This DMX color controller allows you to intelligently customize your RGB LED lighting across multiple zones. This unit works as a two-in-one DMX master or decoder.

**KEY FEATURES & BENEFITS**
- Meets DMX512/1990 standard
- Master can daisy chain up to 170 decoders

**PROFILE VIEW**

**PRODUCT DETAILS**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>970022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimming</td>
<td>0% - 100%</td>
</tr>
<tr>
<td>Color</td>
<td>3 Channel RGB</td>
</tr>
<tr>
<td>Temperature</td>
<td>-26 °C (-15 °F) ~ 29 °C (85 °F)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>8 1/32&quot; (204 mm) L x 1 23/32&quot; (44 mm) W x 31/32&quot; (25 mm) D</td>
</tr>
<tr>
<td>Weight</td>
<td>4 oz (115 g)</td>
</tr>
</tbody>
</table>

**ELECTRICAL**

<table>
<thead>
<tr>
<th>Input Voltage</th>
<th>12 VDC ~ 24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Current</td>
<td>Max. 5 A / channel (3 channels)</td>
</tr>
<tr>
<td>Static Power</td>
<td>Max. 180 W (12 VDC) Max. 360 W (24 VDC)</td>
</tr>
<tr>
<td>DMX Standard</td>
<td>DMX512/1990</td>
</tr>
</tbody>
</table>
**DMX Key**

**Color Controller and Decoder**

**DETAILS**

- This controller operates as DMX Master or DMX decoder (slave).
- The unit has three digits for setting addresses that can be increased or decreased by pressing + or -.
- It has two RJ45 (1 for Data In and 1 for Data Out).
- The LED indicator on top right (red LED indicator) turns on when power is connected.
- The LED indicator at bottom right (green LED indicator) turns on or flashes when the output is activated.

**NOTES**

1. If the connected LED light is rated at 12 VDC, then the maximum voltage of the power supply to the unit must not be higher than 12 VDC.
2. The rated wattage of the power supply must be higher than the rated power consumption of the connected LED light.
3. In a DMX control system, there should be only one DMX master.
4. If the top right LED indicator does not turn on, then the “+” and “-” of the power adapter is reversed or it is a bad power adapter.
5. If the connected LED light does not turn on (green LED indicator does not turn on) then,
   - Address is probably not set
   - Data line is not connected correctly

**MASTER MODE**

In Master mode, this controller has built-in 39 pre-set programs and can daisy chain up to 170 decoders:
- Controller automatically acts as a master when the first two digits are set between 71 - 99
- The master uses the first 2 digits for pre-set programs and the last digit for color changing speed (0 = slow and 9 = faster)
DMX Key
Color Controller and Decoder

**PRE-SET PROGRAMS**

<table>
<thead>
<tr>
<th>70=Off</th>
<th>80=Yellow</th>
<th>89=Cyan fading</th>
</tr>
</thead>
<tbody>
<tr>
<td>71=Seven color jumping</td>
<td>81=Purple</td>
<td>90=White fading</td>
</tr>
<tr>
<td>72=Seven color fading</td>
<td>82=Cyan</td>
<td>91=Seven color fading recycle</td>
</tr>
<tr>
<td>73=Seven color jumping and fading</td>
<td>82=Cyan</td>
<td>92=Red flashing</td>
</tr>
<tr>
<td>74=Seven color tail chasing</td>
<td>83=White</td>
<td>93=Green flashing</td>
</tr>
<tr>
<td>75=Seven color water flowing</td>
<td>84=Red fading</td>
<td>94=Blue flashing</td>
</tr>
<tr>
<td>76=Execute programs 71 - 75 and repeat</td>
<td>85=Green fading</td>
<td>95=Yellow flashing</td>
</tr>
<tr>
<td>77=Red</td>
<td>86=Blue fading</td>
<td>96=Cyan flashing</td>
</tr>
<tr>
<td>78=Green</td>
<td>87=Yellow fading</td>
<td>97=Purple flashing</td>
</tr>
<tr>
<td>79=Blue</td>
<td>88=Purple fading</td>
<td>98=White flashing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99=Seven color flashing</td>
</tr>
</tbody>
</table>

**DECODER MODE**

- In decoder mode, all 3 digits are used for address settings
- Controller automatically acts as a decoder when digits are set between address range of 001 - 512.
- Pre-set programs do not function in this mode
- The decoder changes colors according to incoming DMX signals
- There is one address difference between “R”, “G” and “B”. For example if Red is 001, then Green is 002, and Blue is 003
- To operate each decoder independently, you must offset each address by 3 (e.g. 001, 004, 007, ...)
WIRING EXAMPLE

DMX KEY - master mode address between 71X - 99X

DMX Key - decoder mode address between 001 - 512

DMX Key - decoder mode address between 001 - 512

DMX Key - decoder mode address between 001 - 512

NOTES

1. If the first DMX-Key is set as the DMX Master with an address ranging between 71x - 99x depending on application requirements and the address of all the other DMX-Keys are set to 001, all LED lights connected change colors in the same way as the light connected to the Master. In other words, all lights are synchronized.

2. Several RGB panels can be wired in parallel to each controller as long as a maximum power load of 60 W is not exceeded.

3. Restrict the maximum power loading to 80% of its rated capacity to extend the life of the power adapter.
WIRING EXAMPLE USING DATA REPEATERS

POWER ADAPTER + (Red) - (Black) 18 AWG - 2 conductor cable

DMX KEY + (Red) - G (Green) R (Blue) B

RGB LIGHT PANEL

DATA REPEATER + (Red) - G (Green) B

RGB LIGHT PANEL

DATA REPEATER + (Red) - G (Green) B

RGB LIGHT PANEL

DATA REPEATER + (Red) - G (Green) B

RGB LIGHT PANEL

18 AWG - 4 conductor cable

18 AWG - 4 conductor cable

18 AWG - 4 conductor cable

18 AWG - 4 conductor cable

18 AWG - 2 conductor cable

18 AWG - 2 conductor cable

18 AWG - 2 conductor cable

18 AWG - 2 conductor cable

18 AWG - 4 conductor cable

18 AWG - 4 conductor cable

18 AWG - 4 conductor cable

18 AWG - 2 conductor cable

18 AWG - 2 conductor cable

V R G B Signal in

Output

V R G B Signal in

Output

V R G B Signal in

Output

V R G B Signal in

Output

V R G B Signal in

Output

V R G B Signal in

Output

NOTES

1. If an RGB lighting system requires all the lights changing color according to the sequence pre-programmed in DMX-KEY, the best way is to use one DMX-KEY for selecting color sequence.

2. All other lights can be wired to “Data Repeater” which follows the same sequence as DMX-KEY.

3. Multiple power adapters can be connected to the DMX-KEY or the Data Repeater separately.

4. The maximum number of RGB light panels is determined by the DC wattage loading on the power adapter.

5. Restrict the maximum power loading to 80% of its rated capacity to extend the life of the power adapter.
1. DMX Keys are used in decoder mode.
2. A commercial DMX controller, such as Philips iColor Player acts as the master.
3. Several RGB panels can be wired in parallel to each controller as long as a maximum power load of 60 W is not exceeded.
4. The maximum number of DMX drivers on the network is 170. The unique addressing must be offset by (+3) for each module.
5. Restrict the maximum power loading to 80% of its rated capacity to extend the life of the power adapter.