| News 610 | Classified 620 |
| Obituaries 611 | Sustaining Members 632 |

STANDARDS AND RECOMMENDED PRACTICES

- Approved American National Standards 626
ANSI/SMPTE 239-1989, Motion-Picture Film (16-mm) — Perforated 8-mm Type R, 2R; and ANSI/SMPTE 243-1989, Motion-Picture Equipment — 35- and 70-mm Projection Lenses and Mounts
- Approved SMPTE Recommended Practices 628
RP 27.3-1989, Specifications for Safe Action and Safe Title Areas Test Pattern for Television Systems; and RP 27.5-1989, Specifications for Mid-Frequency Response Test Pattern for Television

SMPTE Journal (ISSN: 0036-1682) published monthly by the Society of Motion Pictures and Television Engineers, 595 West Hartsdale Avenue, White Plains, NY 10607. Second-class postage paid at White Plains, N.Y., and at additional mailing office. Copyright © 1989 by the Society of Motion Picture and Television Engineers, Inc. All rights reserved. Printed in the U.S.A. No part of this issue may be reproduced without written permission of the publisher. Statements and opinions expressed in articles or editorials in the *SMPTE Journal* are expressions of contributors and do not necessarily represent the policies or opinions of the Society. Advertisements appearing in this publication are the sole responsibility of the advertiser. MEMBERSHIP in the Society is open to any individual according to that person's qualifications. The Society's Headquarters welcomes inquiries from individuals who may apply for these grades: Active (annual dues \$50.00), Associate (annual dues \$50.00), and Student (annual dues \$15.00). All members receive the *SMPTE Journal*. Subscriptions are available to nonmembers. Annual rates \$55.00 United States; \$55.00 plus \$10.00 postage elsewhere. Single issues, \$6.00. *Journals* will be mailed overseas by airmail printed matter to subscribers at a surcharge of \$50.00 to Europe and \$65.00 to Asia (in addition to the subscription rates listed above).

POSTMASTER: Send change of address to *SMPTE Journal*, 595 West Hartsdale Avenue, White Plains, NY 10607-1824.