

## Power control: managing electrical use

**MARK BISHOP**, president of electrical control systems manufacturer Lyntec, defines power control as 'the automation of the on and off process for any and all equipment hooked up to an internal power distribution system. This is especially important in large venues or buildings with high ceilings where A/V equipment is widely distributed. Automated power control can be used to disconnect equipment from the power grid when it is not being used.' Downtime disconnection eliminates standby power draw (aka phantom or vampire power loads) while reducing the possibility of equipment damage due to lightning or other transient power line spikes. Automated disconnection of equipment during power sags or outages (a standard Lyntec feature dubbed 'brown-out protection', offers Mr Bishop) can protect sensitive gear from rapid power fluctuations, forcing a system to shutdown safely rather than fail catastrophically. Power conditioning is about correcting electrical problems while power control is concerned with managing electrical use. 'Both are important to a comprehensive power management programme,' says Mr Bishop. 'Both contribute to extending the life cycle of your electronic gear and lowering equipment maintenance costs.'



**Lyntec's RPC electrical panels are web enabled for control and monitoring**

Power control adds the feature of lowering your utility bills, and conditioning adds the benefit of improving equipment performance during operation.'

Mr Bishop cites four main functions offered by power control systems. The first is sequencing, controlling which electrical systems are powered on sequentially, in a predetermined order. 'This is used to spread out the inrush of powering multiple devices simultaneously and avoids nuisance breaker trips', he explains.

'Sequencing is also used to properly turn on complex systems which need specific time for processor boot-up. For example, newer digital control protocols like Dante require complete boot-up prior to secondary equipment powering or the system can't complete the appropriate "handshake" and won't communicate properly or at all.'

The second function is automation – allowing widely distributed gear to be turned on remotely, including security and safety lighting. Third is energy management and the reduction of utility bills through programmed power cycling. Gear need not be left in standby mode. Fourth, motorised circuit breakers 'enable a simple and cost effective way to comply with local life safety codes,' says Mr Bishop, including evacuation systems in the applications.

To efficiently control these functions, Mr Bishop adds that Lyntec uses web-enabled controllers. There's no software to run; with the controller hooked by Ethernet to a network, any device on the network that can run a browser can control the systems via the controller's built in web server (with password protection, of course).

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