Trouble shooting data connections for Anytronics DFBs and Lightboxes

Connecting the data lines between DFB fittings and light boxes really couldn't be easier than when using the ready made and tested RJ12 connecting leads available from Anytronics. Some installers prefer to make up their own leads to length, but many have found that the extra time spent in troubleshooting the resultant faulty installation has rendered this cable making exercise an expensive economy. Here are some tips to help you overcome such cable connection problems :-

In the well known words of Douglas Adams, 'Don't Panic'.
It is easiest to plug and unplug cables to test their operation one by one.

It is almost impossible to work out what has gone wrong by just leaving everything connected together and watching a wall of fittings all changing colours!

For the simplest trouble shooting, use a ColourDesk with Depth and Phase set to zero, Master set to full and the four colours set to 2. Test each cable in turn by connecting to a DFB and changing each colour in turn whilst observing the DFB output.

Lamps which have a constant output are probably not receiving data. This may be due to an open circuit cable, or one in which the data line is shorted to earth.

When different colour lamps change together, (usually fairly unpredictably) their data lines are probably shorted together.

There are two orientations of an RJ12 plug possible on the standard cable. The orientations of the plugs at either end of a cable should match. (This is easiest to check during assembly and before installation.)

If only a section of the installation is not changing colour, that section is almost certainly not receiving data due to a faulty cable or to a plug which is not properly home in its socket. It may be relatively simple to trace back to the problem cable.

This applies equally to individual lamps on DFBs. If their output should be changing but is not, the DFB is almost certainly not getting data on that channel due to an open circuit cable connection (or one which is shorted to earth).

Shorted connections from one colour to the next in poorly assembled cabling lead to chaotic behaviour from all the DFBs connected on that channel, both those connected before and those after the faulty cable within the installation. Break the installation down into smaller sections and test cables and DFBs one by one.

If you absolutely insist on leaving the entire installation connected up and troubleshooting it as a whole, you should at least find and test one long cable which is known to be good. This can then be used to replace suspect cables one by one until the symptoms change, but …

Note that if there is more than one faulty connection in the system, it will not be possible to make the system work correctly by replacing only one of the faulty cables with a good cable!

Despite many recent technological advances at Anytronics we still cannot test your cables over the phone! All our best suggestions are included above.

Make it easy for yourself, test cables and fittings one by one.

Dr M J Crawford Anytronics Ltd 15th Sept 2003