



SMPTE Journal®

VOL. 100, NO. 1

JANUARY 1991

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

Carol King
Assistant Editor

Mathew V. Kuriakose
Graphics/Production Supervisor

MaryAnn Frusciante
Production Coordinator

Marilyn Waldman
Editorial/Program Coordinator

ADVERTISING/EXHIBITS

Alan Ehrlich
Advertising/Exhibits Manager

ENGINEERING

Sherwin H. Becker
Director of Engineering

Mark S. Hyman
Staff Engineer

Ferdinand V. Galli
Staff Engineer

Message From the President *Blaine Baker* 4

ARTICLES

Requirements for Static and Dynamic Spatial Resolution in Advanced Television Systems: A Psychophysical Evaluation <i>Lew B. Stelmack and Paul Hearty</i>	5
HDTV Digital Frame Recorder <i>Marc Klingelhofer and Vinson R. Perry</i>	10
Stereoscopic HDTV: Experimental System and Psychological Effects <i>Sumio Yano and Ichiro Yuyama</i>	14
A Complete Post-Production System for All Video Formats <i>Michael M. Guess</i>	19
Robotic Camera Control — A News Director's Tool <i>Robert Saltarelli</i>	23
Colorimetric Evaluation of TV Light Sources <i>Bjarne Hisdal</i>	27
An Introduction to the Experimental Study of Visual Fatigue <i>Peter A. Snell, (Special Reprint of First Recipient of Society's Journal Award — 1934)</i> ...	33

SMPTE REPORTS

25th Annual SMPTE Television Conference, February 1-2, 1991 Detroit, Mich.	42
Toronto, Rochester, Montreal/Quebec, and Ottawa Sections Hold Mini-Conference in Toronto	44
The 132nd SMPTE Technical Conference and Equipment Exhibit October 13-17, 1990, New York City	46
New Members	63

SMPTE NEWS AND DEPARTMENTS

Calendar	2	Engineering News	76
Highlights	3	Books, Booklets, Brochures	78
Section Meetings	71	Professional Services	79
News	74	Classified	80
Errata	74	New Products	81
Obituary	74	Sustaining Members	88

STANDARDS AND RECOMMENDED PRACTICES

Approved SMPTE Recommended Practices	83
--------------------------------------------	----

RP 156-1990, Bar Code Labeling for Type D-1 Component and Type D-2 Composite Cassette Identification; and RP 157-1990, Key Signals

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 © 1991 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 \$75.00 United States; \$75.00 plus \$10.00 postage elsewhere. Single issues, \$6.00 plus \$2.00 postage. *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.