

MM9151 AUDIO-VIDEO BROADCASTING SYSTEMS

**L T P C
3 0 0 3**

UNIT I SUPPORTING TECHNOLOGIES 9

Quantities and Units – Information Theory and Error Correction – Coaxial Cable and Optical Fibres – TCP/IP Networking – SAN and NAS Technologies – Telco Technologies – Colour Displays and colorimetry.

UNIT II BROADCAST TECHNOLOGIES AND STANDARDS 9

Linear Digital Audio – Non Linear Audio Systems – Television Standards and Broadcasting Spectrum – Colour Encoding and decoding Systems – Timecode –Sound in Syncs – VBI Data Carriage – Digital Interfaces for Broadcast Signals – Storage File Formats – HDTV Standards – MPEG-2 – DVB standards –Data Broadcast – ATSC Video, Audio and PSIP Transmission – Interactive TV – Encryption systems.

UNIT III BROADCAST / STUDIO AND PRODUCTION COMPONENTS 9

Sound Origination Equipment – Lens Systems and Optics – Optical Sensors – Studio Cameras and Camcorders – VTR Technology – Television Standards Conversion – Television studio centers – Studio cameras ad lighting – Talkback and Communication Systems – Visual Effects –Editing, Mixers and Switchers – Sound Mixing and Control, Surround sound- Routers and Matrices – Transmission Systems..

**UNIT IV BROADCAST SYSTEMS AND TRANSMITTER SYSTEMS
HARDWARE 9**

Broadcast mobile control rooms – Microwave links for OB and ENG – Battery Systems – Electrical Systems for Outside Broadcast – Radio frequency propagation – Thermionics, Power grid and linear beam tubes – Transposes – Satellite distribution – Microwave radio relay systems – Up-link Terminals – Intercity Links and switching centers – Masts, Towers and Antennas.

UNIT V TEST AND MEASUREMENT 9

Television Performance Measurements – Digital Video Systems Test and Measurement - Audio Systems Test and Measurement – Broadcast Engineering RF Measurements – Digital RF Measurements – Systems Monitoring and Management.

Total = 45

REFERENCES

1. EPJ Tozer, "[Broadcast](#) Engineer's Reference Book", Elsevier, 2004.
2. Jerry C.Whitaker and K. Blair Benson, "Standard Handbook of Broadcast Engineering", TMH publications, 2004
3. Michael Talbot Smith, "Broadcast Sound Technology" Focal publisher, 2 nd Edition, 1995.