

User Manual



- 4560 – 4-inch CXI Color Changer**
- 7200 - 7.5-inch CXI Color Changer**
- 12210 – 12-inch CXI Color Changer**
- 16050 – Large Format CXI Color Changer**
- 7240 – MultiPAR CXI Color Changer**
- 7220 – Mariner CXI Color Changer**

CXI ColorChanger Software version: B1.4
 Manual version: April 14, 2003

CONTENTS

Safety Information	3
Introduction.....	4
The CXI System Overview	4
Quick Start	5
Using CXI	6
Controls and Indicators	6
Menu Tree.....	6
Operating Modes	7
Set the Operating Channel.....	7
Mix Mode Color Tables	8
Mix Mode Color Table (sort by DMX %).....	9
Mix Mode Color Table (sort by color number)	11
Index Mode Color Table.....	13
Gel String Time-to-Destination Table.....	15
Head-Feet Restrictions	16
Fan Speed Control.....	16
Error Messages.....	17
Power Supply	18
Quantity of CXI per Power Supply	18
Power/Signal Cables.....	18
CXI Gelstring.....	18
Gel String Diagram	19
Gel String Loading	20
CXI Specifications	20
Part Numbers	21
Warranty information	22

SAVE THESE INSTRUCTIONS

READ AND FOLLOW ALL INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

This manual gives step-by-step instructions for the preparation, setup, and operation of the CXI color changer.

There is a potential risk of fire, electric shock or injury to persons if the product is not used as instructed.

The Coloram II Power Supply is to be used in an indoor environment only and is not intended for residential use.

The CXI color changers are not intended for residential use.

Introduction

The CXI System is a color mixing color changer and power supply in a range of models offering ease of setup and use. The lightweight color changers slide easily into the gel frame holder of the light fixture. The compact power supplies attach easily 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 CXI Color Changer and power supply.

The CXI System Overview

The CXI System consists of one or more CXI Color Changers and a remote Coloram II Power Supply. The DMX512 control signal from the lighting board is connected to the power supply and can continue on to more Coloram II 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 the color changer.

CXI color changers are 100% compatible with all members of the Coloram II family including Coloram II color changers, the Coloram II Power Supplies, the Eclipse Dowser and others. You can daisy chain CXI color changers with other Coloram equipment if you wish.

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

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



Caution: The CXI System is compatible with the Coloram II equipment but is not compatible with the Forerunner System. Do not connect CXI Color Changers to Forerunner Power Supplies, or Forerunner Color Changers to CXI Power Supplies. Damage from such action will not be covered by the CXI or Forerunner warranties.

Quick-Start

Follow these steps to get the CXI color changer operational quickly.

1. Connect the equipment

- a. Attach the CXI Color Changer to a powered light fixture
- b. Connect the CXI Color Changer to the power supply using 4-pin CXI/Coloram power/signal Cable.
- c. Connect the power supply to 115/230VAC power and to a DMX source

2. Setup the CXI Color Changer

- a. Set the CXI color changer to a starting channel of 1 (see Menu Tree)
- b. Set the CXI color changer to the MIX mode (to have independent control of each of the two gel strings)
- c. Set the Move Speed to LOW
- d. Set the "Time-to-destination" Channel to OFF

3. Setup the Coloram II Power Supply

- a. Set the power supply to a starting channel of 1

4. Send DMX Levels

- a. The CXI will respond to DMX channel 1 (positions the FRONT gel string) and DMX channel 2 (positions the BACK gel string)
- b. Set DMX channel 1 to 4%
- c. Set DMX channel 2 to 4%

You will see the light color change to a "medium blue". Vary the DMX levels of channels 1 and 2 to change colors.

Using CXI

Controls and Indicators

The CXI has controls and indicators as follows:

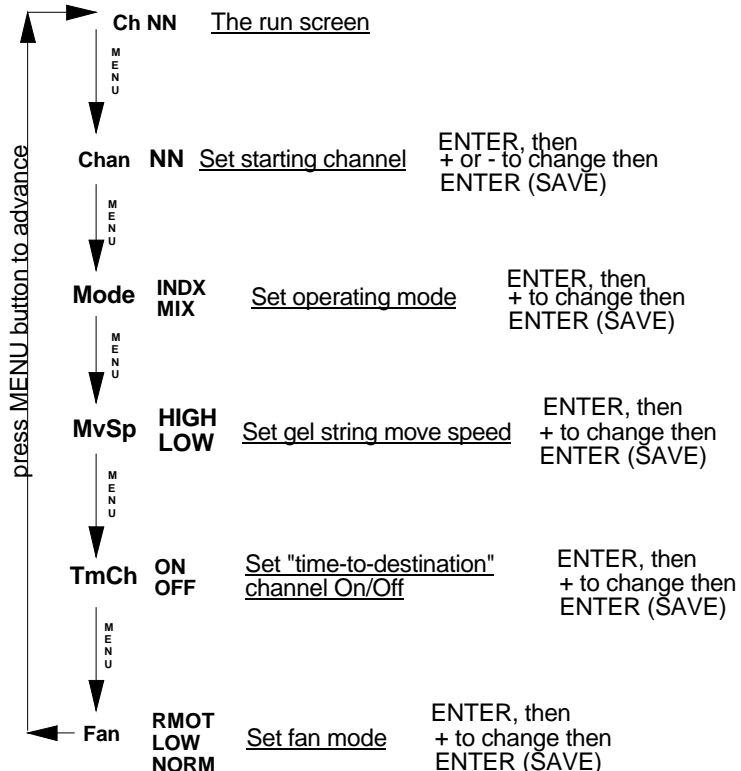
1. 4 character LED display
2. 4 push buttons - MENU, -, +, ENTER (select/save)
3. Indicator LEDs
 - Index mode (Yellow LED)
 - control signal present (Green LED -- flashes)
 - power (Red LED)

The MENU button advances you through the menu items such as "Chan", "Mode", e.t.c. The ENTER button "selects" the menu item and "saves" the change made.

The display and yellow and green LEDs have an Auto power-off feature. They will automatically go dark after 1 minute of no pushbutton activity. If, however, an error message is displayed or a menu item has been changed and ENTER has not been pressed, the display will remain on.

Menu Tree

The CXI menu tree is as follows:



Operating Modes

Select either Index or Mix mode with the push-button / display via the MODE selection -- INDX (index) or MIX.

1. Index mode
 - this is used to control both gel strings with ONE DMX channel
 - channel descriptions:
 - channel 1: positions both gel strings
 - channel 2: gel string time-to-destination (ONLY if enabled)
2. Mix mode
 - this is used to control the two gel strings with TWO DMX channels -- each string independently of one another
 - channel descriptions:
 - channel 1: positions the front gel string (farthest from the mounting plate)
 - channel 2: positions the back gel string (nearest the mounting plate)
 - channel 3: gel string time-to-destination (ONLY if enabled)

Set the Operating Channel

Set the operating channel with the push-button / display via the CHAN selection. The CXI channels can be set from 1 to 48 except for channel setting restrictions listed below.

As with Coloram II, the channel setting formula is:

$$\text{DMX channel} = \text{CXI channel} + \text{power supply starting channel} - 1$$

Or, in a different form:

$$\text{CXI channel} = \text{DMX channel} - \text{power supply starting channel} + 1$$

Example: DMX channel (10) = CXI channel (4) + power supply starting channel (7) - 1

Channel setting restrictions:

For each model power supply, CXI channel setting restrictions are as follows:

Model 19000 - Coloram II 24-Way Power Supply (600 watt)
- set the CXI to any channel from 1 to 48

Model 19012 - Coloram II 12-Way Power Supply (300 watt)
- set the CXI to any channel from 1 to 24

Model 19060 - Coloram II 6-Way Power Supply (150 watt)

- set the CXI to any channel from 1 to 12

If you set the CXI to the last channel of a power supply (e.g. channel 24 of Model 19012) but also set the CXI to a mode where more than one channel is required, the DMX values of the additional channels (beyond channel 24) will default to 0%.

Power supply channel setting restrictions:

The power supplies receive and retransmit gel string position data for blocks of channels as follows:

Model 19000 - Coloram II 24-Way Power Supply (600 watt)
- a block of 48 channels

Model 19012 - Coloram II 12 Way-Power Supply (300 watt)
- a block of 24 channels

Model 19060 - Coloram II 6-Way Power Supply (150 watt)
- a block of 12 channels

Note: If the power supply is set to TALKBACK = ON, the power supply starting channels are limited to 1, 4, 7, 10, 13, etc.

Mix Mode Color Tables

The Mix mode uses two DMX channels as follows:

- channel 1: positions the front gel string (farthest from the mounting plate)
- channel 2: positions the back gel string (nearest the mounting plate)
- channel 3: gel string time-to-destination (ONLY if enabled)

Intermediate DMX levels will "split the frames" by placing portions of two different colors in the aperture yielding "custom colors".

The following table lists MIX mode colors sorted by DMX % level. A source temperature of 3200 degrees K. is presumed.

Mix Mode Color Table - Sorted by DMX % Level

<u>Color Number</u>	<u>Color Name</u>	<u>front string back string</u>		<u>front string back string</u>	
		<u>Chan 1 DMX %</u>	<u>Chan 2 DMX %</u>	<u>Chan 1 DMX (dec)</u>	<u>Chan 2 DMX (dec)</u>
---	CLEAR	49%	45%	125	115
---	CUSTOMER 2	49%	100%	125	255
---	CUSTOMER 1	100%	45%	255	115
L116	MED BLU GRN	0%	63%	0	161
L139	PRIMARY GREEN	0%	95%	0	242
G905	DARK BLUE	4%	0%	10	0
R83	MEDIUM BLUE	4%	4%	10	10
R80	PRIMARY BLUE	4%	9%	10	23
L132	MEDIUM BLUE	4%	13%	10	33
R69	BRILLIANT BLUE	4%	27%	10	69
G740	OFF BLUE	4%	31%	10	79
L124	DARK GREEN	4%	85%	10	217
R90	DRK YELL GRN	4%	90%	10	230
L181	CONGO BLUE	9%	0%	23	0
R383	SAPPHIRE BLUE	9%	4%	23	10
G835	AZTEC BLUE	9%	13%	23	33
G810	MOON BLUE	9%	18%	23	46
L118	LIGHT BLUE	9%	27%	23	69
G690	BLUEGRASS	9%	54%	23	138
G915	TWILIGHT	13%	4%	33	10
G760	AQUA BLUE	13%	31%	33	79
G725	PRINCESS BLUE	13%	40%	33	102
G685	PISTACHIO	13%	63%	33	161
G650	GRASS GREEN	13%	85%	33	217
G945	ROYAL PURPLE	18%	0%	46	0
G847	CITY BLUE	18%	18%	46	46
G815	MOODY BLUE	18%	22%	46	56
R65	DAYLIGHT BLUE	18%	27%	46	69
G710	BLUE GREEN	18%	36%	46	92
G680	KELLY GREEN	18%	63%	46	161
G660	MED GREEN	18%	81%	46	207
R358	ROSE INDIGO	22%	0%	56	0
L180	DARK LAVENDER	22%	4%	56	10
G950	PURPLE	22%	9%	56	23
R64	LIGHT STEEL BLUE	22%	22%	56	56
R57	LAVENDER	27%	13%	69	33
G940	LIGHT PURPLE	27%	18%	69	46
L201	FULL CT BLUE	27%	27%	69	69
L117	STEEL BLUE	27%	36%	69	92
R86	PEA GREEN	27%	85%	69	217

G960	MEDIUM LAVENDER	31%	18%	79	46
G790	ELECTRIC BLUE	31%	36%	79	92
G995	ORCHID	36%	4%	92	10
G990	DARK LAVENDER	36%	13%	92	33
R52	LIGHT LAVENDER	36%	22%	92	56
R54	SPECIAL LAVENDER	36%	31%	92	79
G540	PALE GREEN	36%	67%	92	171
R48	ROSE PURPLE	40%	9%	102	23
L203	1/4 CT BLUE	40%	40%	102	102
L101	YELLOW	40%	95%	102	242
R344	FOLIES PINK	45%	9%	115	23
R10	MEDIUM YELLOW	49%	90%	125	230
G450	SAFFRON	54%	85%	138	217
R312	CANARY	54%	90%	138	230
L104	DEEP AMBER	54%	95%	138	242
G325	BASTARD AMBER	58%	58%	148	148
R09	PALE AMBER GOLD	58%	72%	148	184
R14	MEDIUM STRAW	58%	90%	148	230
G155	LIGHT PINK	63%	54%	161	138
G330	SEPIA	63%	63%	161	161
L204	FULL CT ORANGE	63%	85%	161	217
R15	DEEP STRAW	63%	90%	161	230
G160	CHORUS PINK	67%	54%	171	138
G343	HONEY	67%	81%	171	207
L179	CHROME ORANGE	67%	90%	171	230
L110	MIDDLE ROSE	72%	58%	184	148
L105	ORANGE	72%	95%	184	242
R36	MEDIUM PINK	76%	63%	194	161
R318	MAYAN SUN	76%	81%	194	207
G335	CORAL	76%	95%	194	242
G130	ROSE	81%	54%	207	138
L111	DARK PINK	81%	63%	207	161
R23	ORANGE	81%	90%	207	230
G315	AUTUMN GLORY	81%	95%	207	242
R44	MIDDLE ROSE	85%	54%	217	138
R32	MEDIUM SALMON PINK	85%	81%	217	207
R22	DEEP AMBER	85%	95%	217	242
G110	DARK ROSE	90%	49%	230	125
G120	BRIGHT PINK	90%	58%	230	148
G180	CHERRY	90%	76%	230	194
R19	FIRE	90%	95%	230	242
L128	BRIGHT PINK	95%	54%	242	138
R39	EXOTIC SANGRIA	95%	58%	242	148
R46	MAGENTA	95%	76%	242	194
R26	LIGHT RED	95%	95%	242	242

The following table lists MIX mode colors sorted by color number.

Mix Mode Color Table - Sorted by Color Number

Color Number	Color Name	front string back string		front string back string	
		Chan 1 DMX %	Chan 2 DMX %	Chan 1 DMX (dec)	Chan 2 DMX (dec)
---	CLEAR	49%	45%	125	115
---	CUSTOMER 2	49%	100%	125	255
---	CUSTOMER 1	100%	45%	255	115
G110	DARK ROSE	90%	49%	230	125
G120	BRIGHT PINK	90%	58%	230	148
G130	ROSE	81%	54%	207	138
G155	LIGHT PINK	63%	54%	161	138
G160	CHORUS PINK	67%	54%	171	138
G180	CHERRY	90%	76%	230	194
G315	AUTUMN GLORY	81%	95%	207	242
G325	BASTARD AMBER	58%	58%	148	148
G330	SEPIA	63%	63%	161	161
G335	CORAL	76%	95%	194	242
G343	HONEY	67%	81%	171	207
G450	SAFFRON	54%	85%	138	217
G540	PALE GREEN	36%	67%	92	171
G650	GRASS GREEN	13%	85%	33	217
G660	MED GREEN	18%	81%	46	207
G680	KELLY GREEN	18%	63%	46	161
G685	PISTACHIO	13%	63%	33	161
G690	BLUEGRASS	9%	54%	23	138
G710	BLUE GREEN	18%	36%	46	92
G725	PRINCESS BLUE	13%	40%	33	102
G740	OFF BLUE	4%	31%	10	79
G760	AQUA BLUE	13%	31%	33	79
G790	ELECTRIC BLUE	31%	36%	79	92
G810	MOON BLUE	9%	18%	23	46
G815	MOODY BLUE	18%	22%	46	56
G835	AZTEC BLUE	9%	13%	23	33
G847	CITY BLUE	18%	18%	46	46
G905	DARK BLUE	4%	0%	10	0
G915	TWILIGHT	13%	4%	33	10
G940	LIGHT PURPLE	27%	18%	69	46
G945	ROYAL PURPLE	18%	0%	46	0
G950	PURPLE	22%	9%	56	23
G960	MEDIUM LAVENDER	31%	18%	79	46
G990	DARK LAVENDER	36%	13%	92	33
G995	ORCHID	36%	4%	92	10
L101	YELLOW	40%	95%	102	242
L104	DEEP AMBER	54%	95%	138	242
L105	ORANGE	72%	95%	184	242
L110	MIDDLE ROSE	72%	58%	184	148

L111	DARK PINK	81%	63%	207	161
L116	MED BLU GRN	0%	63%	0	161
L117	STEEL BLUE	27%	36%	69	92
L118	LIGHT BLUE	9%	27%	23	69
L124	DARK GREEN	4%	85%	10	217
L128	BRIGHT PINK	95%	54%	242	138
L132	MEDIUM BLUE	4%	13%	10	33
L139	PRIMARY GREEN	0%	95%	0	242
L179	CHROME ORANGE	67%	90%	171	230
L180	DARK LAVENDER	22%	4%	56	10
L181	CONGO BLUE	9%	0%	23	0
L201	FULL CT BLUE	27%	27%	69	69
L203	1/4 CT BLUE	40%	40%	102	102
L204	FULL CT ORANGE	63%	85%	161	217
R09	PALE AMBER GOLD	58%	72%	148	184
R10	MEDIUM YELLOW	49%	90%	125	230
R14	MEDIUM STRAW	58%	90%	148	230
R15	DEEP STRAW	63%	90%	161	230
R19	FIRE	90%	95%	230	242
R22	DEEP AMBER	85%	95%	217	242
R23	ORANGE	81%	90%	207	230
R26	LIGHT RED	95%	95%	242	242
R312	CANARY	54%	90%	138	230
R318	MAYAN SUN	76%	81%	194	207
R32	MEDIUM SALMON PINK	85%	81%	217	207
R344	FOLIES PINK	45%	9%	115	23
R358	ROSE INDIGO	22%	0%	56	0
R36	MEDIUM PINK	76%	63%	194	161
R383	SAPPHIRE BLUE	9%	4%	23	10
R39	EXOTIC SANGRIA	95%	58%	242	148
R44	MIDDLE ROSE	85%	54%	217	138
R46	MAGENTA	95%	76%	242	194
R48	ROSE PURPLE	40%	9%	102	23
R52	LIGHT LAVENDER	36%	22%	92	56
R54	SPECIAL LAVENDER	36%	31%	92	79
R57	LAVENDER	27%	13%	69	33
R64	LIGHT STEEL BLUE	22%	22%	56	56
R65	DAYLIGHT BLUE	18%	27%	46	69
R69	BRILLIANT BLUE	4%	27%	10	69
R80	PRIMARY BLUE	4%	9%	10	23
R83	MEDIUM BLUE	4%	4%	10	10
R86	PEA GREEN	27%	85%	69	217
R90	DRK YELL GRN	4%	90%	10	230

Index Mode Color Table

The Index mode uses ONE DMX channel as follows:

- channel 1: positions the two gel strings
- channel 2: gel string time-to-destination (ONLY if enabled)

The following table lists INDEX mode colors sorted by color number. A source temperature of 3200 degrees K. is presumed.

Index Mode Color Table

<u>Color Number</u>	<u>Color Name</u>	<u>DMX %</u>	<u>DMX decimal</u>	<u>front gel string Color</u>	<u>back gel string Color</u>
---	CLEAR	0%	0	CLEAR	CLEAR
---	CUSTOMER 1	99%	252	CUSTOMER 1	CLEAR
---	CUSTOMER 2	100%	255	CLEAR	CUSTOMER 2
G110	DARK ROSE	55%	140	MAGENTA 9	YELLOW 1
G120	BRIGHT PINK	63%	161	MAGENTA 9	YELLOW 3
G130	ROSE	56%	143	MAGENTA 7	YELLOW 2
G155	LIGHT PINK	59%	150	MAGENTA 3	YELLOW 2
G160	CHORUS PINK	61%	156	MAGENTA 4	YELLOW 2
G180	CHERRY	48%	122	MAGENTA 9	YELLOW 7
G220	PINK MAGENTA	57%	145	MAGENTA 10	YELLOW 7
G315	AUTUMN GLORY	41%	105	MAGENTA 7	YELLOW 11
G325	BASTARD AMBER	77%	196	MAGENTA 2	YELLOW 3
G330	SEPIA	76%	194	MAGENTA 3	YELLOW 4
G335	CORAL	85%	217	MAGENTA 6	YELLOW 11
G343	HONEY	80%	204	MAGENTA 4	YELLOW 8
G450	SAFFRON	84%	214	MAGENTA 1	YELLOW 9
G540	PALE GREEN	73%	186	CYAN 3	YELLOW 5
G570	LT GREEN YELLOW	78%	199	CYAN 5	YELLOW 9
G650	GRASS GREEN	67%	171	CYAN 8	YELLOW 9
G655	RICH GREEN	74%	189	CYAN 10	YELLOW 10
G660	MED GREEN	69%	176	CYAN 7	YELLOW 8
G680	KELLY GREEN	71%	181	CYAN 7	YELLOW 4
G685	PISTACHIO	72%	184	CYAN 8	YELLOW 4
G690	BLUEGRASS	36%	92	CYAN 9	YELLOW 2
G710	BLUE GREEN	37%	94	CYAN 7	MAGENTA 2
G725	PRINCESS BLUE	39%	99	CYAN 8	MAGENTA 1
G740	OFF BLUE	21%	54	CYAN 10	MAGENTA 3
G760	AQUA BLUE	30%	77	CYAN 8	MAGENTA 3
G790	ELECTRIC BLUE	26%	66	CYAN 4	MAGENTA 2
G810	MOON BLUE	15%	38	CYAN 9	MAGENTA 6
G815	MOODY BLUE	34%	87	CYAN 7	MAGENTA 5
G835	AZTEC BLUE	12%	31	CYAN 9	MAGENTA 7
G840	STEEL BLUE	33%	84	CYAN 6	MAGENTA 5
G847	CITY BLUE	29%	74	CYAN 7	MAGENTA 6

G848	BONUS BLUE	22%	56	CYAN 7	MAGENTA 6
G850	BLUE	5%	13	CYAN 10	MAGENTA 9
G905	DARK BLUE	1%	3	CYAN 10	MAGENTA 10
G915	TWILIGHT	11%	28	CYAN 8	MAGENTA 9
G940	LIGHT PURPLE	40%	102	CYAN 5	MAGENTA 6
G945	ROYAL PURPLE	8%	20	CYAN 7	MAGENTA 10
G950	PURPLE	31%	79	CYAN 6	MAGENTA 8
G960	MEDIUM LAVENDER	45%	115	CYAN 4	MAGENTA 6
G990	DARK LAVENDER	44%	112	CYAN 3	MAGENTA 7
G995	ORCHID	43%	110	CYAN 3	MAGENTA 9
L101	YELLOW	88%	224	CYAN 2	YELLOW 11
L104	DEEP AMBER	89%	227	MAGENTA 1	YELLOW 11
L105	ORANGE	97%	247	MAGENTA 5	YELLOW 11
L110	MIDDLE ROSE	58%	148	MAGENTA 5	YELLOW 3
L111	DARK PINK	62%	158	MAGENTA 7	YELLOW 4
L116	MED BLU GRN	23%	59	CYAN 11	YELLOW 4
L117	STEEL BLUE	24%	61	CYAN 5	MAGENTA 2
L118	LIGHT BLUE	19%	48	CYAN 9	MAGENTA 4
L124	DARK GREEN	70%	179	CYAN 10	YELLOW 9
L128	BRIGHT PINK	52%	133	MAGENTA 10	YELLOW 2
L132	MEDIUM BLUE	10%	26	CYAN 10	MAGENTA 7
L139	PRIMARY GREEN	65%	166	CYAN 11	YELLOW 11
L141	BRIGHT BLUE	14%	36	CYAN 10	MAGENTA 4
L161	SLATE BLUE	27%	69	CYAN 7	MAGENTA 5
L179	CHROME ORANGE	90%	230	MAGENTA 4	YELLOW 10
L180	DARK LAVENDER	17%	43	CYAN 6	MAGENTA 9
L181	CONGO BLUE	3%	8	CYAN 9	MAGENTA 10
L201	FULL CT BLUE	42%	107	CYAN 5	MAGENTA 4
L203	1/4 CT BLUE	25%	64	CYAN 2	MAGENTA 1
L204	FULL CT ORANGE	81%	207	MAGENTA 3	YELLOW 9
R09	PALE AMBER GOLD	79%	201	MAGENTA 2	YELLOW 6
R10	MEDIUM YELLOW	87%	222	CLEAR	YELLOW 10
R14	MEDIUM STRAW	86%	219	MAGENTA 2	YELLOW 10
R15	DEEP STRAW	96%	245	MAGENTA 3	YELLOW 10
R18	FLAME	83%	212	MAGENTA 4	YELLOW 8
R19	FIRE	98%	250	MAGENTA 9	YELLOW 11
R21	GOLDEN AMBER	94%	240	MAGENTA 5	YELLOW 11
R22	DEEP AMBER	95%	242	MAGENTA 8	YELLOW 11
R23	ORANGE	92%	235	MAGENTA 7	YELLOW 10
R26	LIGHT RED	93%	237	MAGENTA 10	YELLOW 11
R312	CANARY	91%	232	MAGENTA 1	YELLOW 10
R318	MAYAN SUN	82%	209	MAGENTA 6	YELLOW 8
R32	MEDIUM SALMON PINK	53%	135	MAGENTA 8	YELLOW 8
R3202	C.T. FULL BLUE	18%	46	CYAN 5	MAGENTA 4
R344	FOLIES PINK	51%	130	CYAN 1	MAGENTA 8
R358	ROSE INDIGO	20%	51	CYAN 6	MAGENTA 10
R36	MEDIUM PINK	64%	163	MAGENTA 6	YELLOW 4
R383	SAPPHIRE BLUE	6%	15	CYAN 9	MAGENTA 9
R385	ROYAL BLUE	2%	5	CYAN 9	MAGENTA 10

R39	EXOTIC SANGRIA	60%	143	MAGENTA 10	YELLOW 3
R44	MIDDLE ROSE	54%	138	MAGENTA 8	YELLOW 2
R46	MAGENTA	49%	125	MAGENTA 10	YELLOW 7
R48	ROSE PURPLE	47%	120	CYAN 2	MAGENTA 8
R52	LIGHT LAVENDER	46%	117	CYAN 3	MAGENTA 5
R54	SPECIAL LAVENDER	50%	128	CYAN 3	MAGENTA 3
R57	LAVENDER	38%	97	CYAN 5	MAGENTA 7
R58	DEEP LAVENDER	28%	71	CYAN 6	MAGENTA 9
R59	INDIGO	7%	18	CYAN 7	MAGENTA 10
R64	LIGHT STEEL BLUE	32%	82	CYAN 6	MAGENTA 5
R65	DAYLIGHT BLUE	35%	89	CYAN 7	MAGENTA 4
R68	SKY BLUE	13%	33	CYAN 9	MAGENTA 7
R69	BRILLIANT BLUE	16%	41	CYAN 10	MAGENTA 4
R80	PRIMARY BLUE	9%	23	CYAN 10	MAGENTA 8
R83	MEDIUM BLUE	4%	10	CYAN 10	MAGENTA 9
R86	PEA GREEN	66%	168	CYAN 5	YELLOW 9
R89	MOSS GREEN	68%	173	CYAN 7	YELLOW 8
R90	DRK YELL GRN	75%	191	CYAN 10	YELLOW 10

Gel String Time-to-Destination Table

Enable or disable this function via the push-button / display via the TmCh (Time channel) selection.

If this function is enabled, this channel controls the time it will take to arrive at the destination gel string positions after the new destination command is sent.

NOTE: For quietest gel string movement, select the longest acceptable time.

CXI Gel String Time Table

<u>DMX Level</u>	<u>Time-to-destination</u>
0-4%	As Soon As Possible
5-9%	greater of: 1 sec or ASAP
10-14%	greater of: 2 sec or ASAP
15-19%	greater of: 3 sec or ASAP
20-24%	4 sec
25-29%	5 sec
30-34%	6 sec
35-39%	7 sec
40-44%	8 sec
45-49%	9 sec
50-54%	10 sec
55-59%	11 sec
60-64%	12 sec
65-69%	13 sec
70-74%	14 sec

75-79%	15 sec
80-84%	16 sec
85-89%	17 sec
90-94%	18 sec
95-100%	19 sec

Head-Feet Restrictions

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

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.

The maximum HEAD-FEET for each of the CXI color changers is as follows:

Model 4560	4-inch CXI	750 head-feet max.
Model 7200	7.5-inch CXI	750 head-feet max.
Model 12210	12-inch CXI	500 head-feet max.
Model 7420	MultiPAR CXI	1500 head-feet max.
Model 16050	Large Format CXI	750 head-feet max.

"Head-Feet" Example:

There are three CXI Color Changers connected to a power supply. The Coloram II Cable between the power supply and the first CXI is 100 feet long. The cables between each of the CXI's is 20 feet long.

The amount of cable from the power supply to:

1st CXI	100 ft
2nd CXI	120 ft
3rd CXI	<u>140 ft</u>
total:	360 "head-feet"

Fan Speed Control

Set the fan speed control with the push-button / display via the FAN selection.

1. RMOT (Remote control) -- the commands from the power supply

will control the fan speed. See the Coloram II Power Supply manual for details.

2. Low -- for quietest operation.
3. Norm (Normal speed) -- for longest gel life

Error Messages

The CXI can display error messages as follows:

1. Roll Call -- this is displayed when the power supply is plugged in and the CXIs are waiting for the power supply to request each CXI to "report in".
2. The following messages are related to gel string initialization:
 - a. front gel too short - rollers stalled before the end of the gel string was reached
 - b. front gel too long - gel string came loose from a roller
 - c. back gel too short - rollers stalled before the end of the gel string was reached
 - d. back gel too long - gel string came loose from a roller
3. Low Volt (low voltage) there is less than 17VDC at the CXI. This is a warning that the voltage is dangerously low. This is normally a "head-feet" cable problem.
4. Shut Down - there is less than 16 VDC at the CXI and the unit has shut down because it cannot work properly below this voltage. This is normally a "head-feet" cable problem or the user has commanded a "shut down" from the power supply.
5. Mtrs Errs (Motors Errors) -- both motors cannot get to their commanded position because the roller is jammed or the rotary encoder has failed.
6. Mtr1 Err (Motor 1 Error) -- motor #1 cannot get to its commanded position because the roller is jammed or the rotary encoder has failed.
7. Mtr2 Err (Motor 2 Error) -- motor #2 cannot get to its commanded position because the roller is jammed or the rotary encoder has failed.
8. XRAM Fail (Nonvolatile RAM failure) -- the memory device which saves the menu settings after power down has failed.

Power Supply

The power supplies for CXI color changer are the various models of the Coloram II power supply.

Quantity of CXI Color Changers per Power Supply

Model 19000 - Coloram II 24-Way Power Supply (600 watt)
- use 12 CXI Color Changers maximum

Model 19012 - Coloram II 12-Way Power Supply (300 watt)
- use 6 CXI Color Changers maximum

Model 19060 - Coloram II 6-Way Power Supply (150 watt)
- use 3 CXI Color Changers maximum

Power/Signal Cables

The CXI cable uses 4-pin XLR connectors on either end and consists of two 14 AWG conductors and a 22 AWG twisted, shielded pair. This is the standard Coloram II Cable.

XLR Pin #	Wire Color	Function	Size
1	White	24 Volts DC	14 AWG
2	Green	Data -	22 AWG
3	Red	Data +	22 AWG
4	Black	Ground	14 AWG

Gel Strings

The CXI Color Changer has two gel strings each with 23 frames. The front gel string is the one farthest from the light/mounting plate. The gel strings are diagrammed on the next page:

discard this page and insert the colored gel string diagram here

Gel String Loading

The CXI gel string installation procedure is as follows:

Note: The CXI relies on the gel string being taped securely to the rollers. Be sure the roller is clean and use good quality GAFF tape. The tape length should be 2/3 of the roller length and apply the tape "lengthwise" on the roller.

1. Put the color changer on table, mounting plate down with the 4 pushbuttons toward you, remove the front cover
2. The back gel string is yellow-magenta
 - a. tape the "yellow end" of gel string to the lower left roller, roll the gel string onto the lower left roller
 - b. holding the gel string, wind up the lower right roller 6 turns and tape the gel string on
3. The front gel string is magenta-cyan
 - a. tape the "magenta end" of gel string to the upper left roller, roll the gel string onto the upper left roller
 - b. holding the gel string, wind up the upper right roller 6 turns and tape the gel string on
4. Replace the front cover

CXI Specifications

End to end speed:

3 seconds

Models: 4560, 7200, 7220, 7240

4 seconds

Models: 12210, 16130, 16050

Fan: Multiple speed - normal

- limited

- remote control

Fuse: 3 Amp Slo Blo

Models: 4560, 7200, 7220, 12210, 7240

4 Amp Slo Blo

Models: 16050, 16130

Gelstring: Qty 2, 23 frames each

LED Indicators: Index mode (Yellow LED)

Control signal present (Green LED)

Power (Red LED)

Power supply compatibility:

Any Coloram II Power Supply

Signal termination: Not required

Weight:

4560 – 4-inch CXI Color Changer - 6.10 lbs./2.77 kg

7200 - 7.5-inch CXI Color Changer – 7.24 lbs./3.28 kg

- 12210 – 12-inch CXI Color Changer – 12.18 lbs/5.52 kg
- 16050 – Large Format CXI Color Changer – 23.54 lbs./10.68 kg
- 7220 – Mariner CXI Color Changer – 12.0 lbs./5.44 kg
- 16130 – Eight Light CXI Color Changer – 22.68 lbs./10.28 kg
- 7240 – MultiPAR CXI Color Changer – 14.0 lbs./6.35 kg

Dimensions:

- 4560 – 4-inch – 9.73"/247.2mm x 10.78"/273.8mm x 3.67"/93.2mm
- 7200 - 7.5-inch – 11.38"/289.1mm x 13.08/332.24mm x 3.67"/93.2mm
- 12210 – 12-inch – 15.5"/393.7mm x 18.67"/474.22mm x 4.85"/123.19mm
- 16050 – LF – 25.13"/638.31mm x 25.8"/655.33mm x 5.73"/145.55mm
- 7220 – Mariner – 12.28"/311.92mm x 15.03"/381.77mm x 4.62"/117.35mm
- 16130 – 8 Light – 32.69"/830.33mm x 23.4"/594.37mm x 5.61"/142.5mm
- 7240 – MultiPAR – 28.48"/723.4mm x 14.86"/377.45mm x 5.46"/138.69mm

Part Numbers

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

- 4560..... 4-inch CXI Color Changer
- 7200..... 7.5-inch CXI Color Changer
- 12210..... 12-inch CXI Color Changer
- 16050..... Large Format CXI Color Changer
- 16130..... Eight Light CXI Color Changer
- 7220..... Mariner CXI Color Changer
- 7042-xx..... Coloram II Power/signal Cable-xx feet long
- 19000..... Coloram II 24-Way Power Supply
- 19012..... Coloram II 12-Way Power Supply
- 19060..... Coloram II 6-Way Power Supply

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.



ADVANCING THE ART OF LIGHTING

WYBRON, INC. - TEL 719-548-9774 - FAX 719-548-0432

Email: info@wybron.com - Visit us on the World Wide Web at <http://www.wybron.com>