WYBRON

Advancing The Art Of Lighting

CXI IT

User Manual

infotrace IT

control & management system

84560 **4-inch CXI IT**
87200 **7.5-inch CXI IT**
812210 **12-inch CXI IT**
816050 **Large Format CXI IT**

CXI IT software version: V1.2
Manual issue date: October 17, 2006
Manual revision: March 25, 2009

CONTENTS

Safety Information 4
Introduction 5
Quick Start 6
Using CXI IT 7
- Operating Modes 7
- Mix Mode Color Tables 8
- Mix Mode Color Table (sorted by DMX %) 8
- Mix Mode Color Table (sorted by color number) 10
- Index Mode Color Table 12

CXI IT System Components 14
- Color Changer 14
- Gelstrings 14
- Power Supply 14
- Cables 15

Installing the CXI IT 17
CXI IT Menus 19
- Alerts/Error Messages 22
- DMX Address 24
- Settings 25
- Sensor Info 26
- Self Test (Demo) 28
- History 28
- Reset Defaults 31

Head-Feet Restrictions 31
Loading a Gelstring 32
Power Supply Capacity 33
Non-RDM Equipment and Infotrace 33
Coloram IT Products and Standard Environments 33
Specifications 34
Parts List 35
Warranty information 36

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DECLARATION OF CONFORMITY

Manufacturers Name: Wybron, Inc.
Manufacturers Address: 4830 List Dr., Colorado Springs, Colorado 80919 USA

Equipment Name: CXI IT Color Changer
Equipment Model Number(s): 84560, 87200, 816050, 812210, 816130, 87220

This product is in conformity with the following standards:

Referenced Safety Standard(s)	Referenced EMC Standard(s)
EN60598-1 EN60598-2-17	EN55022

following the provisions of the EU LV Directive 73/23/EEC and the EU EMC Directive 89/336/EEC.

I declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Signature: Kenneth Fasen

Printed Name: KEN FASEN

Title: VP of ENG.

Date: 14 SEPT. 2006

Safety Information

SAVE THESE INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS

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

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

The CXI IT 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 CXI IT™ color-mixing color changer offers a nearly limitless palette of colors by blending two overlapping gelstrings of cyan, magenta, and yellow, letting you create custom shades and tweak colors on the fly. Create custom colors, or replicate existing gels. The unit fits nearly every fixture available, sliding easily into a gel frame holder. A weather-resistant Mariner IT™ version is also available.

Each CXI IT receives power and signal via Wybron's PS Power Supply series. The unit is controlled by DMX512, and it sends feedback to its operators with Remote Device Management, an industry-standard feedback protocol.

The CXI IT isn't just RDM-compatible – it's built with several sensors that collect a wealth of data, including gelstring temperature, fan speed, and lamp life. All this data gets send to the operator with Wybron's RDM-based Infotrace feedback system, which makes it easy to remote address the devices, track maintenance cycles, and more.

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

CAUTION:
CXI IT color changers can ONLY be used with PS Power Supply units.

Do not connect CXI IT units to Coloram II (RAM) Power Supplies.

Do not connect Coloram II (RAM) units to PS Power Supplies.

Damage from such action will not be covered by the product warranties.

Quick Start

1. Connect the equipment

A. Attach the CXI IT color changer to a powered light fixture.
B. Connect the CXI IT color changer to the PS Power Supply using the 4-pin power/data cable.

2. Set up the CXI IT Color Changer

A. Set the CXI IT color changer to the MIX mode (to have independent control of each of the two gelstrings).
B. Set the Gel Move Speed to LOW.

3. Send DMX Levels

A. In MIX mode, as set above, the CXI IT responds to two separate DMX channels.
   i. The first DMX channel moves the gelstring that is FURTHEST from the mounting plate.
   ii. The second DMX channel positions the gelstring that is NEAREST the mounting plate.

Operating Modes

Please refer to the Menu Details below for information on how to select INDEX or MIX mode.

1. Index mode
   - A. Controls both gelstrings with ONE DMX channel.
   - B. Channel descriptions:
     - i. Channel 1: Positions both gelstrings
     - ii. Channel 2: Gelstring time-to-destination (ONLY if enabled)

2. Mix mode
   - A. Controls the two gelstrings with TWO DMX channels – with independent control of each of the two gelstrings.
   - B. Channel descriptions:
     - i. Channel 1: Positions the front gelstring (the gelstring located furthest from the mounting plate)
     - ii. Channel 2: Positions the back gelstring (the gelstring located nearest the mounting plate)
     - iii. Channel 3: Gelstring time-to-destination (ONLY if enabled)

Mix Mode Color Tables

The MIX mode uses TWO DMX channels as follows:

- Channel 1: Positions the front gelstring (furthest from the mounting plate)
- Channel 2: Positions the back gelstring (nearest to the mounting plate)
- Channel 3: Gelstring time-to-destination (ONLY if enabled)

Intermediate DMX levels will "split the frames" by placing portions of two different colors in the aperture, letting the user create custom colors.

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

Mix Mode Color Table – Sorted by DMX Level

Color Number	Color Name	front string Chan 1 DMX %	back string Chan 2 DMX %	front string Chan 1 DMX (dec)	back string Chan 2 DMX (dec)
---	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 Chan 1 DMX %	back string Chan 2 DMX %	front string Chan 1 DMX (dec)	back string 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 gelstrings
- Channel 2: gelstring time-to-destination (ONLY if enabled)

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

Index Color Table

Color Number	Color Name	DMX %	DMX decimal	front gelstring color	back gelstring color
---	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

CXI IT System Components

Color Changer

The CXI IT color changer uses two pre-made gelstrings containing cyan, magenta, and yellow gel, with 23 frames in each gelstring. The color changer sets the position of the gelstring as determined by the DMX signal level. The color changer is powered by 24 volts DC, which also comes from the power supply. The DMX signal, RDM data, and DC power are all supplied in one cable connecting the color changers to the power supply.

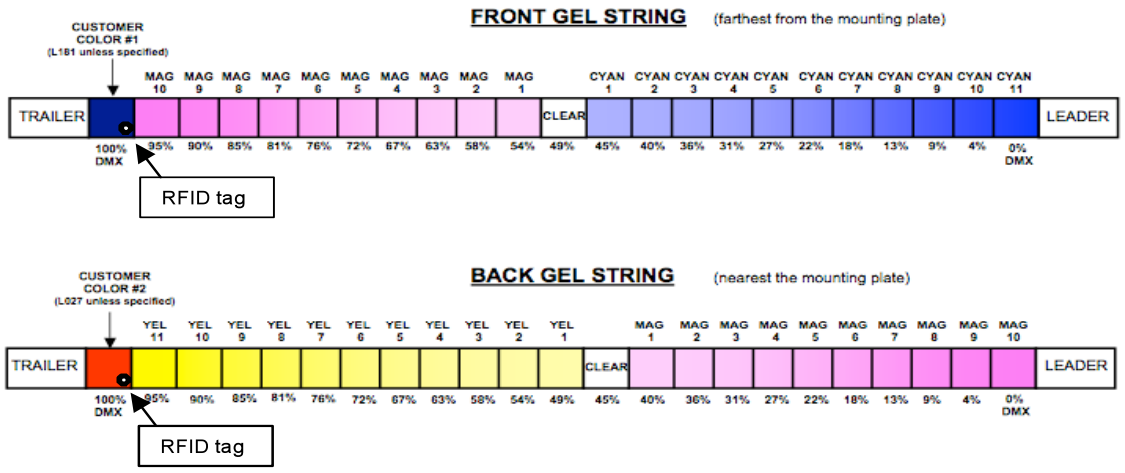
Power Supply

The PS Power Supply sends the DMX512 signal level from the lighting console to each color changer along with 24 volts DC. RDM information is sent from the CXI IT color changer to the Infogate software installed on a Mac or PC.

Gelstrings

The two CXI gelstrings are a predetermined series of precisely cut, colored gel frames joined together, side-by-side, to create a sequence of colors. Gelstring #1 (front) includes colors in the magenta-cyan range, and gelstring #2 (back) covers the yellow-magenta color range.

Wybron, Inc.
CXI Color Fusion
Gel String Diagram



Each gelstring features an RFID tag on the “custom color” frames (a custom color of gel chosen by the customer). The RFID tag contains information about the gelstring and send that information to the user via RDM and the Infotrace system.

Two additional clear gel frames at each end of each 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; these tags are necessary for the color changer's automatic calibration to the length of that particular gelstring.

Cables

- **Power/Data cable**

The 4-pin power/data cable connects the PS Power Supply outputs to the CXI IT color changers and provides them with power and control signal.

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, preventing high-power currents from flowing from chassis to chassis of the Coloram IT equipment. The twisted pair shield is connected only at the male XLR connector end. This is the standard Wybron power/data cable.

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

- **DMX512 control cable**

The DMX control cable from the lighting board to the dimmers, power supply, and Infogate gateway (if used) 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.

XLR Pin #	Function
1	Common
2	Data -
3	Data +
4	Talkback -
5	Talkback +

Installing the CXI IT

1. Attach the color changer to the fixture

Slide the color changer's mounting bracket into the gel frame holder of your fixture and lock the gel frame retention clip (if available). If the mounting plate installed on your color changer does not fit the fixture, you may able to replace it with the Wybron Universal Mounting plate.

The mounting plate allows you to position the color changer with the gelstring rolling either horizontally or vertically. However, CXI IT 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.

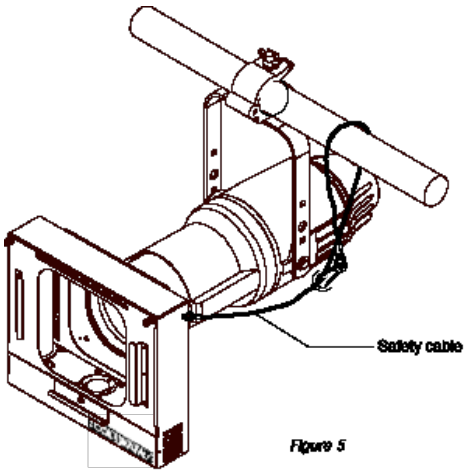


Figure 5

3. Mount the power supply

The PS 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 PS Power Supply rack mount kit. The rack mount kit will accommodate two PS 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 cable.

Refer to the HEAD-FEET RESTRICTIONS section of this manual for details regarding 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 - 240 VAC (50/60 Hz).

Power at the PS Power Supply is indicated by a red LED indicator.

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

a. Moving the gelstring toward the last frame, stalling on the end of the gelstring.
b. Changing direction, moving toward the first frame and then stalling on the end of the gelstring.
c. Stopping at the first frame and staying there if no DMX signal is present or going to its commanded position if DMX signal is present.

Note: It may take up to 30 seconds before all color changers start to initialize.

Caution: Do not power the PS Power Supply from a dimmer. Severe damage will result and is not covered by product warranty.

6. Connect 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 a flashing green LED. The color changers will now position their gelstrings according to their respective DMX signal levels.

Please refer to the Infogate manual for further details about how lighting fixtures and CXI IT color changers can be automatically paired together and remotely assigned DMX addresses using Infogate.

CXI (IT)
Graphical Menu Tree

Main LCD Menu

[Alerts Menu] >
[DMX Status]
DMX Address: 512
Settings >
Sensor Info >
History >
Reset Defaults >

Alerts Menu
This menu only displays when there is an active alert on the unit.

Multiple Alerts

GEL ALERT >
FAN ALERT >

Reset all Alerts? No/Yes

Single Alert

GEL ALERT
GELSTRING OUT OF POSITION - UNIT SHUT DOWN

Reset this Alert? No/Yes

DMX Status
Displays status of incoming DMX signal. i.e. "No DMX Data" *or* "DMX Signal OK"

DMX Address
Displays current DMX Address that can be selected and modified, using unit buttons.

Note: The unit will remember its DMX Address when unplugged.

Settings

DMX Addresses >
Fan Speed >
Gel Move Speed >
Gel DMX Mode >

DMX Addresses

Scroller Address 1
Fan Speed Addr 2
Time/Dest Addr 3

Note: The unit only supports one secondary address at a time. You can have Fan Speed on a remote channel or Time To Destination (Time/Dest) on a remote channel but not both remotely controlled at the same time.

Fan Speed

FAN SPEED high

Fan Speed Options:
High - default
Low
Remote - control remotely via assigned DMX channel

Gel Move Speed

GEL MOVE SPEED high
TTD info >

Gel Move Speed Options:
High - default
Low
Time/Dest - control remotely via assigned

TTD info

Time/Dest Addr 3
Information >

Gel DMX Mode

GEL MODE index

Gel DMX Mode:
Index – 1 address, preprogrammed color mixs
Mix – 2 address, mix color

Information
*Chart of information regarding **time to destination** remote settings. No changes can be made from this screen.*

TIME TO DEST INFO ONLY	95-100%: Hi
	90-94%: Low
	85-89%: 80 sec
	80-84%: 70 sec
	75-79%: 60 sec
	70-74%: 50 sec
	65-69%: 40 sec
	60-64%: 35 sec
	55-59%: 30 sec
	50-54%: 25 sec
	45-49%: 20 sec
	40-44%: 15 sec
	35-39%: 10 sec
	30-34%: 9 sec
	25-29%: 8 sec
	20-24%: 7 sec
	15-19%: 6 sec
	10-14%: 5 sec
	5-9%: 4 sec
	0-4%: ASAP

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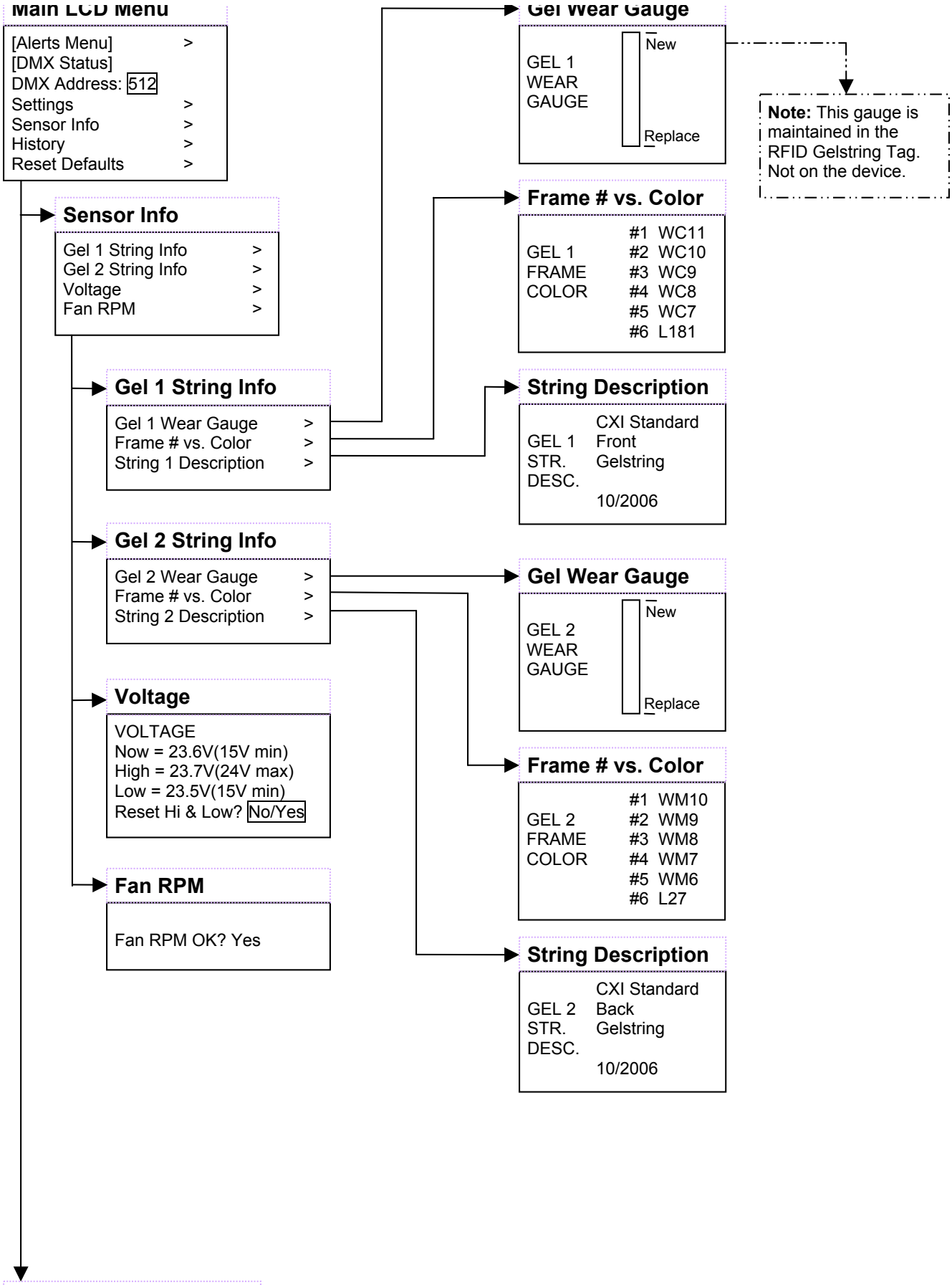

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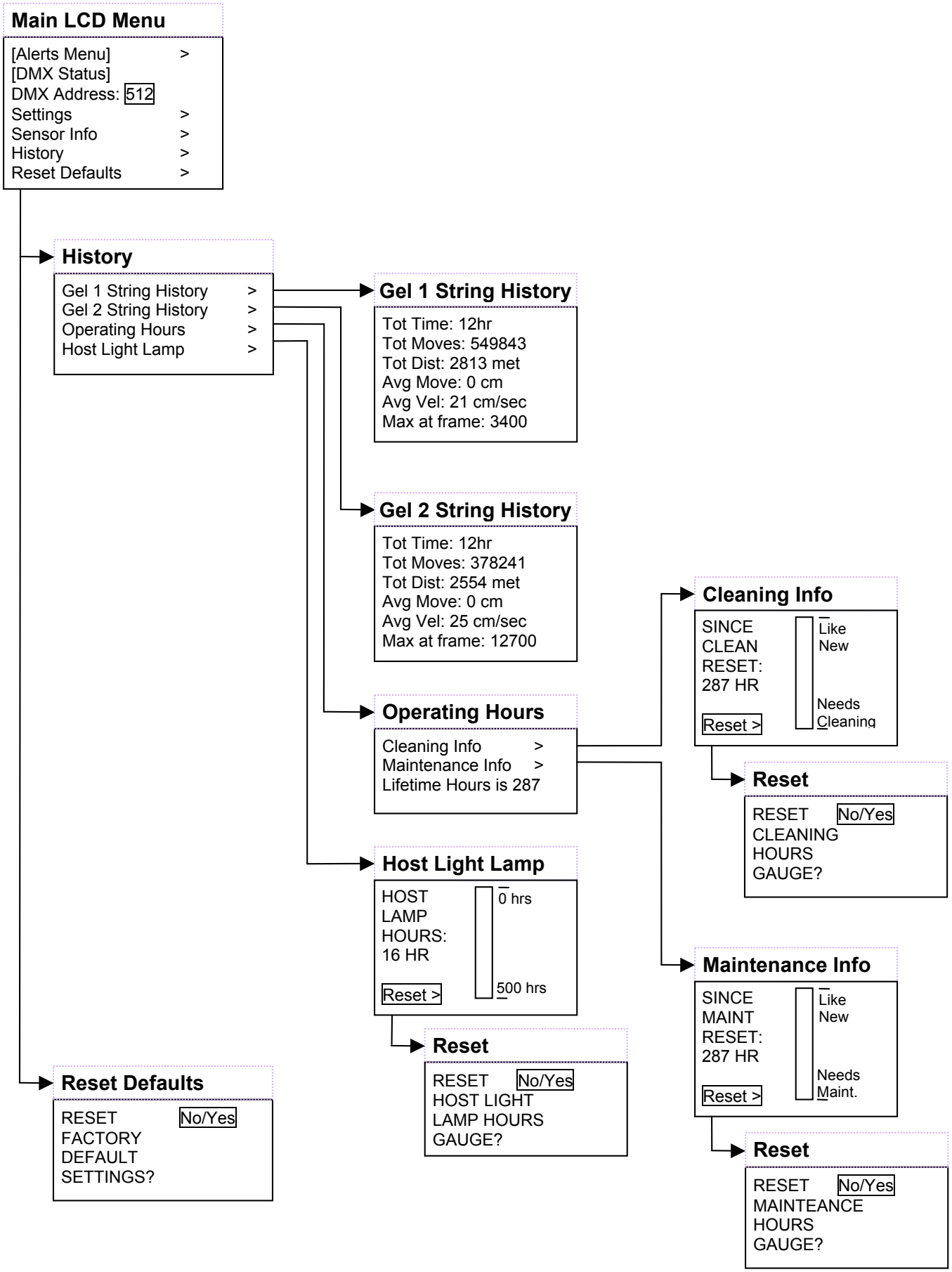

Main LCD Menu
[Alerts Menu] >
[DMX Status]
DMX Address: 512
Settings >
Sensor Info >
History >
Reset Defaults >
History
Gel 1 String History >
Gel 2 String History >
Operating Hours >
Host Light Lamp >
Gel 1 String History
Tot Time: 12hr
Tot Moves: 549843
Tot Dist: 2813 met
Avg Move: 0 cm
Avg Vel: 21 cm/sec
Max at frame: 3400
Gel 2 String History
Tot Time: 12hr
Tot Moves: 378241
Tot Dist: 2554 met
Avg Move: 0 cm
Avg Vel: 25 cm/sec
Max at frame: 12700
Operating Hours
Cleaning Info >
Maintenance Info >
Lifetime Hours is 287
Cleaning Info
SINCE CLEAN RESET: 287 HR
Reset >
Like New
Needs Cleaning
Reset
RESET CLEANING HOURS GAUGE?
No/Yes
Host Light Lamp
HOST LAMP HOURS: 16 HR
Reset >
0 hrs
500 hrs
Reset
RESET HOST LIGHT LAMP HOURS GAUGE?
No/Yes
Maintenance Info
SINCE MAINT RESET: 287 HR
Reset >
Like New
Needs Maint.
Reset
RESET MAINTEANCE HOURS GAUGE?
No/Yes
Reset Defaults
RESET FACTORY DEFAULT SETTINGS?
No/Yes

MENU DETAILS

1. Use the ▲ and ▼ buttons to scroll through selections on the display.
2. Press **SELECT** to activate that selection or progress to the next level of displays.

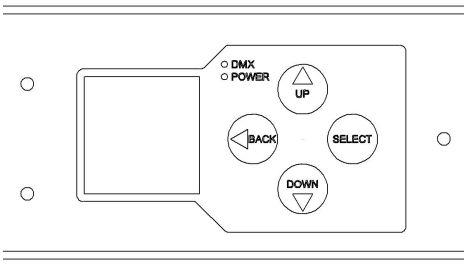


Figure 5

The ▲ and ▼ buttons are also used to navigate to further levels within the display. For example, to select “Scroller Address”:

1. Use the ▲ and ▼ buttons to move to the selection box to “Settings.”
2. Press **SELECT** to select “Settings.”
3. Use the ▲ and ▼ buttons to move to the selection box to “DMX Addresses.”
4. Press **SELECT** to select “DMX Addresses.”
5. Use the ▲ and ▼ buttons to move to the selection box to “Scroller Address.”
6. Press **SELECT** to select “Scroller Address.”

Alerts / Error Messages

The following is an explanation of alerts and error messages that are displayed locally on the color changer.

To read alert messages:

1. When “SENSOR ALERT” is displayed, press **SELECT.**
2. As an example: “VOLTAGE ALERT” indicates a voltage problem.
3. Press **SELECT** to access more information on the Voltage Alert.
4. For example: “WARNING – VOLTAGE DROPPED BELOW 15V”

VOLTAGE ALERTS

- “WARNING – VOLTAGE DROPPED BELOW 15V”

  Operating voltage has dropped below the minimum operating requirement of 15 volts. The cable between the CXI IT and the PS Power Supply may be too long.

- "VOLTAGE DROPPED
  BELOW 13V UNIT
  SHUTDOWN"
  Unit has automatically shut down because operating voltage has dropped below 13 volts for more than one second. The voltage typically drops this low if the cable is too long — the head-feet limit has been exceeded.

GEL ALERTS

1. "GELSTRING OUT
   OF POSITION — UNIT
   SHUTDOWN"
   Scroller motor automatically shuts down if gelstring is not in its programmed frame position or a roller is stuck.

2. "GELSTRING DID
   NOT INIT PROPERLY"
   Gelstring did not initialize properly. Please check that gelstring is properly installed.

3. "GELSTRING IS
   BROKEN —
   UNIT SHUTDOWN"
   Scroller motor automatically shuts down if gelstring has broken or come loose from a roller. Gelstring needs to be replaced or reinstalled.

MOTOR ALERT

1. "MOTOR IS
   OPERATING AT A HI
   CURRENT LEVEL"
   High current level at the scroller motor may indicate an ususually high level of friction at the motor. Please check scroller motor for possible maintenance or replacement.

FAN ALERT

1. "FAN IS OFF WHILE
   THE LAMP IS ON"
   The color changer may overheat or premature fading of the gelstring colors may occur when the scroller fan is off while the fixture lamp is on.

2. "FAN IS NOT
   OPERATING
   PROPERLY"
   Check fan for possible maintenance.

RFID ALERTS

1. "RFID TAG —
   COMMUNICATION FAILURE"
   A. Communication could not be established with the RFID tag.
   B. Press **SELECT** for more detailed information:

      i. "COULD NOT WAKE
      THE RFID TAG"
      RFID wake command did not finish.

      ii. "COULD NOT READ
      THE RFID TAG"
      Coloram IT had a communication failure when trying to read the RFID tag.

      iii. "COULD NOT WRITE
      THE RFID TAG"
      Coloram IT had a communication failure when trying to write to the RFID tag.

RESET ALERT

Clears existing alert from display screen when you press **SELECT**, unless problem hasn't been resolved and still exists.

MULTIPLE ALERTS

1. Press **SELECT** to read the first alert.
2. Press **SELECT** to read the details of the first alert.
3. Press **BACK** to view the second alert.
4. Press **SELECT** to view details of the second alert.
5. Press **BACK** to check if there any additional alerts, repeat Steps 4 and 5 until all alerts have been read.
6. Once all alerts have been read, use the d key to move the selection box to the "RESET ALL ALERTS" command.
7. Press **SELECT** to clear all alerts, except for those that currently exist as problems.

DMX Address

1. Use the ▲ and ▼ buttons to select the desired DMX address.
2. Press **SELECT** to activate the displayed DMX address.

Settings

DMX ADDRESSES

Scroller Addr (Scroller Address)

A. Use the ▲ and ▼ buttons to select the desired DMX address.
B. Press **SELECT** to activate the desired DMX address.

Fan Speed Addr (Fan Speed Address)

A. Selecting a DMX address for Fan Speed Address also automatically sets Fan Speed to "REMOTE" (see "Fan Speed" below).
B. Use the ▲ and ▼ buttons to select the desired DMX address.
C. Press **SELECT** to activate the desired DMX address.

Time/Dest Addr (Time to Destination Address)

If this function is enabled, this feature controls the time it takes to arrive at the destination gelstring position after the new destination command is sent.

A. Use the ▲ and ▼ buttons to select the desired DMX address.
B. Press **SELECT** to activate the desired DMX address.

FAN SPEED

1. Use the ▲ and ▼ buttons to select High (normal setting), Low or Remote.
2. Press **SELECT** to activate the desired setting.
   A. REMOTE assigns Fan Speed control to the lighting console where:
      51% to 100% = Fan at High (normal) setting
      0% to 50% (except 8%) = Fan at Low setting
      8% = Off

GEL MOVE SPEED

1. Use the ▲ and ▼ buttons to select High, Low or Time/Dest (Time to Destination).
2. Press **SELECT** to activate the desired setting.

TTD Info (Time to Destination information)

A. Gel Time to Destination DMX Address — use the ▲ and ▼ buttons to select the desired DMX address.
   i. If this function is enabled, this feature controls the time it takes to arrive at the destination gelstring position after the new destination command is sent.

   ii. The DMX address for this feature can also be set at the alternate display "DMX Address: DMX Addresses: Time/Dest Addr".

   iii. For quietest gelstring movement, select the longest time possible.

iv. Information Only
Displays DMX levels to be used at the lighting console to program specific timings using Gel Time to Destination.

CXI IT Gelstring Time Table

DMX Level	Time to Destination
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

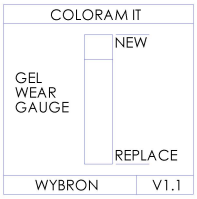
MODES

1. Use the ▲ and ▼ buttons to select Mix or Index mode.
2. Press **SELECT** to activate the desired setting.

Sensor Info

GELSTRING INFO

Gel Wear Gauge
Press **SELECT** to display the gauge that indicates how gelstring currently rates between “New” and “Replace.”



Frame # vs. Color
Lists each frame number and associated gel color. Use the ▲ and ▼ buttons to scroll through list. For example:

Frame 3	Mag 8
Frame 4	Mag 7
Frame 5	Mag 6
Frame 6	Mag 5

String Description
Press **SELECT** to display the gelstring description created by the user when the gelstring was ordered. The order information is also imbedded on the gelstring RFID tag:

ABC Co.
Order 53968
Woman in Black
22 Jan. 2005

GELSTRING INTACT?

Press **SELECT** to display answer to this question (Yes or No).

VOLTAGE

1. Displays present voltage, highest and lowest voltages measured, along with normal minimum and maximum acceptable voltages.

   Reset Hi & Low:
   A. Use the ▲ and ▼ buttons to select Yes.
   B. Press **SELECT** to activate Reset Hi & Low.

SCROLLER CURRENT

1. Displays present current and highest and lowest current measured, along with normal minimum and maximum acceptable current.
   A. The amount of current used by a scroller is a measure of scroller friction and an indicator of the general health of the unit.
   B. An increase in the amount of current needed for a scroller to operate may signal that is motor is going bad.

Reset Hi & Low:

A. Use the ▲ and ▼ buttons to select Yes.
B. Press **SELECT** to activate Reset Hi & Low.

PASS THRU CURRENT

1. Displays present pass through current, highest and lowest current measured, along with normal minimum and maximum acceptable pass through current.
   A. Used in automatically sequencing through RDM enabled units on the lighting rig during Infogate setup procedures.

Reset Hi & Low:

A. Use the ▲ and ▼ buttons to select Yes.
B. Press **SELECT** to activate Reset Hi & Low.

FAN RPM

Press **SELECT** to display answer to the question “IS FAN RPM OK?” (Yes or No).

Self Test (Demo)

MOVE / STOP

1. Use the ▲ and ▼ buttons to select “Move” or “Stop” gelstring commands.
2. Press **SELECT** to activate selected command.
3. Present current and voltage information is also displayed, along with maximum acceptable current and minimum acceptable voltage.

History

GELSTRING HISTORY

1. Use the ▲ and ▼ buttons to scroll through the data.

   All gelstring history reflects lifetime use of that gelstring, whether the gelstring has been moved from one scroller to another or remained with the same scroller throughout its lifetime.

   Total Time (in hours)

   The total number of hours that the gelstring has been in use over its entire lifetime.

Total Moves

The total number of times that the gelstring has scrolled from one gel frame to another.

Total Distance (in meters)

The total distance that the gelstring has scrolled.

Average Move (in centimeters)

The average distance that the gelstring moves per command.

Average Velocity (in centimeters per second)

The average velocity at which the gelstring moves.

Max at Frame:

The frame count is the number of times that each frame of the gelstring has been in the aperture of the Coloram IT. This information is stored in the Infotrace system and the RFID tag on the gelstring.

The "Max at Frame" number is the largest number of all the frame counts.

Example:

Frame 1	15 times
Frame 2	11 times
Frame 3	37 times

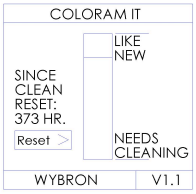
The Max at Frame number displayed is 37.

OPERATING HOURS

Cleaning Info

A. Lifetime operating hours is shown at the bottom of the first display, which is the total number of hours the color changer has been in use over its lifetime. This counter is never reset.

B. Press **SELECT** to display the gauge that indicates how the color changer currently rates between "Like New" and "Needs Cleaning."



Cleaning means cleaning dust out of the vent slots, off the printed circuit board, off the internal components and cleaning the inside surfaces of the tag sensor.

C. The display also shows the number of hours since the last cleaning of the color changer. Reset the Hours function after each cleaning:

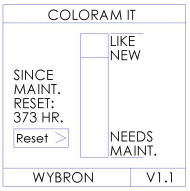
Reset Hours

i. Press **SELECT** to select the Reset Hours function.
ii. Use the ▲ and ▼ buttons to select Yes on the "Reset Cleaning Hours Gauge?"
iii. Press **SELECT** to activate Reset Cleaning Hours Gauge.

Maintenance Info

A. Lifetime operating hours is shown at the bottom of the first display, which is the total number of hours the color changer has been in use over its lifetime. This counter is never reset.

B. Press **SELECT** to display the gauge that indicates how the color changer rates between "Like New" and "Needs Maintenance."



Maintenance means replacing a failed part on the color changer.

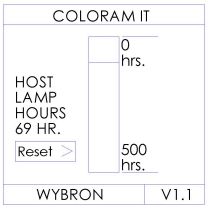
C. The display also shows the number of hours since the last maintenance on the color changer. Reset the Hours function after each maintenance cycle:

Reset Hours

i. Press **SELECT** to select the Reset Hours function.
ii. Use the ▲ and ▼ buttons to select Yes on the "Reset Maintenance Hours Gauge?"
iii. Press **SELECT** to activate Reset Maintenance Hours Gauge.

Host Light Lamp

A. Press **SELECT** to display the gauge that indicates the number of hours that the lighting fixture lamp has been on since its lamp was installed. Reset the Hours function after each relamping.



Reset Hours

i. Press **SELECT** to select the Reset function.
ii. Use the ▲ and ▼ buttons to select Yes on the “Reset Host Light Lamp Hours Gauge?”
iii. Press **SELECT** to activate Reset Host Light Lamp Hours Gauge.

Reset Defaults

1. Press **SELECT** to select “Reset Defaults.”
2. Use the ▲ and ▼ buttons to select Yes to Reset Defaults.
3. Press **SELECT** to activate Reset Defaults:
   Scroller address is 1
   Fan address is 2
   Time to Destination address is 3
   Fan speed is High
   Gel speed is High

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 the

- **Model 84560, 4” CXI IT color changer is 1500 Head-Feet.**
- **Model 87200, 7.5” CXI IT color changer is 1500 Head-Feet.**
- **Model 812210, 12” CXI IT color changer is 500 Head-Feet.**

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

Head-Feet Example

There are three CXI IT color changers connected to a power supply. The Wybron power/data cable between the power supply and the first CXI IT is 100 feet long. The cables between each of the other two CXI ITs is 20 feet long.

The amount of cable from the power supply to:

1st CXI IT	100 ft
2nd CXI IT	120 ft
3rd CXI IT	140 ft
Total:	360 "head-feet"

Loading a Gelstring

The CXI IT color changer contains two gelstrings, each with 23 frames. The front gelstring is the one furthest from the light fixture and mounting plate.

The CXI IT gelstring installation is performed with no power to the color changer.

Note: The CXI IT relies on the gelstring being taped securely to the rollers. Be sure the roller is clean, and use good quality gaffers tape. ***Do not use duct tape or masking tape.*** *The tape length should be 2/3 of the roller length. Apply the tape "lengthwise" on the roller.*

1. Put the color changer on table, mounting plate down with the four pushbuttons toward you. Remove the front cover.
2. The back gelstring is yellow-magenta.
   a. Tape the yellow end of the gelstring to the lower left roller, then roll the gelstring onto the lower left roller.
   b. Holding the gelstring, wind the lower right roller six turns and tape on the gelstring.
3. The front gelstring is magenta-cyan.
   a. Tape the magenta end of the gelstring to the upper left roller, then roll the gelstring onto the upper left roller.
   b. Holding the gelstring, wind the upper right roller six turns and tape on the gelstring.
4. Replace the front cover.

Caution: Operating the CXI IT 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. CXI IT gelstrings may be ordered online from ColorExpress IT at www.wybron.com.

Power Supply Capacity

Number of units per Power Supply

Product	Model	Max Head-Feet	PS-150	PS-300	PS-600
CXI IT 4”/7.5”	87200 816120	1500	6	12	24
CXI IT 12”	812210	500	4	9	18
CXI IT Lg Fmt	81605	750	2	5	9

Non-RDM Equipment and Infotrace

A lighting rig can use any combination non-RDM along with Wybron’s IT equipment. The non-IT equipment will work the old-fashioned way (hand addressing, no status reporting or other features). The RDM protocol allows configuration, status monitoring and management of RDM devices in such a way that does not disturb the normal operation of the DMX devices that do not recognize the RDM protocol.

Coloram IT and Standard (non-IT) Environments

The Coloram IT family of products (Coloram IT, CXI IT, Eclipse IT and Eclipse II IT, which all must be connected to PS Power Supplies) will work in any standard environment that does not use Infogate.

Specifications

End to end speed: 3 seconds
Fan Speed: High, Low, Remote
Fuse: 3 Amp Slo Blo for 4” and 7.5” models, 5 amp Slo Blo for 12” model
Gelstring: Qty 2, 23 frames each
LED Indicators:
Red: Power
Green: DMX signal
Status Display: Backlit display
Power supply compatibility:
PS 150 Power Supply, 150 watts
PS 300 Power Supply, 300 watts
PS 600 Power Supply, 600 watts
Signal termination: None required
Weight:
87200 - 7.5-inch CXI IT Color Changer – 6.52 lbs./2.95 kg
Dimensions:
87200 - 7.5-inch CXI IT Color Changer:
13”/330.2mm wide x 11.84”/301mm high x 4.58”/116mm deep

Parts List

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

CXI IT mounting and installation accessories

704-01-03P	7.5"/190.5mm mounting plate for 7.5-inch CXI IT
711-01-03P	10"/254mm mounting plate for 7.5-inch Color Changer
8711-03-01	Universal mounting plate for 7.5-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
715-01-03P	PS 150-300-600 Power Supply hanger bracket
SCRWC252075	Wing screw for Power Supply hanger bracket to pipe
SCRSC2520037	Socket cap screw for hanger bracket to Power Supply

Power/data 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.