



## **Anycolour Memory Unit : Installation Guide**

The Anycolour memory unit emulates the operation of either a CD01 or CD02 ColourDesk in a compact and user friendly form. The Anycolour memory unit can store all the front panel and internal settings of a ColourDesk connected to it in eight memories, subsequently reproducing the corresponding ColourDesk DMX outputs at the touch of a button.

The memory unit should be powered from +5 Volts supplied via by a Category 5 cable with RJ45 connector (as supplied) which also carries the DMX signals. This is most simply accomplished by connecting the RJ45 cable to the memory port provided on an Anycolour DMX to DFB interface. The interface unit DMX addressing should be set for a CD01 or CD02 as appropriate (see manuals).

Only one memory unit should be used in any installation.

### **Installation procedure overview**

1. Check jumper on rear of PCB is set for required CD01 or CD02 emulation.
2. Use supplied RJ45 cable to connect to +5 Volt supply and DMX data line.  
(If being used with Anycolour DMX to DFB Interface, connect to memory port)
3. Set DMX addressing on any DMX light fittings and on DMX to DFB interface unit (if used) for correct RGBY CD01/02 output addressing.

For use with DMX to DFB interface :-

Both the MFL and FCL potentiometers on the interface should be set fully counter clockwise to zero.

For CD01 emulation, set the DMX address to 13 and DIL switches 1,2 and 3 to ON.

For CD02 emulation, set the DMX address to 193 or above and DIL switches 1 and 2 to OFF with switch 3 ON.

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### Installation : DMX Output addressing

The DMX output of the memory unit is identical to the DMX output of the ColourDesk that is being emulated. Correct DMX address setting is vital to the operation of the installation. If a ColourDesk drives the light fittings correctly via DMX connection, then so will the memory unit when in the equivalent emulation mode. Details of the DMX addressing are reproduced below from the relevant ColourDesk manuals.

#### **ColourDesk 1** : DMX data output addressing

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

#### **ColourDesk 2** : DMX data output addressing

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

with the channel addressing organised as 16 sets of RGBY data (A to P) thus :-

	A	B	C	D	E	F	G	H
Linear data	1 - 4	5 - 8	9 -12	13 - 16	17 - 20	21 - 24	25 - 28	29 - 32
Linear Power	65 - 68	69 -72	73 -76	77 - 80	81 - 84	85 - 88	89 - 92	93 - 96
Cold Cathode	129 -132	133 -136	137 -140	141 -144	145 -148	149 -152	153 -156	157 -160
Fluorescent	193 -196	197 -200	201 -204	205 -208	209 -212	213 -216	217 -220	221 -224
	I	J	K	L	M	N	O	P
Linear data	33 - 36	37 - 40	41 - 44	45 - 48	49 - 52	53 - 56	57 - 60	61 - 64
Linear Power	97 -100	101 -104	105 -108	109 -112	113 -116	117 -120	121 -124	125 -128
Cold Cathode	161 -164	165 -168	169 -172	173 -176	177 -180	181 -184	185 -188	189 -192
Fluorescent	225 -228	229 -232	233 -236	237 -240	241 -244	245 -248	249 -252	253 -256

Four colour fluorescent light fittings (such as Anycolour DFBs) should be set with addresses at 193, 197, 201 etc through to 253, in order to use the RGBY fluorescent compatible information for each fitting.

Three colour light fittings such as RGB LED fittings should be set with addresses 1, 5, 9, 13 etc to 61 to use only the first three channels of data (RGB) from each set of four channel (RGBY) data.

To use the CD02 split phase lighting feature, fittings should be addressed symmetrically around fitting H and I for an even number of fittings, or



symmetrically around fitting 1 for an odd number of fittings, and the appropriate jumper setting for an odd or even number of fittings must also be made on the programming CD02. (See CD02 manual) This setting will then be programmed into the memory unit.



## Anycolour Memory Unit : USER GUIDE

### **1.0 Front Panel Overview**

The front panel has ten button switches and ten LED indicators. Switches labelled 0-7 have their own blue mimic LEDs and are used for storing and recalling the contents of the eight programmable memories. The last two up and down buttons form a Master slider control, allowing control of overall lighting level. The green power LED shows when the unit is powered up, and the yellow data LED indicates that the unit is receiving suitable programming data from a ColourDesk.

The Memory unit should either be set for CD01 emulation or for CD02 emulation using the jumper selection on the back of the PCB.

### **2.0 Guide to Operation**

#### **2.1 Overview**

By connecting the memory unit to the DMX output of a ColourDesk, the memory unit can be used to store eight different front panel setups (colour cycles) from the ColourDesk. This is best done whilst the ColourDesk is also connected to the target lighting system so that the desired effects can be seen as they are being programmed into the memory unit.

If the ColourDesk is then disconnected, the DMX output of the memory unit will take over and will match the DMX output of the ColourDesk, producing the colour cycles stored in its memories as if they came from the ColourDesk.

#### **2.2 Recalling Preset Memories**

With the power applied, the memory unit will power up and, if no DMX data is detected within 2 seconds, it will start to output a colourcycle from a memory as DMX data with the corresponding preset memory's mimic LED lit. Alternative preset memories can be selected by depressing the appropriate preset button, when the corresponding LED will be lit to indicate that it is active. [If the preset selected is in 'blackout', the mimic LED will flash.]

At any time, the overall illumination level can be temporarily adjusted by using the Master 'Up' and 'Down' buttons (on the right of the panel) to increase and decrease the setting of the Master level control. Note that these altered settings are not saved so that selecting a new preset memory will download the corresponding preset Master level to override these temporary adjustments.

After the equipment has been powered down, the last manually selected preset memory will be automatically reselected on powering up again. In this way the same preset colour cycle can be used if required day in, day out, and will be automatically reselected on powering up after a power failure.

#### **2.3 Re-programming Presets**



The Anycolour memory unit is supplied with pre-programmed preset memories, but these can be easily reprogrammed from an Anycolour ColourDesk. Use a ColourDesk 1 or 2 for re-programming the presets according to the selected emulation mode of the Memory unit. The DMX output of the ColourDesk should be connected to the DMX output of the memory unit (eg by connecting both to an Anycolour DMX to DFB converter). Provided that the emulation mode of the memory unit matches the ColourDesk (ie CD01 or CD02), both the Power and Data LEDs of the memory unit should be lit, the yellow data LED indicating the presence of suitable programming DMX data. NOTE that unless this data LED is illuminated, no programming of the unit will be possible.

Disconnecting the ColourDesk will extinguish the Data light on the memory unit. After two seconds, the memory unit will automatically take over control of the DMX line, with the same colour cycle being output from the memory unit as was being output from the ColourDesk. The memory unit has retained the ColourDesk settings as an emergency backup option, but these settings will be lost when powered down, when a preset memory is selected, or when the ColourDesk is reconnected to the DMX line. For this reason none of the preset LEDs will be illuminated (as the output data corresponds to the last data input from the ColourDesk rather than to the contents of any of the preset memories).

To reprogram the preset memories, reconnect the DMX output of the ColourDesk and adjust its controls to achieve the desired lighting effect, then press down a preset memory button on the memory unit to save data of the current colour cycle to the required memory. The Data LED on the memory unit will flash twice, and will then stay off until the button is released (to indicate that the preset memory has been reprogrammed). This process can be repeated for all of the eight preset memories (0-7) in any order, any number of times until the installer is satisfied with all the contents of the preset memories. Only the data last entered into each memory will be remembered.

The internal settings of the ColourDesk are also transferred into each preset memory, and can therefore be set differently in each preset if required. These settings include the MFL and FCL potentiometer settings and jumper settings such as slow/normal clock and odd/even ballast number.

Presets can be altered or changed at any time in this way, but cannot be programmed whilst the ColourDesk is disconnected from the DMX line. This means that the ColourDesk can be used as a programming tool and that the preset memories are completely secure once the ColourDesk has been disconnected.

If required, it is possible to recover the original factory preset memory contents by holding down both 'up' and 'down' Master buttons at the same time whilst plugging the memory unit RJ45 cable into an interface unit which is



receiving data from a ColourDesk. The 'data' light on the Memory unit will flash every 2 seconds to show when this operation is complete.

## **2.4 Programming from another Memory unit**

In the above instructions, another Anycolour memory unit can be substituted for the ColourDesk data source so that the preset memory contents can be copied from one memory unit to another. Note that only one data source should be present in the system at a time, but that several receiving units can be programmed from the same source. Connectors to facilitate this are available from Anytronics.

Copying data from one memory unit to another is most simply done by plugging the source memory unit into the ColourDesk port of a powered Anycolour DMX to DFB interface. The memory unit to be programmed should then be plugged into the Memory port of the interface using the RJ45 cable supplied. Its yellow data light should be lit to show that it is receiving valid programming data (check the CD01/02 jumper selection on both units and reconnect units in sequence again if it is not). The memory unit connected first will be the source of the data, any other memory units connected should remain in receive mode.

Select the eight presets in turn on the source unit saving each into the receiving unit memories. Note that in most applications, preset memory contents will probably be copied straight across to the same preset number in the receiving unit, but it is possible to alter the order or numbering of presets as required into the receiving unit. It is also possible to merge data from selected preset memories of two or more memory units one at a time into the eight presets of a further memory unit.

## **2.5 'Preset Cycle' Mode**

In this mode of operation, the Anycolour memory unit will cycle round the preset memories in ascending sequence, spending one complete colour cycle in each preset. Any preset which has been programmed in 'blackout' will not be included in this cycle.

NOTE that any preset memory which has been programmed for a very long colour cycle will hold up this preset cycling for a correspondingly long period. Presets programmed from a ColourDesk in 'freeze' will have a static colour output, but the timing will still be set by the stored 'Period' value.

Enter the 'preset' cycle mode by depressing both Master 'Up' and 'Down' buttons for approximately two seconds. The data LED will then be illuminated until these buttons are released, to show that the unit is in 'preset cycle' mode. Note that the 'up' and 'down' buttons can be used to raise and lower the Master level as in normal operation, and that this setting will be held whilst in 'preset cycle' mode, overriding the Master levels stored in the preset memories.

Auto mode can be terminated at any time by pressing any of the preset memory buttons to recall a preset memory. If the unit is connected to a source of



DMX data, the cycle will also be stopped. If the memory unit was in 'preset cycle' mode when powered down, it will power up in the same mode, starting from the preset memory in which it started 'preset cycling'.

## **2.6 'Auto Cycle' Mode**

An alternative 'auto cycle' mode can be selected instead of the 'preset cycle' using a jumper on the rear of the memory unit PCB. This mode works in the same way as the 'preset cycle', but each preset is retained for four complete colour cycles, with minor colour modifications on each cycle for variety.



### 3.0 Specification

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

Red, Green, Blue, Yellow/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 ColourDesk :-

- 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 Category 5 data and supply cable  
maximum length of cable recommended : 50m  
use a Cat 5 shielded cable in noisy environments

**Temperature:** Recommended ambient in range 0 - 40°C

**Dimensions** : 148 x 86 x 15 mm, the unit is designed to mount in a standard UK double patress box (which can be supplied on request)  
recommended minimum patress internal depth : 25 mm

**Weight** : Gross inc cable and packaging 0.75 kg Net 0.14 kg

**Compliance** : EN55103-2 , EN55103-3

