4520 4-inch Coloram II Color Changer
7110 7.5-inch Coloram II Color Changer
10100 10-inch (2K) Coloram II Color Changer
15010 15-inch (5K) Coloram II Color Changer
16090 Large Format Coloram II Color Changer
16080 Eight Light Coloram II Color Changer
16100 Thomas 9 Light Coloram II Color Changer
7080 7.5-inch Aquaram Color Changer
5000 Large Format Aquaram Color Changer

Software versions: CR1.0, LF1.0 and AR1.0
Manual revision: June 2006

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Safety Notice

SAVE THESE INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS

This manual gives step-by-step instructions for preparation, setup and operation of the Coloram II Color Changer.

There is a potential risk of injury to persons if the product is not used as instructed.

The Coloram II is not intended for residential use.

WARNING: When using electrical appliances, use basic precautions, including:

- Read this manual before connecting power.
- Use supervision around children.
- Do not touch moving parts.
- Only use attachments recommended or sold by Wybron.
- Use in a dry location only.

Replace only with same type and rating of fuse.

For questions, contact Wybron at 1-800-624-0146.

Product Modification Warning

Wybron, Inc. products are designed and manufactured to meet the requirements of United States and International Safety standards. Modifications to the products could affect safety and render the product non-compliant to relevant safety standards.
Introduction

The Coloram II System is a scrolling color changer and power supply in a complete range of models offering ease of setup and use. Its variable color capacity and DMX compatibility affords the designer economy and versatility, particularly when budget and space are limited. The lightweight color changers slide easily into the gel frame holder of the light fixture. The compact power supplies attach effortlessly to the truss of the lighting rig or mount into a 19-inch rack.

This manual gives step-by-step instructions for preparation, setup and operation of the Coloram II Color Changer.
The Coloram II System

The Coloram II System consists of one or more color changers and a remote power supply. The DMX512 control signal from the lighting board is connected to the power supply and can continue on to more Coloram II (RAM) Power Supplies or other DMX-controlled devices. The power supply sends both power and control signal on a single cable eliminating the need for a separate power cable for each color changer.

The Coloram II System also allows you to control the color changer fan speed via an additional DMX channel on the lighting console.

The Coloram II System is equipped with the Intelligent Diagnostic System (IDS). Status information is sent from each of the Coloram II Color Changers to the Coloram II (RAM) Power Supply.

**Caution:** The Coloram II System is not compatible with The Forerunner System. Do not connect Coloram II Color Changers to Forerunner Power Supplies, or Forerunner Color Changers to Coloram II (RAM) Power Supplies. Damage from such action will not be covered by the Coloram II or Forerunner warranties.
Quick-Start

Follow these steps to get the Coloram II Color Changer operational quickly.

1. Connect the equipment
   a. Attach the Coloram II Color Changer to a powered light fixture.
   b. Connect the Coloram II Color Changer to the power supply using the 4-pin Wybron Power/Data Cable.
   c. Connect the Coloram II (RAM) Power Supply to 115/230 VAC power and to a DMX source.

2. Setup the Coloram II Color Changer
   Set the color changer to an address of 1 as follows:
   a. Set the DIP switches as follows:

      | DIP switch | Position        |
      |------------|-----------------|
      | 1          | motor speed: NORM |
      | 2          | operation: 24 CHAN |
      | 3          | channel range: 1-12 |
      | 4          | fan speed: NORM |

   b. Set the rotary "channel select" switch to 1

3. Setup the Coloram II (RAM) Power Supply
   Use the SETUP menu for the following:
   a. Set the starting channel to 1.
   b. Set the mode to CR2.

4. Send DMX levels
   The Coloram II color changer will respond to DMX channel 1. Vary the DMX level to move the gel string.
Using The Coloram II Color Changer

The Coloram II Color Changer sets its gel string position according to the DMX512 level it receives from the control console. As all Coloram II Color Changers will accommodate variable length gel strings, the level settings which correspond with each frame position will vary depending on the number of frames in the gel string.

The following chart shows the level settings that correspond with each frame position if a 24 frame gel string is installed on a 7.5-inch color changer. The color of each frame position will be determined by your custom gel string specification.

<table>
<thead>
<tr>
<th>Channel Level</th>
<th>Frame Position</th>
<th>Channel Level</th>
<th>Frame Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Frame 1</td>
<td>51</td>
<td>Frame 13</td>
</tr>
<tr>
<td>04</td>
<td>Frame 2</td>
<td>55</td>
<td>Frame 14</td>
</tr>
<tr>
<td>09</td>
<td>Frame 3</td>
<td>59</td>
<td>Frame 15</td>
</tr>
<tr>
<td>12</td>
<td>Frame 4</td>
<td>64</td>
<td>Frame 16</td>
</tr>
<tr>
<td>17</td>
<td>Frame 5</td>
<td>69</td>
<td>Frame 17</td>
</tr>
<tr>
<td>21</td>
<td>Frame 6</td>
<td>73</td>
<td>Frame 18</td>
</tr>
<tr>
<td>25</td>
<td>Frame 7</td>
<td>78</td>
<td>Frame 19</td>
</tr>
<tr>
<td>29</td>
<td>Frame 8</td>
<td>82</td>
<td>Frame 20</td>
</tr>
<tr>
<td>34</td>
<td>Frame 9</td>
<td>87</td>
<td>Frame 21</td>
</tr>
<tr>
<td>38</td>
<td>Frame 10</td>
<td>91</td>
<td>Frame 22</td>
</tr>
<tr>
<td>42</td>
<td>Frame 11</td>
<td>96</td>
<td>Frame 23</td>
</tr>
<tr>
<td>47</td>
<td>Frame 12</td>
<td>FL</td>
<td>Frame 24</td>
</tr>
</tbody>
</table>

If you send a channel level that is between the values shown, you can create split frame effects. For example, if you send a level of 49, the color changer positions the gel string halfway between frame 12 and frame 13 creating a blend of the two colors.

*Note: If you wish to use gel strings longer than 24 colors, Wybron recommends the use of a moving light console. This gives the operator more accurate control of the gel string position.*

The Coloram II System Components

Color Changers

All Coloram II Color Changers use gel strings which can vary in length. The color changers set the position of the gel string via the signal from the power supply in proportion to the DMX level. The color changers are powered by 24 volts DC which also comes from the power supply. The control signal and DC power are both supplied in one cable connecting the color changers to the power supply.
Note: Refer to the Specifications section of this manual for the maximum number of gel string frames each color changer will hold.

Gelstring

The gelstring is a series of precisely cut, colored gel frames joined together, side by side, to create a sequence of colors. Two additional gels at each end of the gelstring are called the leader and the trailer. The leader and the trailer allow for proper attachment to the rollers. The gelstring has foil tags near each end which are necessary for the color changer’s automatic calibration to the length of that particular gelstring.
Power Supply

The power supply converts the DMX512 signal level from the lighting console into Coloram/Coloram II control signal which it then sends to each color changer along with 24 volts DC. The power supply features a DMX bypass relay to pass the DMX signal to the DMX output connector in the event of AC power loss.

Cables

The Power/Data Cable connects the Coloram II (RAM) Power Supply outputs to the Coloram II Color Changers or Goboram II Gobo Changers and provides them with power and control signal. The Cable uses 4-pin XLR connectors on either end and consists of two 4 AWG conductors and a 22 AWG twisted, shielded pair.

Note: The cable used in the Coloram II System is the same cable which is used in the Forerunner System and may be referred to as either Coloram II cable or Forerunner cable.

Installing The Coloram II

To get your Coloram II System up and running, follow these hookup and checkout procedures.

1. **Attach the color changer to the fixture**

Slide the color changer’s mounting bracket into the gel frame holder of your lamp and lock the gel frame retention clip (if available). If the mounting plate installed on your color changer doesn’t fit the fixture, you may replace it with a different plate.

The mounting plate allows you to position the color changer with the gel string rolling either horizontally or vertically. However, Coloram II operates most effectively with the fan, which is located in the top of the center panel, blowing air vertically (as hot air naturally rises).

2. **Attach the safety cable**

A safety cable is attached to the color changer. Run this cable around the pipe or truss from which you hang the light fixture and clip it to itself.

3. **Mount the power supply**
The Coloram II Power Supply is designed to be free standing, truss mounted, or rack mounted. You decide which mounting method best suits your application.

The power supply comes with a mounting bracket which hooks over the pipe or truss of your lighting rig and is then locked into place with a thumb screw. If you have selected this mounting method, connect the safety cable by running it around the pipe or truss to which the power supply is attached.

The power supply can also be mounted into a 19" rack using the optional Coloram II Power Supply rack mount kit. The rack mount kit will accommodate two Coloram II Power Supplies side by side.

4. Connect the color changers to the power supply

Connect the color changers to the power supply using 4-pin Wybron Power/Data cable.

Refer to the HEAD-FEET RESTRICTION section of the manual for details of the length of cable runs.

5. Connect the power supply to AC power

Plug the AC cord into a non-dimmed power circuit. The power supply automatically accommodates 100 - 132 VAC (50/60 Hz) or 170 - 240 VAC (50/60 Hz).

Power at the Coloram II (RAM) Power Supply is indicated by a red LED display which can be viewed from the stage. Power is also indicated on the bottom of each color changer by a red or yellow LED.

The connected color changers will automatically "calibrate" themselves to the gel string installed by doing the following actions:

a. Moving the gel string toward the last frame, in search of the long foil tag.

b. Turning around at the long foil tag and then searching for the short foil tag at the beginning of the gel string.

c. Stopping at the short foil tag and staying there if no DMX signal is present or going to it's commanded position if DMX signal is present.

Note: It may take up to 30 seconds before all color changers start to initialize. Upon power up, the power supply will scroll a short message which includes the software version installed in it. The power supply will then initiate a "roll call" which tells the color changers to initialize.

Caution: Do not power the Coloram II (RAM) Power Supply from a dimmer. Severe damage will result and is not covered by product warranty.
6. **Set the power supply/color changer channels**

Each color changer is assigned a DMX channel to which it will respond from the lighting console. Valid DMX addresses are 001 - 512.

First, set the first channel for the block of DMX channels chosen for the power supply -- do this on the power supply. Then, set the color changer (the rotary switch and third DIP switch) for the first, second, etc channel of the block of power supply channels.

For example, if you want a color changer to respond to DMX channel 105, first set the power supply channel block to start on channel 105 and then set the color changer to channel 1-- the first channel in the block of power supply channels.

Set the power supply starting DMX channel by using the SETUP menu. If talkback is enabled on the power supply, the starting power supply channel is limited to 1, 4, 7, 10, 13, etc.

The rotary switch window is the channel indicator. The color changer switch settings and the 24 channels they represent are as follows:

<table>
<thead>
<tr>
<th>Rotary Switch</th>
<th>DIP Switch #3</th>
<th>Color Changer channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Off</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Off</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Off</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Off</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Off</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Off</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>Off</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Off</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>Off</td>
<td>9</td>
</tr>
<tr>
<td>A</td>
<td>Off</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>Off</td>
<td>11</td>
</tr>
<tr>
<td>C</td>
<td>Off</td>
<td>12</td>
</tr>
<tr>
<td>1</td>
<td>On</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>On</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>On</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>On</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>On</td>
<td>17</td>
</tr>
<tr>
<td>6</td>
<td>On</td>
<td>18</td>
</tr>
<tr>
<td>7</td>
<td>On</td>
<td>19</td>
</tr>
<tr>
<td>8</td>
<td>On</td>
<td>20</td>
</tr>
<tr>
<td>9</td>
<td>On</td>
<td>21</td>
</tr>
<tr>
<td>A</td>
<td>On</td>
<td>22</td>
</tr>
<tr>
<td>B</td>
<td>On</td>
<td>23</td>
</tr>
<tr>
<td>C</td>
<td>On</td>
<td>24</td>
</tr>
</tbody>
</table>
The formula for calculating DMX channels is as follows:

**DMX channel = Color Changer channel + Power Supply starting channel -1**

*Example:* DMX channel (221) = Color Changer channel (20) + Power Supply starting channel (202) -1

*Note:* For the 24-Way Power Supply, the Coloram II Color Changers can only be addressed to the first 24 channels of the 48 channel block of the power supply.

*Note:* The color changers will not respond to the DMX signal until you return in the "menu tree" to the RUN SCREEN loop.

7. **Set the Coloram II operating modes**

The Coloram II System offers you optional settings so you can custom tailor its performance to best suit your application. These settings are accessed via the 4 DIP switches on the bottom of each color changer in combination with the power supply. To set the DIP switch, press the switches in the direction of the words shown on the chassis legend.

The functions and indications of the LEDs and DIP switches on the color changer are as follows:

<table>
<thead>
<tr>
<th>LED On</th>
<th>Indicates</th>
<th>DIP Switch</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>Low Motor Speed</td>
<td>1</td>
<td>Motor Speed</td>
</tr>
<tr>
<td>Red</td>
<td>Low Voltage (&lt; 22V)</td>
<td>2</td>
<td>12/24 Channel Mode</td>
</tr>
<tr>
<td>Red</td>
<td>Normal Motor Speed</td>
<td>3</td>
<td>Channel Range</td>
</tr>
<tr>
<td>Green</td>
<td>Low Fan Speed</td>
<td>4</td>
<td>Fan Speed</td>
</tr>
<tr>
<td></td>
<td>All Flashing</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shutdown (&lt; 15V or no tags detected)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fan speed (when enabled at the power supply) is remotely controlled with the following DMX levels:

- 51% to 100% = fan at normal (high) speed
- 0% to 50% = fan at low speed
- 8% = fan off (when this function is enabled at the power supply)

*Note:* DIP switch 4 (Fan Speed) set to "Remote" allows the operator to control the fan speed via the lighting console.

*Note:* The 12/24 channel mode is used to support either the original 12 Channel Coloram I Color Changers/Power Supplies (CR1) or the 24 channel Coloram II Color Changers/Power Supplies (CR2). All color changers in a system must be set to the same mode as the power supply to function correctly.
8. Connect and set the DMX512 source

Connect the DMX512 signal source to the DMX input connector on the front of the power supply using standard DMX cable. Valid DMX signal will be indicated by the words "DMX OK" on the power supply display. The color changers will now position their gel strings according to their respective DMX signal levels.

Head-Feet Restrictions

The HEAD-FEET parameter is a method of accounting for the voltage drop in the power/signal cable caused by the current drawn by each color changer.

To help understand this issue, think of it as water pressure (voltage) in a hose (cable) where you have multiple water sprinkler heads (color changers). If the hose (cable) is too long or you have too many sprinkler heads (color changers), the water pressure (voltage) will be too low.

HEAD-FEET is defined as "the sum of cable lengths from each color changer to a single power supply output".
**Head-Feet Example:**

![Diagram](image)

The length of cable from the Power Supply to:
- 1st Coloram 100'
- 2nd Coloram 120'
- 3rd Coloram 140'
- 4th Coloram 160'

520 "head feet"

The maximum HEAD-FEET for each of the Coloram II Color Changers is as follows:

(If a daisy chain consists of different models, use the model with the least amount of "head feet" for the calculation).

- 4520 - 4-inch Coloram II: 1500 head feet
- 7110 - 7.5-inch Coloram II: 1500 head feet
- 10100 – 10-inch Coloram II: 1000 head feet
- 15010 – 15-inch Coloram II: 1000 head feet
- 16080 - 8 Light Coloram II: 1000 head feet
- 16090 - Large Format Coloram II: 1000 head feet
- 16100 - Thomas 9 Light Coloram II: 1000 head feet
- 7080 - 7.5-inch Aquaram: 1000 head feet
- 5000 - Large Format Aquaram: 1000 head feet
Mounting and Installation Accessories

The components of your Coloram II System may require the installation of additional mounting accessories or the replacement of others. Some of these accessories, such as the power supply hanger brackets and your choice of one color changer mounting plate, are supplied, while other accessories, such as the power supply rack mount kit and additional mounting plates, may need to be purchased separately. The following sections describe the procedures for installation and replacement of some of these accessories.

Color Changer Mounting Plate

The Coloram II Color Changer ships with your choice of available mounting plates installed. It may be necessary, when mounting the color changer on different light fixtures, to replace the mounting plate.

Note: Some fixtures which require larger versions of Coloram II Color Changers use multiple piece mounting assemblies. Some pieces of these mounting assemblies may have to be attached directly to the fixture and some may attach in a different manner than described below to the color changer.

Follow these instructions to replace the mounting plate on 4-inch through 10-inch color changers.

1. Place the color changer on a flat surface, with the Coloram II logo face down.

2. Unscrew the four screws which hold the current mounting plate on.

3. Place the replacement mounting plate on the color changer, aligning the screw holes properly.

4. Fasten the four corners of the mounting plate to the color changer using the same screws you removed in step 2.

Note: Always use the supplied screws, as they are treated with an anti-vibration compound to keep them from loosening.
Replacing a gelstring

At some point in time you may find that you need to replace the gelstring in your color changer, either because the old one wears out or because you want a different selection of colors. With all the Coloram II Color Changers this is quick and easy.

Caution: Operating the Coloram II Color Changers with damaged gelstrings will damage the color changers. Replace the gelstrings before damage occurs.

Note: If a frame in the gelstring becomes damaged, do not remove the frame and splice the gelstring. Replace the gelstring. Gelstrings may be ordered from Color Express by WYBRON INCORPORATED.

Remove the old gelstring

This procedure is performed with no power to the color changer.

1. Place the color changer on a flat surface with the Coloram II logo facing up.

2. Remove the front panel by unscrewing the two thumb screws at the top right and left corners of the front door as shown in the first picture on the left.

3. Gently roll the gelstring onto the left roller, exposing the clear leader taped on the right roller.

4. Untape the leader from the right roller. Remove the tape from the leader.

5. Roll the gelstring onto a cardboard tube as you slowly remove it from the left roller.

6. When you reach the clear trailer, untape it from the roller.

Hint: To save time, move all gelstrings to the first frame via the DMX source before disconnecting power.
Install the new gelstring

Note: Use gaffer’s tape to attach the gelstrings to the rollers. Do not use duct tape or masking tape.

1. Put a strip of gaffer’s tape on the edge of the gelstring trailer. Holding the trailer, let the rest of the roll hang off the right side of the color changer.

2. Center the edge of the trailer between the two ends of the left roller as shown to the left. Tape the trailer along the top of the roller as shown.

3. Roll the gelstring onto the left roller until the end of the leader is directly above the right roller.

4. Put a strip of gaffer’s tape on the gelstring leader.

5. While holding the end of the gelstring, turn the right roller toward the left roller. The sticker at the bottom end of the roller has a black line on it to help you judge the number of turns.

6. Tape the gelstring to the right (spring) roller.

Note: Use maximum number of spring roller turns for gel strings with maximum number of frames. Use less turns for shorter gelstrings. Refer to the gelstring tension chart below for the exact number of turns for your color changer/gelstring combination.

**Models: 4520, 7110, and 7080**

<table>
<thead>
<tr>
<th>Number of Frames</th>
<th>Number of Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 10 frames</td>
<td>5</td>
</tr>
<tr>
<td>11 - 18 frames</td>
<td>6</td>
</tr>
<tr>
<td>19 - 26 frames</td>
<td>7</td>
</tr>
<tr>
<td>27 - 32 frames</td>
<td>8</td>
</tr>
</tbody>
</table>

**Model: 10100**

<table>
<thead>
<tr>
<th>Number of Frames</th>
<th>Number of Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 5 frames</td>
<td>5</td>
</tr>
<tr>
<td>6 - 10 frames</td>
<td>6</td>
</tr>
<tr>
<td>11 - 17 frames</td>
<td>7</td>
</tr>
<tr>
<td>18 - 24 frames</td>
<td>8</td>
</tr>
</tbody>
</table>

**Models: 15010, 16080, 16090, 16100, and 5000**

<table>
<thead>
<tr>
<th>Number of Frames</th>
<th>Number of Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 4 frames</td>
<td>8</td>
</tr>
<tr>
<td>5 - 8 frames</td>
<td>9</td>
</tr>
<tr>
<td>9 - 12 frames</td>
<td>10</td>
</tr>
<tr>
<td>13 - 16 frames</td>
<td>11</td>
</tr>
<tr>
<td>17 - 20 frames</td>
<td>12</td>
</tr>
<tr>
<td>21-24 frames</td>
<td>13</td>
</tr>
</tbody>
</table>
Equipment Compatibility

The following is a chart of compatibility and capacity of the various models of Coloram II Power Supply and the companion components.

<table>
<thead>
<tr>
<th>Power Supply Description</th>
<th>Model Number</th>
<th>Output Power</th>
<th>Max # of Channels Available</th>
<th>Max # of CXI (2)</th>
<th>Max # of Coloram (3)</th>
<th>Max # of Eclipse (4)</th>
<th>Max # of Goboram (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-Way</td>
<td>19060</td>
<td>150 watts</td>
<td>12</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>12-Way</td>
<td>19012</td>
<td>300 watts</td>
<td>24</td>
<td>6</td>
<td>12</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>24-Way</td>
<td>20240</td>
<td>600 watts</td>
<td>48</td>
<td>12</td>
<td>24 (1)</td>
<td>24 (1)</td>
<td>16</td>
</tr>
</tbody>
</table>

Notes:
(1) can only use the first 24 channels
(2) CXIs use 1, 2 or 3 channels
(3) Coloram IIs use 1 channel
(4) Eclipses use 1 channel
(5) Goboram IIs use 3 channels

Cables

Power/Data Cable

The Power/Data cable uses 4-pin XLR connectors on either end and consists of two 14 AWG conductors and a 22 AWG twisted, shielded pair. The shells of the two XLR connectors are not electrically connected -- this prevents high power currents from flowing from chassis to chassis of the Coloram II equipment. The twisted pair shield is not connected at either end.

<table>
<thead>
<tr>
<th>XLR Pin #</th>
<th>Wire Color</th>
<th>Function</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
<td>24 Volts DC</td>
<td>14 AWG</td>
</tr>
<tr>
<td>2</td>
<td>Green</td>
<td>Data -</td>
<td>22 AWG</td>
</tr>
<tr>
<td>3</td>
<td>Red</td>
<td>Data +</td>
<td>22 AWG</td>
</tr>
<tr>
<td>4</td>
<td>Black</td>
<td>Ground</td>
<td>14 AWG</td>
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</tbody>
</table>

DMX512 control cable

The DMX control cable from the lighting board to the power supply is a five conductor cable with 5-pin XLR connectors on each end. The wiring pin out is specified by the USITT DMX512 / 1990 standard.
<table>
<thead>
<tr>
<th>XLR Pin #</th>
<th>Function</th>
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<tbody>
<tr>
<td>1</td>
<td>Common</td>
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<tr>
<td>2</td>
<td>Data -</td>
</tr>
<tr>
<td>3</td>
<td>Data +</td>
</tr>
<tr>
<td>4</td>
<td>Talkback -</td>
</tr>
<tr>
<td>5</td>
<td>Talkback +</td>
</tr>
</tbody>
</table>

**Specifications**

**Coloram II Color Changer Technical Information**

End to end speed:
- 3.2 seconds  
  Models: 4520, 7110, and 7080  
- 5 seconds  
  Models: 10100, 15010, 16080, 16090, 16120, 16110 and 5000

Fan: Multiple speed - normal  
- limited  
- off

Fuse:  
- 1.5 Amp Slo Blo  
  Models: 4520, 7110, 7080, 10100 and 15010  
- 2 Amp Slo Blo  
  Models: 16080, 16090, 16110, 16120 and 5000

Gelstring:  
- 2 - 32 frames  
  Models: 4520, 7110, and 7080  
- 2 - 24 frames  
  Models: 10100, 15010, 16080, 16090, 16110, 16120 and 5000

Coloram II address: 01 - 24

LED Indicators:  
- Motor speed  
- Low voltage  
- Fan speed  
- Shutdown (all flashing)

Power supply compatibility:  
- Coloram II (RAM) 6-Way Power Supply  
- Coloram II (RAM) 12-Way Power Supply  
- Coloram II (RAM) 24-Way Power Supply

Signal termination: Not required

Weight:

Models:
- 4520 - 4-inch Coloram II Color Changer – 4.04 lbs./1.83 kg  
- 7110 - 7.5-inch Coloram II Color Changer – 4.92 lbs./2.23 kg  
- 10100 -10-inch (2K) Coloram II Color Changer – 6.38 lbs./2.89 kg  
- 15010 -15-inch (5K) Coloram II Color Changer – 15.06 lbs./6.83 kg  
- 16090 - Large Format Coloram II Color Changer – 17.92 lbs./8.13 kg  
- 16080 - Eight Light Coloram II Color Changer – 15.62 lbs./6.92 kg  
- 16100 - Thomas 9 Light Coloram II Color Changer – 18.5 lbs./8.39 kg
7080 - 7.5-inch Aquaram Color Changer - 7.74 lbs./3.51 kg
5000 - Large Format Aquaram Color Changer – 25.56 lbs/11.59 kg

Dimensions:
4520 - 4-inch – 9.55"/242.57mm x 9.65"/245.11mm x 2.69"/68.33mm
7110 - 7.5-inch – 11.08"/281.44mm x 12.65"/321.31mm x 2.69"/68.33mm
10100 -10-inch – 14.2"/360.68mm x 15.15"/384.81mm x 2.69"/68.33mm
15010 -15-inch – 22.59"/573.79 x 20.53"/521.47mm x 5.09"/129.29mm
16090 - LF – 25.06"/636.53mm x 22.63"/574.81mm x 5.09"/129.29mm
16080 - 8 Light – 32.82"/833.63mm x 20.28"/515.12mm x 4.97"/126.24mm
16100 -Thomas 9–25.06"/636.53mm x 23.76"/603.5mm x 5.09"/129.29mm
7080 - 7.5-inch Aquaram – 12.65"/321.31mm x 12.80"/325.12mm x 12"/104.65mm
5000 - LF Aquaram – 26.68"/677.68mm x 23.88"/606.56mm x 5.45"/138.43mm

The Coloram II Color Changer Fixture Compatibility

Fixture compatibility with optional mounting plates:

Models:
4520 – 4-inch Coloram II Color Changer
   Source Four
   Shakespeare 600
   Other fixtures with 6.25" gel frames
7110 - 7.5-inch Coloram II Color Changer
   Source Four
   Shakespeare 600
   Other fixtures with 6.25" gel frames
   Source Four PAR
   PAR 64
   Full size ellipsoidals
7080 - 7.5-inch Aquaram Color Changer
   Source Four
   Shakespeare 600
   Other fixtures with 6.25" gel frames
   Source Four PAR
   PAR 64
   Full size ellipsoidals
10100 – 10-inch Coloram II Color Changer
   Source Four 5 degree
   Source Four 10 degree
   Various 2K
15010 – 15-inch Coloram II Color Changer
   Various 3K
   Various 4K
   Various 5K
   4-light
16080 - 8 Light Coloram II Color Changer
Various 8-light
16090 - Large Format Coloram II Color Changer
Various 5K
9-light
Various cyc lights
16100 - Thomas 9 Light Coloram II Color Changer
Thomas 9-light
5000 - Large Format Aquaram Color Changer
Various 5K
Phillips Arena Vision

The Coloram II Gelstring Information

4-inch Coloram II:
  2 - 32 frames plus leader and trailer
  Frame width: 8"
  Frame height: 6 1/16"
  Leader/Trailer: 9.5"

7.5-inch Coloram II:
  2 - 32 frames plus leader and trailer
  Frame width: 10"
  Frame height: 7 13/16"
  Leader/Trailer: 9.5"

7.5-inch Aquaram:
  2 - 32 frames plus leader and trailer
  Frame width: 10"
  Frame height: 7 13/16"
  Leader/Trailer: 9.5"

10-inch Coloram II:
  2 - 24 frames plus leader and trailer
  Frame width: 13 1/2"
  Frame height: 10 5/16"
  Leader/Trailer: 9.5"

15-inch Coloram II:
  2 - 24 frames plus leader and trailer
  Frame width: 20"
  Frame height: 16 1/8"
  Leader/Trailer: 9.5"

8 Light Coloram II:
  2 - 24 frames plus leader and trailer
  Frame width: 20"
  Frame height: 26 5/16"
  Leader/Trailer: 9.5"

Large Format Coloram II:
  2 - 24 frames plus leader and trailer
  Frame width: 24"
  Frame height: 18 5/8"
The Coloram II Color Changers and Power Supplies

To order any of the following items, contact your authorized WYBRON dealer.

**Parts list**

Large Format Aquaram:
- 2 - 24 frames plus leader and trailer
- Frame width: 24"
- Frame height: 18 5/8"
- Leader/Trailer: 9.5"

Large Format Coloram:
- 2 - 24 frames plus leader and trailer
- Frame width: 24"
- Frame height: 18 5/8"
- Leader/Trailer: 9.5"

**The Coloram II Color Changers and Power Supplies**

- 4520 ........................................... 4-inch Coloram II
- 7110 ......................................... 7.5-inch Coloram II
- 10100 ........................................ 10-inch Coloram II
- 15010 ........................................ 15-inch Coloram II
- 16080 ........................................ Eight Light Coloram II
- 16090 .................................. Large Format Coloram II
- 16100 .................................... Thomas 9 Light Coloram II
- 7080 ........................................ 7.5-inch Aquaram
- 5000 .................................. Large Format Aquaram
- 20240 ................................ Coloram II (RAM) 24-Way Power Supply
- 19012 ................................ Coloram II (RAM) 12-Way Power Supply
- 19060 ................................ Coloram II (RAM) 6-Way Power Supply

**Coloram II mounting and installation accessories**

- 452-01-03P .................................. 6.25"/158.75mm mounting plate for 4-inch Color Changer
- 452-03-04 .................................. 6.25"/158.75mm mounting plate for 7.5-inch Color Changer
- 704-01-03P .................................. 7.5"/190.5mm mounting plate for 7.5-inch Color Changer
- 711-01-03P .................................. 10"/254mm mounting plate for 7.5-inch Color Changer
- 1009-01-20P ................................ 12.125"/307.98mm mounting plate for 10-inch Color Changer
- 1009-01-21P ................................ 14.25"/361.95mm mounting plate for 10-inch Color Changer
- SCRPH832037P ......................... 3/8" pan head screws for mounting plate to
Color Changer
SCRPH832050 .......................... 1/2" pan head screws for mounting plate to Color Changer
1900-01-05P .......................... 24-Way Power Supply hanger bracket
715-01-03P .......................... 6-Way and 12-Way Power Supply hanger bracket
SCRWC252075 .......................... Wing screw for Power Supply hanger bracket to pipe
SCRSC2520037 .......................... Socket cap screw for hanger bracket to Color Changer

The Coloram II System cable

7042-3 .......................... 3' power/signal cable
7042-5 .......................... 5' power/signal cable
7042-10 .......................... 10' power/signal cable
7042-15 .......................... 15' power/signal cable
7042-25 .......................... 25' power/signal cable
7042-50 .......................... 50' power/signal cable
7042-75 .......................... 75' power/signal cable
7042-100 .......................... 100' power/signal cable
Warranty information

WYBRON, INC. warrants to the original owner or retail customer that for a period of one year from date of delivery of a portable system or energization of a permanently installed system (up to a maximum of 18 months from delivery) its products will be free from defects in materials and workmanship under normal use and service.

Warranty does not cover any product or part of a product subject to accident, negligence, alteration, abuse, misuse or any accessories or parts not supplied by WYBRON, INC.. Warranty does not cover "consumable" parts such as fuses, lamps, or color media. WYBRON, INC.’s warranty does not extend to items not manufactured by us. Freight terms on warranty repairs are FOB WYBRON, INC. factory or designated repair facility. Collect shipments or freight allowances will not be accepted.

WYBRON, INC.’s sole responsibility under this warranty shall be to repair or replace at WYBRON, INC.’s option such parts as shall be determined to be defected on WYBRON, INC.’s inspection. WYBRON, INC. will not assume any responsibility for any labor expended or materials used to repair any equipment without WYBRON, INC.’s prior written authorization. WYBRON, INC. shall not be responsible for any incidental, general or consequential damages to property, damages for loss of use, time, profits or income, or any other charges.

The owner’s obligations during the warranty period under this warranty are to notify WYBRON, INC. at WYBRON, INC.’s address within one week of any suspected defect, and return the goods prepaid to WYBRON, INC. at their factory or authorized service center.

This warranty is contingent on the customer's full and timely compliance with the terms of payment set forth in said purchase order. This warranty is expressly in lieu of any and all other warranties expressed or implied including the warranties of merchantability and fitness for a particular purpose and of other obligations and liabilities on our part. The owner acknowledges that no other representations were made to him or relied upon him with respect to the quality and function of the goods sold.

This written warranty is intended as a complete and exclusive statement of the terms thereof. Prior dealings or trade usage shall not be relevant to modify, explain or vary this warranty. Acceptance of, or acquiescing in, a course of performance under this warranty shall not modify the meaning of this agreement even though either party has knowledge of the performance and a chance to object.
# Gelstring order form

Any combination of color filter manufacturer's gels can be combined to create a custom Coloram II gelstring. Please specify using the following format.

Specify: (G) GAM, (L) Lee, (R) Rosco with the color number and the color name.

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<th>Frame</th>
<th>Mfgr./Color number</th>
<th>Color name</th>
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