DMX to DFB Interface Unit Installation Guide

The Anytronics DMX to DFB interface is designed to accept 32 channels of data from a specified start address via the DMX input, and to output this data via an RJ12 connection system for use by eight channels of Anycolour DFB RGBY light fittings.   The output may be in the form of DSI or else DALI broadcast data. The presence of valid DMX data at and above the DMX start address is indicated by a yellow data LED on the unit.

Installation procedure overview

1.   Check unit is correctly set for DSI or DALI output (see label or jumper J1).
2.   Check unit is for correct supply voltage and connect to supply.
3.   Connect to DMX data source and set appropriate start address.
4.   Set DIL switches 1&2 for required RGBY output mapping.
5.   Set DIL switch 3 for 'Blackout enable' if DMX source is an Anycolour unit.
6.   Set DIL switch 4 for DMX termination if interface unit is last in DMX chain.
7.   Connect outputs to DFB light fittings via RJ12 interconnection system.
8.   If necessary, test DFB connections using Interface test feature.

For **ColourDesk 1**, set the DMX address to 13 and DIL switches 1,2 and 3 to ON.
For **ColourDesk 2**, set the DMX address to 193 or above and DIL switches 1 and 2 to OFF with switch 3 ON.
Both the MFL and FCL potentiometers should be set fully counter clockwise to zero

DMX Start Address

The DMX start address is set by the three miniature rotary switches on the side of the unit. The left switch sets the hundreds, the middle switch the tens and the right switch the units of the start DMX address.

A start address of 0 or between 700 and 999 disables the unit, all DFBs will be switched off

Start addresses from 1-509 are allowable in normal operation.

Addresses from 509 to 599 are read as start address 509

A start address of 600+ puts the unit in test mode (indicated by the blinking data LED). To test a specific output, set the number of the required output (1-32) on the tens and units address switches and that output will rise to full on.

For use with **ColourDesk 1**, set the address to 13.

For use with **ColourDesk 2**, set the address to 193,   or to one of 197, 201, 205, 209, 213, 217, 221, 225, 229, 233, 237, 241, 245, 249, 253 for other effects.

DMX to DFB Mappings

When the unit is powered from 240Vac, each DFB output will drive 15 **Anycolour** DFB light fittings with a DSI signal. On lower supply voltages (eg 220Vac) or for DALI broadcast signals this drive capability is reduced to 10 fittings. To increase the overall output capability, the user can select to drive groups of the RJ12 DFB sockets from the same DMX data, by setting DIL switches 1&2.

In normal operation with DIL switches 1 and 2 off, the 32 channels of data starting from the DMX start address are decoded and output to the eight DFB sockets as RGBY data.

With DIL switch 1 set OFF, switch 2 set ON, only the first sixteen data channels are decoded and are output to successive pairs of pairs of sockets.

With DIL switch 1 set ON, switch 2 set OFF, only the first eight data channels are decoded and are output to the first and last four sockets as two channels of DFB data.

With both DIL switch 1 and 2 set ON, only the first four DMX data channels are decoded and their data is output to all of the DFB sockets.

For **ColourDesk1**, set switches 1&2 ON for the same output to all DFBs.

Ballast On/Off Commands

This interface can be used to decode DMX data from any DMX data source including **Anycolour** ColourDesk products and conventional lighting control desks. A particular feature of the ColourDesk products is the ability to switch off the DFB fittings directly using their 'Blackout' button. This is achieved by reserving the zero level DMX data level as a command to switch off the ballast on that channel. This feature is enabled on the interface unit by switching DIL switch 3 to ON, and disabled by switching it to OFF. For use with all ColourDesk products, this switch should be set to ON. For use with conventional lighting desks, the switch should be set to OFF to disable this feature.

Minimum Level setting and Automated Cutoff

Normally DFB fittings can be dimmed from 1-100%, a range which provides unique precision in illumination colour control. This range can be reduced if required by setting a minimum fluorescent level (MFL) using the potentiometer control on the interface unit.

A second potentiometer control sets a fluorescent cutoff level (FCL). If the data level on any channel of DMX remains below this cutoff level for more than five seconds, the corresponding output channel will have its ballast switched off. When the data level rises above this cutoff level, the ballast will be switched on again, (but this is an inelegant process which often causes the tube to flash on whilst powering up). For normal use and with faster dynamic effects, this second FCL control should best be set to zero (fully counter clockwise) to disable this process. During very slow colour cycles, or for static lighting effects, this control can come in to its own, switching off fluorescents to preserve lamp life and reducing power consumption during periods where specific colours remain at very low levels.

Note that if the MFL control is set at a level above the FCL control, the FCL control is effectively disabled and lamps will be dimmed at lowest to the MFL level. If the FCL control is set above the MFL control, during periods when the input level on a channel is low, the corresponding lamp will be switched off after five seconds below the FCL level.

For ColourDesk1, ColourDesk2 and Memory unit, set both controls to zero unless you specifically wish to overide the settings within those controllers.

DMX Failure modes

In the event that DMX data is disconnected from the interface unit, the data LED will be extinguished, but the last input levels received for each channel will normally be held in memory and continually output to the DFB outputs. Note that this data may be corrupted or cleared if the DMX address or DMX to DFB mappings are changed, or if the unit is powered down.

An internal jumper J2 can be used to select the action taken in the event of DMX disconnection. With J2 in position A, the data will be held for 5 seconds and will then fade to zero level, all DFBs being eventually switched off. With J2 in position B (factory setting) the last received data level will be held indefinitely.

Use with Anycolour Memory Unit

If using an Anycolour Memory in conjunction with this interface, the Memory unit will be set to emulate either a ColourDesk 1 or ColourDesk 2. The DMX address and other settings on the Interface unit should be made to match this selected emulation mode. The Memory unit is connected to the RJ45 interface socket labelled 'Memory' via a category 5 cable (supplied with unit).

<u>Specification</u>

Supply :   220-240 Vac nominal @ 8VA with 100mA anti-surge fuse

Inputs :   DMX input/through via 5 pin XLRs
RJ45 connectors for Memory Unit and ColourDesk 2.

Outputs :   8 RJ12 data sockets, for connection to Anycolour DFBs.
Each drives 15 Anycolour DSI fluorescent fittings on 240V ac supply
10 Anycolour DSI DFBs on 220V ac supply
10 Anycolour DALI DFBs on 220 or 240V ac supply

Controls :
Three BCD coded rotary address switches set the DMX start address.

Four way DIL switch :-
The first two positions set the output mapping.
DIL switch 3 switches in the zero DMX level = blackout option.
DIL switch 4 switches in an optional DMX termination resistor.

Two presets controls :-
MFL   sets a minimum fluorescent level in range 1-25%
FCO   sets level below which fluorescents will cut out (after 5s delay) 1-25%

Two jumpers (read only on switch on)
Internal jumper J1 selects between 'B' DSI and 'A' DALI broadcast output.
Internal jumper J2 selects between the DMX data failure options of 'B' data
hold and 'A' fade to zero after 5 seconds.

Connecting Leads Supplied :
Integral 2m mains lead and
IEC mains lead for connecting the mains supply to the first Anycolour DFB

Dimensions :   245 x 120 x 60 mm

Weight   :   Gross 2.0 kg   Net 1.4 kg

Compliance :   relevant current standards under EN61000-3-2
and EN61000-3-3, including EN55103-2, EN55103-3
and EN60065/EN60950

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