



## COLOUR CONTROLLED ILLUMINATION FROM ANYTRONICS

The Anycolour range of products from Anytronics provides precise static and dynamic RGB colour control of lighting for use in large area illumination. The range fits together to form a digitally integrated system, which will control synchronised colour washing of fluorescent, cold cathode neon, LED and any other dimmable light sources.



Cost effective Anycolour light fittings (DFBs) use high efficiency recyclable fluorescent tubes driven from digitally controlled switched-mode ballasts to give long lifetime, low energy colour washing with unparalleled control of colour. They are designed for either direct colour washing of walls and ceilings or for rear illumination of translucent screens to create walls of changing and moving colour. All these fittings may be driven from conventional DMX signals through an Anycolour DMX to DFB converter which will drive up to 120 fittings.

The range of Anycolour control desks is designed to meet the requirements of a wide range of users, from those requiring precise hands-on control of illumination, to installations requiring only push button selection of preset effects. All the controllers have DMX outputs suitable for use with conventional incandescent, neon, LED or fluorescent lighting sources, so that the controllers can be used within existing installations.

The controllers all feature precise RGB control of hue, with independent controls for colour saturation and overall lighting level. To produce dynamic colour lighting effects, controls for the speed, depth and shape of colour modulation give total control over the modulation trajectory through colour space. Additional Anycolour wave software allows the controlled use of a number of Anycolour fittings to produce a spectacular range of static or dynamic spatial colour effects from subtle changes in hue to vibrant moving spectra.

All units in the Anycolour range connect together with plug and socketed mains and data leads to minimise installation time. Light fittings can be directly wall mounted, and the controllers used as free standing lighting desks or as wall mounted controls.

### Product Range Overview

The Anycolour range of colour controllers comprises three models :-

**ColourDesk 1:** an RGBY colour control desk with an output socket for direct connection to Anycolour DFB fluorescent light fittings, and DMX512 outputs suitable for controlling fluorescent, LED, incandescent and cold cathode colour changing RGB and RGBY light fittings.

**ColourDesk 2:** a sixteen channel RGBY colour control desk with Anycolour wave software and DMX512 outputs suitable for controlling Anycolour DFB fluorescent colour control light fittings, LED, incandescent and cold cathode sources.

**Anycolour Memory:** a DMX input/output programmable stand alone multipurpose control/memory/backup unit with programmable and preset dynamic colour generation algorithms.

**DMX to DFB Interface:** a unit which will convert 32 channels of DMX data to RGBY data for use in controlling up to eight separate outputs of RGBY data to Anycolour fluorescent light fittings. This will drive up to 120 such fittings from DMX data.

**Anycolour T8 Fluorescent Light Fittings (DFB):** for indoor use come in three sizes based on 600, 1200 and 1500mm fluorescent tubes with 72, 144 and 224 Watt ratings respectively. These are ideal for wall or ceiling mounting for rear screen illumination or colourwash effects.

**Anycolour Up/downlighter:** fittings based on the same three standard tube sizes offer more flexibility in mounting for more awkward colourwash situations.

**Anycolour Outdoor RGB Fitting:** a rugged sealed based on 1500mm fluorescent tubes is also available for exterior use, with a polycarbonate enclosure rated to IP67.

## ColourDesk Products

The ColourDesk products feature conventional lighting desk sliders for setting the levels of the three additive primary colours red, green and blue. An additional slider controls the level of a fourth neutral colour (usually yellow), to reduce the colour saturation levels producing less intense and more pastel shades. A master level control sets the overall level of illumination without altering the hue (colour) or degree of colour saturation in the output. With these controls a wide range of static, mood changing colours can be produced from suitably balanced RGB or RGBY light fittings suitable for use in retail, architectural or studio environments.

To create an environment which slowly changes colour, the output of an oscillator with a selectable waveform can be used to modulate the RGB outputs through a controlled colour cycle. The speed and depth of modulation are again controlled from slider controls on the front panel, so that for more dynamic lighting effects, the speed and depth of modulation can both be increased. Whatever these settings, a novel algorithm automatically adjusts the colour saturation level by controlling the fourth neutral colour around the set value to create bright and vibrant colour effects throughout the cycle. Conventional four colour chases can also be created using the colour desk, with the speed, depth and shape of modulation again adjustable using the front panel controls. All colour cycles can be frozen or reversed at the touch of a button on the front panel, which also provides a blackout control.



### ColourDesk 1

A low cost entry level controller with all of the above features. It has an output which can drive Anycolour DFB fluorescent light fittings directly via an RJ12 connection system and low cost cable over distances in excess of 200m. It also features a DMX512 output to assist integration into existing lighting systems. The DMX data output frame consists of four sets of RGBY data modified by dimming curves intended for use with LED, incandescent, cold cathode and fluorescent lighting, providing output data suitable for use with all types of light source and dimming systems.

#### Specification

- Supply** : 220-240 Vac nominal @ 3VA with 100mA anti-surge fuse  
**Outputs** : Anycolour data socket, for connection to Anycolour DFBs.  
 Drives upto 50 Anycolour fluorescent fittings  
 DMX output via standard 5 pin XLR.

Output for different light sources at following addresses :-

- channels 1-4 : R, G, B, Y linear output (for LEDs etc)
- channels 5-8 : R, G, B, Y linear power (for incandescent)
- channels 9-12 : R, G, B, Y cold cathode (for neons / argon etc)
- channels 13-16 : R, G, B, Y fluorescent

#### Controls:

- Slider controls :-  
 Red, Green, Blue, Neutral colour level settings and master level (all 0-100%)  
 Colour cycle depth (0-100%) and period (10 seconds - 45 minutes)  
 [or select period range (5 minutes - 24 hours) using internal jumper]

#### Push Button Controls :-

- Sequence select : Three (RGB) and four (RGBY) colour cycles
- Waveform select : Ramp, Sine and Peak modulation waveforms
- Direction select : Forward, Reverse and Freeze control of colour cycle
- Blackout : Blackout all outputs
- Internal adjustments : Jumper selects speed range (see above)
- Two presets can be used to control the operation of the fluorescent outputs (ie to DFB and to DMX fluorescent outputs) at low output levels
- MFL sets a Minimum Fluorescent Level in range 1-25%
- FCO sets level below which Fluorescents will Cut Out after timeout (1-25%)

#### Connecting Leads Supplied

- 5m RJ12 data cable and mains lead
- also IEC mains lead for connecting the supply to the first Anycolour DFB

- Dimensions** : Desk Top Model 220 x 145 x 80 mm  
 Wall Mount 240 x 165 x 62 mm

- Weight** : Gross 2 kg Net 1.4 kg

- Compliance** : Relevant current standards under EN61000-3-2,  
 EN61000-3-3 including EN55103-2, EN55103-3,  
 EN60065/EN60950

### ColourDesk 2

ColourDesk 2 is intended for use with larger installations. It has all the features of the CDO1 except the DFB output for driving Anycolour light fittings directly. Instead the output is exclusively DMX512 via a DMX frame with 64 channels of data suitable for controlling sixteen outputs of RGBY lighting. Again the 64 channels of data are output four times per DMX frame, firstly as raw data, and then modified by dimming curves suitable for use with incandescent, cold cathode and fluorescent lighting.

The key additional feature of ColourDesk 2 is the relationship between these sixteen outputs of colour data provided by Anycolour wave software. If the ColourDesk is arranged to produce a colour cycle as described above, each of the sixteen RGBY outputs can be arranged to output a different part of the cycle. The phase separation between channels can be set from zero to a quarter of the complete cycle by a slider control on the ColourDesk. If the light fittings driven by these outputs are arranged sequentially, at low separation settings, a slight change of hue will be visible across the illuminated surface. At higher separation settings, a more noticeable spatial colour change will be visible, and at the highest settings a complete spectrum.

#### Specification

- Supply** : 220-240 Vac nominal @ 3VA with 100mA anti-surge fuse  
 or 5 Vdc via DMX cable from DMX to DFB interface unit.  
**Outputs** : DMX output via standard 5 pin XLR and RJ45 connectors.  
 Output of 16 channels of RGBY colour data.

Output for different light sources at following addresses:-

- channels 1-64 : R, G, B, Y linear output (for LEDs etc)
- channels 65-128 : R, G, B, Y linear power (for incandescent)
- channels 129-192 : R, G, B, Y cold cathode (for neons / argon etc)
- channels 193-256 : R, G, B, Y fluorescent

#### Controls :

- Slider controls :-  
 Red, Green, Blue, Neutral colour level settings and master level (all 0-100%)  
 Colour cycle depth (0-100%) and period (10 seconds - 45 minutes)  
 [or select period range (5 minutes - 24 hours) using internal jumper]  
 Phase control sets phasing between adjacent RGBY channel outputs (0-25%)

#### Push Button Controls :-

- Sequence select : Three (RGB) and four (RGBY) colour cycles
- Waveform select : Ramp, Sine and Peak modulation waveforms
- Direction select : Forward, Reverse and Freeze control of colour cycle
- Phase sign select : Positive or negative phase shift select
- Linear/split phase : Selects linear phase shift or phase split from centre
- Blackout : Blackout all outputs

### Internal adjustments

- : Jumper selects speed range (see above)
- : Jumper selects phase split optimised for odd or even no of channels
- Two presets can be used to control the operation of the fluorescent outputs :-
  - MFL sets a Minimum Fluorescent Level in range 1-25%
  - FCO sets level below which Fluorescents will Cut Out after timeout (1-25%)

### Connecting Leads Supplied

5m RJ45 DMX data cable (and mains lead if mains powered desk)

<b>Dimensions</b>	:	Desk Top Model	220 x 165 x 80 mm
<b>Weight</b>	:	Gross 2 kg	Net 1.4 kg
<b>Compliance</b>	:	Relevant current standards under EN61000-3-2, EN61000-3-3 including EN55103-2, EN55103-3, EN60065/EN60950	

## Anycolour Memory Control

The Anycolour Memory is a compact multipurpose control embodying all the features and software of the CD01 and CD02 in a twin pattern housing. It does not have manual slider controls, but instead is designed to take a snap shot of the settings of a ColourDesk 1 or 2 so that they can be recalled by untrained users as one of eight presets from the front panel switches. These settings are then used to create the equivalent outputs to a ColourDesk1 or ColourDesk2 which the Anycolour memory emulates.

Although the unit is pre-programmed with representative colour cycle effects via the DMX to DFB interface, it can be reprogrammed by connecting to the DMX output of a ColourDesk 1 or 2. The ColourDesk should ideally also be connected to the target lighting installation so that the required effects can be created and checked in turn before committing the settings to Anycolour memory as a preset.

When the ColourDesk is disconnected from the DMX line, the Anycolour memory unit will detect the lack of DMX data and take over the output of DMX data on the same DMX line to re-create the same lighting effect. The stored preset effects then can also be recalled and output from memory from the front panel controls. If the DMX line is reconnected to a DMX source, the Anycolour memory will detect this and shut down its DMX output. In this way the unit can act either as a pre-programmed and simple to operate controller or as an emergency backup controller for use in DMX controlled colour lighting systems.

A further feature of this product is an automated 'preset cycle' which will cycle round the memorised presets in sequence (avoiding those in 'blackout') staying in each preset for a time defined by the memorised 'period' setting. Alternatively an 'auto cycle' can be selected to automatically cycle round the memorised presets and variants of those presets producing a longer overall cycle time with a wider range of effects.

The Master up/down buttons can be used to adjust the overall illumination level at any time. When a new preset is recalled from memory, its set Master level will take over from the adjusted level, except in the 'preset' and 'auto' cycles when the Master level is unchanged until a preset is selected manually.

### Specification

<b>Supply</b>	:	5 Vdc via DMX cable from DMX to DFB interface unit
<b>In/Outputs</b>	:	DMX input/output via RJ45 connector.
<b>Controls</b>	:	8 preset select buttons plus Master. : Master level up/down buttons.

Red, Green, Blue, Neutral colour level settings, colour cycle depth, period and phase and master level all set from ColourDesk, with ranges as for ColourDesk  
All levels and cycle depth (0-100%),  
Cycle period (10 seconds - 24 hours),  
Cycle channel phase separation (0-25%).

### Also set from Colour Desk :-

Sequence select	:	Three (RGB) and four (RGBY) colour cycles
Waveform select	:	Ramp, Sine and Peak modulation waveforms
Direction select	:	Forward, Reverse and Freeze control of colour cycle
Phase sign select	:	Positive or negative phase shift select
Linear/split phase	:	Selects linear phase shift or phase split from centre
Blackout	:	Blackout all outputs
MFL	:	Minimum Fluorescent Level in range 1-25%
FCO	:	Level below which Fluorescents will Cut Out (1-25%)

### Connecting Leads Supplied

5m RJ45 data / supply cable

<b>Dimensions</b>	:	148 x 86 x 15 mm
<b>Weight</b>	:	Gross inc. cable 0.75 kg Net unit only 0.14 kg
<b>Compliance</b>	:	EN55103-2, EN55103-3

## DMX to DFB Interface

To convert the DMX outputs from the above controllers or any other DMX controller to drive Anycolour DFB lighting units, the range of control hardware is completed by a DMX to DFB interface. This mains powered unit has DMX512 input and through XLR and RJ45 connectors and eight DFB outputs on RJ12 connectors. It will take in 4, 8, 16 or 32 channels of data from the set DMX start address and convert them to supply eight RGBY outputs to Anycolour DFB light fittings. Each output will drive at least 15 such fittings, giving a total drive capability of 120 DFBs. Four different decoder mappings are available to allow driving each output, pair of outputs or quad group of DFB outputs from successive four channel RGBY blocks of DMX data, or else all outputs may be driven from the same 4 channels of DMX data.

A number of additional features are designed to help integrate Anycolour DFB lighting units into DMX controlled lighting systems. These include the optional interpretation of zero channel data as a blackout command, controls for setting minimum levels and cut off levels for DFB units and 'hold' and 'fade to zero' DMX failure modes. The interface unit also contains a power supply which can power both the ColourDesk 2 and Anycolour memory via the RJ45 / DMX interconnection system.

### Specification

<b>Supply</b>	:	220-240 Vac nominal @ 8VA with 100mA anti-surge fuse
<b>Inputs</b>	:	DMX input/through via standard 5 pin XLR and RJ45.
<b>Outputs</b>	:	8 RJ12 data sockets, for connection to Anycolour DFBs. : Each drives 15 Anycolour fluorescent fittings on 240v ac supply. : 10 Anycolour DFBs on 220v ac supply.
<b>Controls</b>	:	Three BCD coded address switches set the DMX start address :- A start address of 0 or 700-999 disables the unit - all DFBs switched off. Start addresses from 1-509 are for 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 blinking data LED). To test a specific output, set the number of the required output (1-32) on the tens and units address switches, the corresponding output will fade up to full on.

### Four Way DIL Switch

The first two positions set the decoding mapping as follows :-  
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.  
With DIL switch 1 set on, switch 2 off, only the first sixteen data channels are decoded and are output to successive pairs of pairs of sockets.  
With DIL switch 2 set on, switch 1 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 are output to all of the DFB sockets.  
DIL switch 3 switches in the zero DMX level = blackout option.  
DIL switch 4 switches in an optional DMX termination resistor.  
Two externally accessible presets can be used to further control the operation of the DFB at low output levels :-  
MFL sets a Minimum Fluorescent Level in range 1-25%  
FCO sets level below which Fluorescents will Cut Out (after 5 sec delay) 1-25%  
An internal jumper selects between DMX data failure options of 'data hold' and 'fade to zero'.

### Connecting Leads Supplied :

Integral mains lead and IEC mains lead for connecting the mains supply to the first Anycolour DFB

<b>Dimensions</b>	:	L inc. flanges 245 x D 120 x H 60mm
<b>Weight</b>	:	Gross 2 kg Net 1.4 kg
<b>Compliance</b>	:	Relevant current standards under EN61000-3-2, EN61000-3-3 including EN55103-2, EN55103-3, EN60065/EN60950



## Anycolour DFB Fluorescent Fittings

The Anycolour range of DFB fluorescent light fittings are cost effective RGBY fittings which are designed to be quick to install and simple to use in a variety of lighting applications. They use standard fluorescent tubes (readily replaceable, recyclable and with an average life expectancy of 7500+ hours) as the light source. This gives good energy efficiency, well diffused colour washing and low maintenance overheads. The fittings are most suited for use in large scale colour wash and screen illumination applications in architectural, studio and retail environments. Since they use high frequency switch-mode fluorescent control ballasts they extend the expected lifetime of the fluorescent tubes and are rugged, flicker free, and particularly suited to use in TV and filming applications.



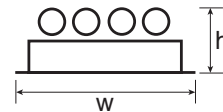
Using additive RGB colour mixing, Anycolour fittings can produce a wider gamut of vibrant colours than those available with subtractive CMY colour control. The filters, fluorescent tubes and dimming curves used have been carefully selected to generate a white output at any set of balanced RGB levels. The addition of the fourth white or yellow source provides a means of control over the colour saturation depth, giving an even wider range of brighter, less intense pastel shades.

The control input is a low data rate digital signal carrying all four RGBY signals on standard telecomms cable to cover distances in excess of 200m. The data interconnection uses RJ12 connectors, three paralleled connectors being available on every unit for ease of in/through interconnection. An IEC plug and socket system is used to provide in/through mains connections on all fittings for equal speed of interconnection of the supply during installation.

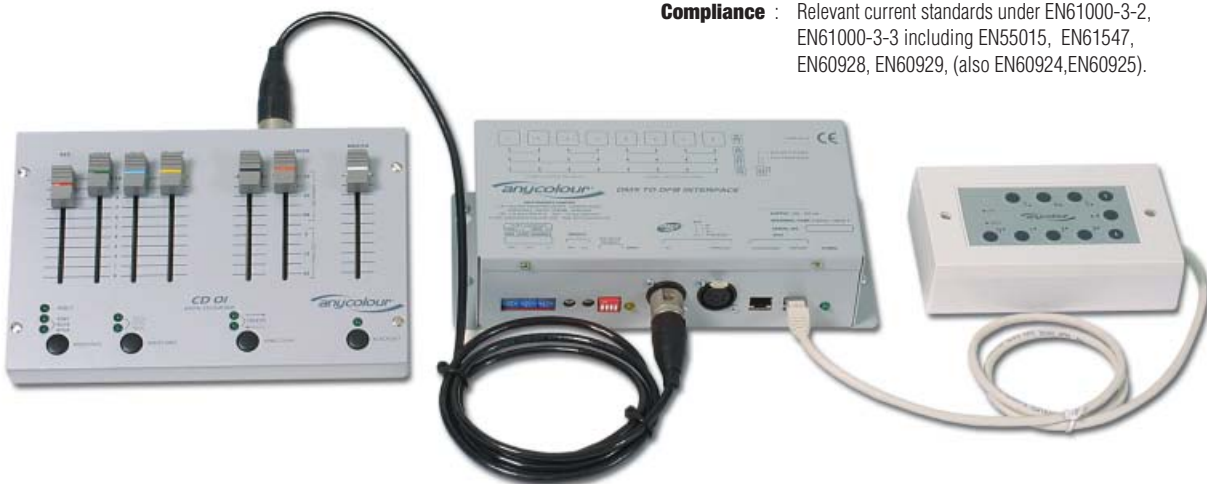
### Anycolour DFB Specification

- Supply** : 220-240 Vac nominal, 1.6A anti-surge fuse, IEC in, IEC out
- Data** : DFB data signal, 1 input/ 2 through via 3 RJ12 connectors.
- Light source** : 4 x 600mm, 1200mm or 1500mm 18/36/58/Watt T8 tubes
- Filters** : Dyed polycarbonate red, green, blue and yellow T8 filters
- Ballasts** : High Frequency switch-mode control ballasts
- Reliability** : Average life expectancies of key components :-  
 Tubes 7,500 + hours of operation  
 Filters 20,000 + hours of operation  
 Ballasts 50,000 + hours of operation

<b>Dimensions</b> :	Packed (l x w x h)	Unpacked (l x w x h)
72 W	745 x 260 x 100 mm	638 x 245 x 80
144 W	1355 x 260 x 100 mm	1250 x 245 x 80
224 W	1660 x 260 x 100 mm	1552 x 245 x 80



- Weight** : Gross Net
- 72 W 5.5 kg 4.5 kg
- 144 W 9.0 kg 8.0 kg
- 224 W 10.7 kg 9.5 kg
- Compliance** : Relevant current standards under EN61000-3-2, EN61000-3-3 including EN55015, EN61547, EN60928, EN60929, (also EN60924, EN60925).



Further information available on our website  
[www.anycolour.com](http://www.anycolour.com)

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