

December 2008

reviews by James Eade

Control Systems for Live Entertainment

John Huntington, Focal Press ISBN 978 0 240 80937 3

Price: ~~£28.99~~ Book of the Month: £25.00

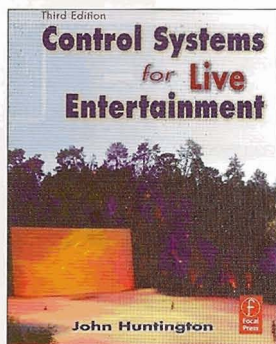
Now in its third edition, this book is a thoroughly comprehensive guide to all aspects of control systems commonly found (and some less so) in entertainment installations, whether temporary or permanent. Huntington has quite a pedigree in entertainment technology, having had a long work history spanning venues, rental companies, trade magazines and latterly as a lecturer and professor at New York City College of Technology and Yale University School of Drama. As such, the book not only gives the reader a feeling of confidence but is also written with some degree of authority.

It's difficult to précis so much content in so few words; one can only advise as to how much information this book contains - and that is lots. Whether you're interested in DMX, audio, laser or pyrotechnic control, it's all there - plus some other things you'd probably never thought of.

Huntingdon begins by giving an overview of control concepts common to all entertainment control systems, particularly standards and how they are used and deployed, as well as the types of systems encountered such as time-based or cue-based ones.

The need to interface control equipment to the outside world is a fundamental part of any system and this is given reasonable coverage with descriptions of TTL interfacing and switching logic. One thing to note is that the book does not expand fully on the electronics aspects involved - to do so would require another book in itself: accordingly, it helps if the reader has some basic electronics knowledge.

Huntingdon continues by looking at the various entertainment technologies and the control systems behind them. These chapters are a kind of moderate primer without going into vast detail on each. For example, the section on lighting discusses dimmer techniques such as thyristor and sine wave dimming as well as touching on control methods such as DMX and analogue. The control protocols though have their guts laid bare in later chapters so the reader doesn't get too bogged down in



detail that may not be necessary.

As it happens, lighting is the first to come under the microscope followed by others including lasers, audio, image presentation, stage machinery, animatronics, fog smoke and similar effects, pyro and finally show control as a whole, describing the

amalgamation of the different disciplines. The third section starts a number of chapters that some may regard as the meat of the book - data communications and networking.

This is arguably the most comprehensive analysis and explanation of control protocols and methods available for the entertainment industry. It commences by looking at the basics of control electronics including numbering systems, data rates and bandwidth, transmission techniques, communications modes (simplex, duplex etc) transmission modulation and error detection and layering. Following on from this there are a number of chapters that cover topics including physical communications media (cables, wireless fibre optics) and point-to-point applications such as serial and parallel interfaces, as well as four chapters specifically aimed at TCP, UDP and IP Ethernet based networking - including a useful chapter on network utilities, great for problem diagnosis.

The fourth section goes on to look at more specific entertainment control protocols including an extensive chapter on DMX, RDM, ACN, MIDI (as well as MIDI show and machine control), SMPTE and MIDI timecode as well as other protocols likely to be encountered such as USB, Firewire SNMP and a variety of industrial protocols such as Echelon, CAN and Profibus. The final chapters of the book give a variety of examples of show control systems using real shows as subjects for analysis.

Huntingdon writes in an accessible but authoritative style - 'Control systems for live entertainment' is definitely a text book but as a reader you don't feel as though you should be in a class room or answering questions at the end of each chapter! An excellent reference for students and seasoned professionals alike.

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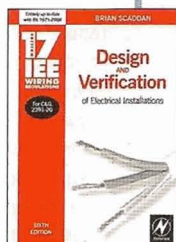
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