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# MultiNeon<sup>®</sup> LTD.

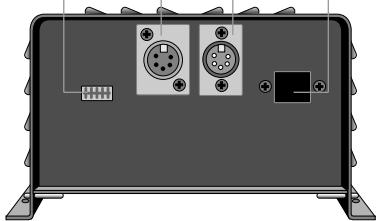
## Warnings

The **Color/FX Creator™ 1** is a professional product intended to control dimmable magnetic neon transformers. Always check with the transformer's manufacturer that the transformer type you intend to use can be electronically dimmed, and is UL2161 listed.

**SAFETY FIRST:** Always disconnect power to the unit before installing, maintaining or servicing it. This includes cleaning and external fuse replacement. Internal fuse replacement is to be done **ONLY** by a qualified electrician, or an authorized MultiNeon Color/FX Creator service center. Do not exceed the specified ratings (always comply with the attached maximum electrical specifications). The Color/FX Creator **MUST** always be horizontally mounted and free of obstructions in order to allow for free air circulation.

### Back

DIP Switches      Output DMX Connector      Input DMX Connector      IR Remote Window & Function Indicator LED

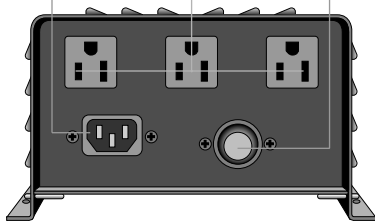


The unit has an intelligent DMX addressing switchless scheme (patent pending), which allows you to program the base address as many times as desired, without the tedious and confusing need for DIP switches. The base address will control channel #1 of the Color/FX Creator, and the two next consecutive addresses will control the 2nd and 3rd channels respectively. For example, if the base address is set to #55, channel #1 will be controlled by DMX address 55, and channels 2 and 3 of the creator will respond to channels 56 and 57 respectively. Because of this, the highest possible base address that can be assigned is 510. (See "Setting the DMX base address" section for more information.)

All specifications subject to change due to continuous product improvement.

### Front

AC Input      Power Outputs 450va Each      12 amp Slow-Blow Fuse Holder



## Color/FX Creator™

can be operated in four different modes, selectable by the DIP switch located in the back of the unit (See pg. 6 illus.)

**DMX mode:** DMX-512 1990 protocol compliant.

**Stand alone:** Factory loaded programs. Custom programs available for multi-unit & large installation use. Contact MultiNeon Ltd.

**IR option:** Up to eight units can be separately addressed,

with 4 memory presets per unit, via infrared link.

**Master/slave:** While in stand alone mode, 1 master and up to 31 slaves per differential pair can be synchronized.

## DIP Switch Settings

**OFF:** Up position

**ON:** Down position

★ indicates: Factory preset

**Switch #1 :** ON: DMX learning mode only. See "Setting the DMX base address".

OFF: for all other functions. ★

**Switch #2:** ON: master mode. See Master/slave operation.

OFF: slave mode, single unit stand alone mode. ★

**Switches #3, #4, #5:**

Seven stand alone programs.

If all are set to OFF, the unit is in slave mode and will respond to DMX control, or

infrared. If the infrared option is installed, DMX control takes priority over IR mode (*i.e. if the unit is connected to a DMX console, the unit will respond only to the DMX, and all controls sent via infrared link will be ignored*).

## Stand Alone Programs

*Note: unit is factory shipped in slave mode, ready to run stand alone program #1.*

Program/Effect	Sw.#3	Sw.#4	Sw.#5
<b>#1</b>	<i>Off</i>	<i>Off</i>	<i>On</i>
Fast Normal Chase 1 on, 1 off & 2 on, 2 off & 3 on. 3 off & 1 on. Etc. (1/2 sec per step)			
<b>#2</b>	<i>Off</i>	<i>On</i>	<i>Off</i>
Medium Normal Chase 1 on, 1 off & 2 on, 2 off & 3 on. 3 off & 1 on. Etc. (2 sec per step)			
<b>#3</b>	<i>Off</i>	<i>On</i>	<i>On</i>
Fast Soft Chase 1 fades on, 1 fades off as 2 fades on, 2 fades off as 3 fades on. 3 fades off as 1 fades on. Etc. (2 sec per step)			
<b>#4</b>	<i>On</i>	<i>Off</i>	<i>Off</i>
Medium Soft Chase 1 fades on, 1 fades off as 2 fades on, 2 fades off as 3 fades on. 3 fades off as 1 fades on. Etc. (4 sec per step)			

Program/Effect	Sw.#3	Sw.#4	Sw.#5
<b>#5</b>	<i>On</i>	<i>Off</i>	<i>On</i>
Medium Normal Spell 1 on (stays on), 2 on (stays on), 3 on (stays on). All off. Repeat. (2 sec per step).			
<b>#6</b>	<i>On</i>	<i>On</i>	<i>Off</i>
Medium Soft Spell 1 fades on (stays on), 2 fades on (stays on), 3 fades on (stays on). All fade off. Repeat. (2 sec per step).			
<b>#7 Rainbow</b>	<i>On</i>	<i>On</i>	<i>On</i>
4 sec fade up ch 1 (red).			
4 sec fade up ch 2, ch 1 remains high (yellow).			
4 sec fade down ch 1 (green).			
4 sec fade up ch 3 & fade down ch 1 & 2 (blue).			
4 sec fade up ch 1, ch 3 remains high (purple).			
4 sec fade up ch 2, ch 1 & 3 remain high (white).			
4 sec fade down all channels.			

*Note: Program #7 color combinations assume that neon tube driven by channel 1 is red, channel 2 is green and channel 3 is blue.*

*If a valid DMX signal is detected, the unit will automatically switch to DMX mode, and will not operate in stand alone mode, regardless of the switch settings. In other words, DMX signal presence takes priority over any other operating mode.*

## Master/Slave Mode

This mode is extremely useful when having many units that need to be synchronized while running stand alone programs, or being operated by the IR option. After daisy chaining the units with a DMX type cable (as recommended by the DMX USITT standard) all slave units will follow exactly what the master unit is running. For example, if Color/FX Creator™ #1 (the master) is sequencing through program #1, all slave units connected to it will sequence synchronized to it. Also, if the IR option is used, with the units properly configured as master/slave, all slave units will respond to the IR commands sent to the master unit (effectively, this allows you to control ALL units by pointing the remote IR wand only to the master unit).

### Notes

- **NO two units can be configured as masters** while daisy chained in the same link.
- **NEVER connect a DMX control line** to a unit configured as a master. **This can lead to a catastrophic failure of the console and Color/FX Creator.**
- **All slave units connected to the master unit must be addressed (base address) as unit #1.** All units must have all DIP switches in OFF position
- **IR option:**  
Please contact Multineon for this option.

## DMX

### Setting the DMX Base Address:

- 1 Set all 512 levels to zero on the DMX console.
- 2 Set the DMX channel level, of the unit that you want to respond, to any value higher than 70 of the 255 possible values. (i.e. If you want to set unit ID to 39, set all 512 channels to zero, and channel 39 to any value greater than 70).
- 3 Turn power off and set DIP switch #1 to “learning mode”  
**CAUTION:** at this point, the unit will be energized, and high voltage will be present at the output connectors, depending on the DMX level. **Be careful!**
- 4 Turn power back on, and reset DIP switch to OFF position (or anything other than the DMX learning position). The unit now should be responding to the selected channel only. (*#39 in the above example*).

These steps can be performed an unlimited number of times. The unit's ID will be retained forever, unless you reassign a new ID by repeating the above steps. The unit ID is factory preset to #1.

## The DMX Threshold

All dimmable neon transformers are subject to an unavoidable “neon flicker” at very low intensity levels when the unit is handling small loads (i.e. small neon transformers). This can be eliminated by adding a “phantom load” (such as an incandescent lamp) for resistance, on the primary side of the neon transformer used in the installation. Another way to accomplish this is by use of a software programmable threshold which can be set to a cutoff level just above the flicker level. See “Setting the DMX threshold”

The factory preset threshold value is set at 2. This preset level should be sufficient to remove unwanted flicker most of the time. The programmable DMX threshold value is variable and can be set between 2 and 26 (the full DMX control range is from 0 to 255). When set, this value acts as a digital threshold and levels below it (including the unwanted flicker) will be shut off for the channel being controlled. For example, if the DMX threshold of a specific Color/FX Creator is set to 5, all DMX levels of 5 and below will be treated by the Color/FX Creator as if a value of 0 was being received, effectively shutting off the channel and avoiding the unwanted low level “flicker”. It is important to understand that one DMX threshold value affects ALL three channels of the Color/FX Creator. In this example, the Color/FX Creator will have an effective control range of levels 6 to 255 including on each of the three channels, and all values below 6 will be treated as a DMX value of 0.

*Note: This threshold also affects the factory loaded default programs, and may affect the “smoothness” of the dimming at low levels during use.*

## Setting DMX Threshold

The process of setting the DMX threshold value is similar to the one used to set the base address. To do this you will need a console with 512 accessible channels and the ability to numerically display channel dimming levels, or the PC Designer. Programming the “DMX threshold value” follows some of the same steps used in “Setting the DMX base address”.

**Note:** The DMX threshold value can be set to any value from 2 to 26. If any other value is set, the threshold value will default to 2.

- 1 Assuming that a base address for the channel has been set, the required DMX threshold level should first be determined by adjusting the channel fader, starting at “0”, until the unwanted low level flicker is replaced by a constant output.
- 2 Once the numeric value of the point where the flicker becomes constant output has been determined, take note of it and drop its fader back to “0”.
- 3 Slowly fade up DMX channel # 512 until it reaches the same numeric value noted for the previous step. (All other channels **MUST** be set to “0”)
- 4 Turn the power off and set DIP switch #1 to learning mode. **CAUTION:** at this point the unit will be energized and high voltage will be present at the output connectors, depending on the DMX level. **Be Careful!**
- 5 Turn power back on and reset DIP switch to the OFF position (or anything other than DMX learning position). The unit now should treat any values below the threshold level as “0” for the 3 Color/FX Creator channels controlled by the programmed fader.

## LED Indicator

**Behind the IR window, located in the back of the unit, there is a LED indicator, which shows:**

**LED off:** Unit is OFF, or main fuse open.

**LED on:** Unit power is ON.

**LED flashing (fast flash):**

Stand alone program active.

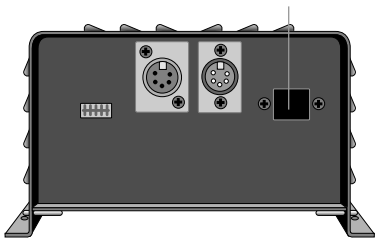
**LED flashing (slow flash):**

Valid DMX detected, or valid IR command received.

## Line Input Connection

The input line cord must be connected to an outlet with a dedicated circuit breaker with at least 15 Amperes capacity. Never bypass the ground connection by using a three to two prong AC adapter.

*IR Remote Window & Function Indicator LED*



## Fuse Replacement

In addition to the external fuse (user serviceable, 12 amp Slow-Blow), the Color/FX Creator™ is internally fused. Under normal operating conditions, these internal protections will not fail. Unusual circumstances (i.e. power surges, output channel shorts, etc.) may cause the internal fuses to blow. If this is the case, internal fuse replacement **MUST** be done to the following safety guidelines:

- 1 NEVER** attempt to connect/disconnect, open, or service the unit in any way while it is plugged in. **ALWAYS** unplug the unit before performing maintenance to it. This includes cleaning and external fuse replacement.
- 2** Internal fuse replacement is to be done **ONLY** by a qualified electrician, or by an authorized MultiNeon service center.
- 3** Before re-testing the unit, the cause of the failure should be fully investigated and eliminated.

**There are four internal fuses.** (see illustration)

### F1

Electronics protection, 160 mA./250 V, time delayed Wickman TR-5 subminiature type.

### F2, F3, F4

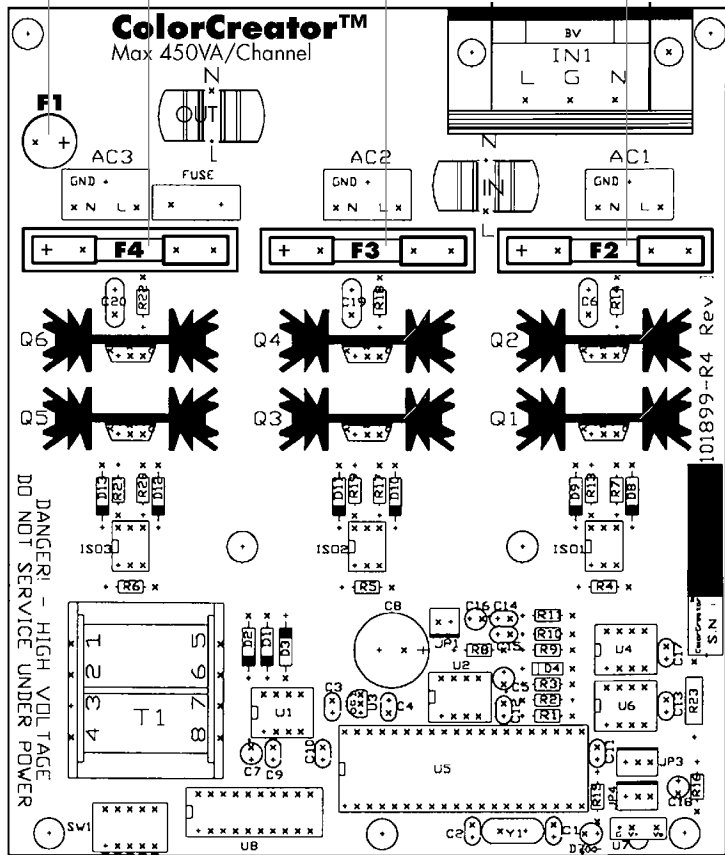
Protection for output channels 1, 2, and 3. 6.25 A/250V time delayed 3 AG type.

Fuse F1

Fuse F4

Fuse F3

Fuse F2



## Technical Specs

### General

★ Value depends on load and/or DMX value

**Use:** Indoors only

#### **Connection type:**

Portable installations, IEC type cord 8' unswitched (supplied)

### Interface Options

#### ■ **Serial:**

USITT DMX-512, 1990

#### **DMX addressing:**

Non dip-switch, patent pending remote addressing, 1-512 address. Unit responds to the base address (user selectable) and next two Consecutive channels.

#### **DMX values:**

Base address: channel 1 control, (base add + 1) channel 2, (base add + 2) channel 3.

#### ■ **Master/slave:**

Up to 1 master and 31 slaves per differential pair

#### ■ **Stand alone:**

Factory loaded programs.  
Custom programs pg. 3

#### ■ **IR option:**

Up to eight units can be separately addressed, with 4 memory Presets per unit.



### Electrical

#### **Input**

**Voltage:** 120 Volts AC

**Frequency:** 50/60 Hz

#### **Operating current:**

0.2 A – 11 A (max) ★

#### **Operating fuse:**

12 A slow blow Earth ground must be connected for safety.

#### **Output per channel**

**Voltage:** 0 – 120 VAC ★

**Max output:** 450 VA

### Mechanical and Environmental

#### **Dimensions:**

L - 7.75" x W - 7.6" x H - 4.5"

**Weight:** 2.8 lbs

#### **Operating temperature:**

-10°C to +50°C

#### **Storage temperature:**

-20°C to +85°C

#### **Heat dissipation:**

Free convection

#### **Air flow requirements:**

Allow for free air convection

#### **If unit shipped**

or transported, allow at least 4 hours before operating to avoid condensation.

### Agency approvals

ITS independent laboratory testing for UL-1472 & CDN compliance, ETL listed.

## Repairs & Info

**Repairs, problems, suggestions and requests for brochures/catalogs, instructions and parts lists can be handled through your Authorized MultiNeon Color/FX Creator™ service center or directly through MultiNeon. Electrical repairs should be made only by MultiNeon or by a qualified electrician.**

Model	Description
80200	Color/FX Creator, AC Cable, Instruction Book

*Color/FX Creator™ 1 is a trademark of MultiNeon Ltd. Patent pending.*

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