31ST ANNUAL
University of Wisconsin

BROADCAST ENGINEERING AND MANAGEMENT SEMINAR
(Formerly BROADCASTERS’ CLINIC)
October 7-10, 1985

Supported in part by Radio World and TV Technology
THE UNIVERSITY OF WISCONSIN PROUDLY OFFERS...

... the 31st Annual BROADCAST ENGINEERING AND MANAGEMENT SEMINAR (formerly BROADCASTERS' CLINIC), long considered a “must” within the industry for broadcast engineers eager to remain on the leading edge of their profession.

The 1985 Broadcast Engineering and Management Seminar is carefully planned to meet the often overlapping needs of broadcast engineering technical and management personnel. The program agenda for the four day seminar is intentionally varied to permit the professional broadcast engineer to come in contact with research and technical advances in many areas of broadcast engineering. We believe that it is vital that the well-informed broadcast engineer of the mid-1980's be aware of research trends and developments in all facets of our rapidly growing profession.

The program for Monday, October 7, will primarily emphasize broadcast engineering management issues, although the day's sessions are flexibly designed to accommodate the needs and interests of broadcast engineers at all levels. Seminar talks and case study presentations will be geared to assist the broadcast engineer in effectively meeting the growing challenges of communicating with station management, supervising staff engineers, and handling the increasing variety of complex decision-making challenges that face engineering management today.

The program for Tuesday through Thursday, October 8 through 10, will emphasize technical issues including state-of-the-art engineering research, emerging technologies, and a wide variety of other topics. The highly popular FCC Update panel and the Nuts and Bolts session moderated by Steve Brown will also return this year. Industry exhibits will be extensive and varied.

Plan to attend the University of Wisconsin Broadcast Engineering and Management Seminar, this year supported in part by Stevan B. Dana, publisher of Radio World and TV Technology. Help us celebrate our 31st year of valuable education and service to the broadcast engineering profession.

GENERAL CONFERENCE INFORMATION

DATES
Monday through Thursday, October 7 through 10, 1985.

LOCATION
All sessions of the Broadcast Engineering and Management Seminar will be held at the Holiday Inn Southeast, Highway 12 and 18 at I-90, Madison, Wisconsin, 53704. Phone: (608)222-9121.

FEE
BROADCAST ENGINEERING AND MANAGEMENT SEMINAR - $175. Fee covers program materials, 4 continental breakfasts, 4 luncheons, 4 break refreshments and 3 evening receptions with hot hors d'oeuvres. The Tuesday evening dinner is optional at an additional charge of $12.

BROADCAST ENGINEERING MANAGEMENT Session only (October 7) - $65. Fee covers program materials, a continental breakfast, luncheon, break refreshments and an evening reception with hot hors d'oeuvres.

BROADCAST ENGINEERING TECHNICAL Sessions only (October 8, 9, 10) - $125. Fee covers program materials, 3 continental breakfasts, 3 luncheons, 3 break refreshments and 2 evening receptions with hot hors d'oeuvres. The Tuesday evening dinner is optional at an additional charge of $12.

You are entitled to an 80% refund if cancellations are received prior to October 1, 1985. Enrollees who do not cancel are obligated for the full fee. Substitutions may be made at any time.

ACCOMMODATIONS
Please make your own room reservations with the Holiday Inn Southeast, Highway 12 and 18 at I-90, Madison, Wisconsin, 53704. Phone: (608) 222-9121. We suggest that you make your reservations before September 20, 1985, while discounted rooms are being held for the seminar. Please specify that you are attending BROADCAST ENGINEERING AND MANAGEMENT SEMINAR.

CREDIT
Seminar enrollees can earn the following Continuing Education Units (CEUs) from the University of Wisconsin: BROADCAST ENGINEERING AND MANAGEMENT SEMINAR, 3.6 CEUs; BROADCAST ENGINEERING MANAGEMENT Session only, 0.8 CEU; BROADCAST ENGINEERING TECHNICAL Sessions only, 2.8 CEUs.

INFORMATION
For further seminar or exhibitor information, contact Don Borchert, Director of Engineering, WHA Radio and Television, 821 University Avenue, Madison, Wisconsin 53706. Phone: (608) 263-2157.
PROGRAM: BROADCAST ENGINEERING AND MANAGEMENT SEMINAR

Monday, October 7, 1985

7:45 a.m. Registration and Continental Breakfast
9:15 Introduction and Welcome to the Engineering Management Seminar
   *Don Borcher*, Director of Engineering, WHA Radio and Television, Madison, WI
9:30 Changing Roles for Engineering Managers
   *Larry Busse*, Executive Vice President, Gillert Communications, Nashville, TN
10:30 Introduction to Problem Solving Through the Case Study Method
   *H. Richard Hiner*, Director of Navy Broadcasting Services, Washington, D.C.
12:00 p.m. Luncheon and Address:
   Instinctive Management
   *John Cummuta*, General Manager, WCFL, Chicago, IL

Tuesday, October 8, 1985

7:45 a.m. Continuing Registration and Continental Breakfast
9:15 Introduction and Welcome to the Broadcast Engineering Technical Seminar
   *Don Borcher*, Director of Engineering, WHA Radio and Television, Madison, WI
9:30 More Applications of Time-Delay Spectrometry
   *Jim Brown*, Chief Engineer, Bridgewater Sound, South Holland, IL
10:15 Break
10:30 Principles of Operation of Digital Audio Computers
   *Jim Woodworth*, National Sales Manager, Compusonics, Denver, CO
11:15 FCC Update
   *Garrett Lyskys*, FCC, St. Paul, MN
   *George Sklom*, FCC, Chicago, IL

2:30 Problem Solving Through Engineering Management Case Studies
   *H. Richard Hiner*, Director of Navy Broadcasting Services, Washington, D.C.
   *John Cummuta*, General Manager, WCFL, Chicago, IL
4:30 Reception, Cash Bar and Equipment Exhibits

2:00 p.m. AM Stereo Proof of Performance Techniques
   *Al Resnick*, Chief Engineer, WLS-AM, Chicago, IL
2:45 Advancements in Applications Utilizing Small Format Camera Tubes
   *Jerry Cohen*, Product Manager, Sony Broadcast, New York, NY
3:30 Non-Ionizing Radiation: Meeting the ANSI Standard
   *Donald L. Markley*, Consulting Engineer, Peoria, IL
4:30 Reception, Cash Bar and Equipment Exhibits
6:00 Dinner (Optional)
Wednesday, October 9, 1985

7:45 a.m. Registration and Continental Breakfast

8:30 Building an AM Directional Antenna from Scratch
Mark Persons, President, M.W. Persons and Associates, Brainard, MN

9:15 Making the Directional Array Play
Doug C. McDonell, Broadcast Engineering Consultant, Madison, WI

10:00 Break

10:15 Maintenance Fundamentals for Microprocessor-Based Broadcast Equipment
Chuck Kelly, Sales Manager, International Tapetronics/3M, Bloomington, IL

11:15 Practical Tips on OP AMP Use in Your Console
Bill Sacks, President/Chief Engineer, Straight Wire Audio, Arlington, VA

12:00 p.m. Luncheon and Address:
Dealing with Non-RF Interference
Mark Durenberger, Director of Technical Development, Hubbard Broadcasting, St. Paul, MN

2:00 Methods of AM/FM Technical Measurements: Avoiding Errors
Garrett Lysiak, Engineer in Charge, FCC, St. Paul, MN

2:45 Multi-Station FM Broadcast Antennas
Ron Fisk, Principal Engineer, Harris Broadcast, Quincy, IL

3:30 Service and Maintenance of Audio Cart Machines
Dave Montgomery, Technical Service Manager, International Tapetronics/3M, Bloomington, IL

4:30 Reception, Cash Bar and Equipment Exhibits

6:30 Broadcast Engineering Forum (Nuts & Bolts Session)
Stephen Brown, Moderator, Chief Engineer, WLTE, Minneapolis, MN

Thursday, October 10, 1985

7:45 a.m. Continental Breakfast

8:30 Advancements in Stereo Generation for Television Audio
Geoff Mendenhall, Vice President, Engineering, Broadcast Electronics, Inc., Quincy, IL

9:15 Review of SMPTE RS-422 Interface and its Impact on the Broadcast Industry
Ray Dulye, Senior Support Product Engineer, AMPex Corporation, Redwood City, CA

10:00 Break

10:15 Practical Transmitter Conversion for Television Stereo
John Shipley, Product Manager, RCA Broadcast, Camden, NJ

11:15 Fiber Optic Applications for Non-Telephony Services
Mike Galli, Engineer, Grass Valley Group, Grass Valley, CA

12:00 p.m. Luncheon and Address:
The Broadcast Engineer and AT&T
Steve Eliason, Senior Account Executive, AT&T Communications, Minneapolis, MN

2:00 System Design for Stereo Television Operation
James Swick, Engineer, WTTW, Chicago, IL

3:00 Adjournment
During the past 30 years, Broadcasters' Clinic has provided significant management information and technical updating for the broadcast engineer. This will continue to be the goal of the University of Wisconsin. The 1985 Broadcast Engineering and Management Seminar welcomes the support of Steven B. Dana, publisher of Radio World and TV Technology.

Don Borchert

1985 PROGRAM COMMITTEE
Don Borchert, WHA Radio and TV, Madison, WI
Steven Brown, WLTE, Minneapolis, MN
John Freberg, WXRT, Chicago, IL
Ray Hernday, WTMJ, Milwaukee, WI
Gary Mach, UW-Green Bay, Green Bay, WI
Harry Priester, WLS-FM, Chicago, IL
Warren Shulz, WFYR, Chicago, IL

Among the many exhibitors at the 1985 Broadcast Engineering and Management Seminar will be the following:

3M CORPORATION
ALCOA-NEC
AMPEx
AUDIO BROADCAST GROUP
AUDIO-SONICS CORPORATION
AVC SYSTEMS
AVONIX, INC.
BRADLEY BROADCAST SALES
BRIDGEWATER SOUND
BROADCAST AUDIO CORPORATION
BROADCAST ELECTRONICS, INC.
EEV, INC.
EMMONS ASSOCIATES
ENTERPRISES, INC.
FULL COMPASS
HARRIS BROADCAST
INTERNATIONAL TAPETRONICS
LENCO, INC.
M.W. PERSONS AND ASSOCIATES
MICROPROBE ELECTRONICS
PRO AUDIO GENERAL STORE
RCA BROADCAST
ROSCOR CORPORATION
SKYLINE COMMUNICATIONS
SONY BROADCAST
TEKTRONIX, INC.
TODD COMMUNICATIONS, INC.
VICTOR DUNCAN
VIDEO IMAGES
VIDEO MIDWEST
...and many more!!

9XM-WHA

"The Oldest Station in the Nation"
On this campus pioneer research and experimentation in "wireless" led to successful transmissions of voice and music in 1917, and the beginning of broadcasting on a scheduled basis in 1919.

Experimental station 9XM transmitted telegraphic signals from Science Hall until 1917 when it was moved to Sterling Hall. In that year Professor Earl E. Terry and students built and operated a "wireless telephone" transmitter.

In 1918, during World War I, when other stations were ordered silenced, 9XM operated under special authorization to continue its telephonic exchange with U.S. Navy stations on the Great Lakes. After the war, programs were directed to the general public.

The WHA letters replaced the 9XM call on January 15, 1922. Thus, the University of Wisconsin station, under the calls 9XM and WHA, has been in existence longer than any other.

Erected 1920
REGISTRATION FORM
Broadcast Engineering and Management Seminar
October 7, 8, 9 and 10, 1985
Holiday Inn Southeast, Highway 12 and 18 at I-90, Madison, Wisconsin 53704 / (608) 222-9121

Social Security Number: ________________________________
(Note mandatory—used only to ensure accessibility and accuracy of your educational record)

Name: _____________________________________________

Phone: ( ) __________________________
area code daytime number/evening number

Title: _____________________________________________

Organization/Station: _________________________________

Business Address: __________________________________
street

_____ city / state / zip

Payment Enclosed:
☐ Broadcast Engineering and Management Seminar, October 7, 8, 9, 10—$775
☐ Broadcast Engineering Management Session only, October 7—$65
   (A-86-8400-0276)
☐ Broadcast Engineering Technical Sessions only, October 8, 9, 10—$125
   (A-86-8400-0277)
☐ Optional Top Sirloin Steak Dinner, October 8—$42

To register, phone or mail this form along with your check made payable to UW-Extension to: Registration Office, The Wisconsin Center, 702 Langdon Street, Madison, WI 53706. Phone (608) 262-7942.

This information is collected to enhance the programming efforts of University of Wisconsin-Extension and is voluntary.

SEX: ☐ Female ☐ Male

BIRTHDATE: Month ______ Day ______ Year ______

HERITAGE: ☐ American Indian ☐ Asian ☐ Black
☐ Hispanic ☐ White or Other

OCCUPATIONAL AREA
☐ 100 Professional, technical and managerial occupations
☐ 700 Other Occupations

This program is supported in part by funds administered through UW-Extension as part of a coordinated statewide Extension program.

Please advise us at time of registration if you are handicapped and desire special accommodations. Requests will be kept confidential.

UW-Extension provides equal opportunities in employment and programming including Title IX requirements.