

## Application Note 5

### What is RDM?

RDM stands for Remote Device Management. This is the colloquial name for the ANSI E1.20 standard just released by ESTA.

RDM allows bi-directional communication over the DMX512 cable. This occurs on the twisted pair connected to pins 2 and 3. This same pair of wires is used to transmit data from the console to the dimmers or moving lamps.

RDM requires a new breed of DMX splitters, such as the Artistic Licence Rack-Split RDM. This new type of splitter is intelligent as it must monitor the data for a command to reverse the direction of the cable.

The large benefit of this approach as opposed to using the spare pins 4 and 5, is that RDM can be retrofitted to installations wired with single pair cable. A second benefit is that many products, such as HES & Martin, already contain the electronics needed for bi-directional communication using pins 2 and 3. These products can be upgraded to RDM with a software only change.

RDM provides the following benefits:

- Ability for the console to set the base address of the lamp. There will no longer be a need for DIP switches.
- Plug and Play. The console will be able to search the DMX512 cable for all connected devices and then automatically patch them.
- Lamp personality: It will be possible for the console to use RDM to download personalities direct from the moving lamp. No more last minute panics to find the correct lamp library.
- RDM devices can be firmware upgraded via the DMX512 signal.
- RDM devices can send status and fault information back to the console.
- By allowing bi-directional communication, it will be much easier to mix DMX installations with sophisticated Ethernet protocols such as Art-Net or ACN.

RDM has recently been released as a standard by ESTA. A full copy of the standard can be purchased from the ESTA web site.

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