

Instruction Manual
For
eMotions Lighting[™]
Pre-Programmed
5 Amp Controller

Model: EML1205

Simons Controls, LLC
Simpsonville, SC

www.emotionslighting.com
864-404-1828

WARNING: DO NOT PUT THIS PRODUCT INSIDE A TREE.

This product produces heat while in use. Do not cover this product with rug, tree skirt, etc.

WARNING: To reduce the risk of electric shock – use only indoors and in dry locations. Risk of electric shock.

WARNING: This product should not be used with aquariums, near water or any source of moisture.

WARNING: This product is for decorative purposes only. Not approved for directing traffic. Not approved by NHTSA, Federal DOT or any state DOT.

Product Application:

This product is designed to control LED and incandescent lights. Other applications may not work and are not covered under warranty.

Primary lighting applications are to control Christmas Tree Lights, Holiday Lights and Traffic Lights (Decorative Use Only).

Items you will need:

- Extension cords (4-6 cords long enough to connect the top of the tree to the device on the floor)
- Twist ties to fasten extension cords to inside of tree (Optional)
- Light sets (LED or Incandescent)
- Christmas Tree or Traffic Light frame

Pattern Descriptions

Type	Pattern #	Description	Type	Pattern #	Description	
Light Patterns	00	All On	Light Patterns	44	Ho Ho Ho Merry Xmas (On-Off)	
	01	Classic Dig (6)		45	Ho Ho Ho Merry Xmas (Brt-Dim)	
	02	Classic (6)		46	Drag Lights	
	03	Shimmer		47	Traffic Light	
	04	Twinkle		48	Traffic Light Delayed	
	05	Cascade Dig (6)		49	Traffic Light Digital	
	06	Cascade (6)		50	Traffic Light Delayed Digital	
	07	Waterfall		51	User Defined	
	08	Snowfall		User Defined Settings	52	Output 1 Dwell
	09	Binary Clock Dig (6)			53	Output 2 Dwell
	10	Binary Clock (6)	54		Output 3 Dwell	
	11	Pyramid Dig (6)	55		Output 4 Dwell	
	12	Pyramid (6)	56		Output 5 Dwell	
	13	Avalanche (6)	57		Output 6 Dwell	
	14	Progression (6)	58		Output 1 Level 1	
	15	Candle Flicker	59		Output 1 Time 1	
	16	Wind Storm	60		Output 1 Level 2	
	17	Dazzle	61		Output 1 Time 2	
	18	Up/Dn Steps Dig (6)	62		Output 2 Level 1	
	19	Up/Dn Steps (6)	63		Output 2 Time 1	
	20	Classic Dig (5)	64		Output 2 Level 2	
	21	Classic (5)	65		Output 2 Time 2	
	22	Cascade Dig (5)	66		Output 3 Level 1	
	23	Cascade (5)	67		Output 3 Time 1	
	24	Binary Clock Dig (5)	68		Output 3 Level 2	
	25	Binary Clock (5)	69		Output 3 Time 2	
	26	Pyramid Dig (5)	70		Output 4 Level 1	
	27	Pyramid (5)	71		Output 4 Time 1	
	28	Avalanche (5)	72		Output 4 Level 2	
	29	Progression (5)	73	Output 4 Time 2		
	30	Up/Dn Steps Dig (5)	74	Output 5 Level 1		
	31	Up/Dn Steps (5)	75	Output 5 Time 1		
	32	Classic Dig (4)	76	Output 5 Level 2		
	33	Classic (4)	77	Output 5 Time 2		
	34	Cascade Dig (4)	78	Output 6 Level 1		
	35	Cascade (4)	79	Output 6 Time 1		
	36	Binary Clock Dig (4)	80	Output 6 Level 2		
	37	Binary Clock (4)	81	Output 6 Time 2		
	38	Pyramid Dig (4)	Medley Modes	97	4-Output Medley (4)	
	39	Pyramid (4)		98	5-Output Medley (5)	
	40	Avalanche (4)		99	6-Output Medley (6)	
	41	Progression (4)				
	42	Up/Dn Steps Dig (4)				
43	Up/Dn Steps (4)					

Pattern descriptions with numbers in parentheses are designed to operate with that number of outputs in use. Patterns 44 and 45 use outputs 1-5 (also works with 1-4 only).

Medley Playlists

97 - 4 output Medley	
32	Classic Dig (4)
7	Waterfall
34	Cascade Dig (4)
4	Twinkle
38	Pyramid Dig (4)
36	Binary Clock Dig (4)
8	Snowfall
40	Avalanche (4)
15	Candle Flicker
41	Progression (4)
16	Wind Storm
42	Up/Dn Steps Dig (4)
33	Classic (4)
17	Dazzle
35	Cascade (4)
37	Binary Clock (4)
39	Pyramid (4)
3	Shimmer
43	Up/Dn Steps (4)

98 - 5 output Medley	
20	Classic Dig (5)
7	Waterfall
22	Cascade Dig (5)
4	Twinkle
26	Pyramid Dig (5)
24	Binary Clock Dig (5)
8	Snowfall
28	Avalanche (5)
15	Candle Flicker
29	Progression (5)
16	Wind Storm
30	Up/Dn Steps Dig (5)
21	Classic (5)
17	Dazzle
23	Cascade (5)
25	Binary Clock (5)
27	Pyramid (5)
3	Shimmer
31	Up/Dn Steps (5)

99 - 6 output Medley	
1	Classic Dig (6)
7	Waterfall
5	Cascade Dig (6)
4	Twinkle
11	Pyramid Dig (6)
9	Binary Clock Dig (6)
8	Snowfall
13	Avalanche (6)
15	Candle Flicker
14	Progression (6)
16	Wind Storm
18	Up/Dn Steps Dig (6)
2	Classic (6)
17	Dazzle
6	Cascade (6)
10	Binary Clock (6)
12	Pyramid (6)
3	Shimmer
19	Up/Dn Steps (6)

Instructions

A. Christmas Tree Installation

1. Set up your Christmas tree with the desired lights.
2. Place the device on the floor near the tree and away from moisture and combustibles.
3. Plug the device into a power outlet (120VAC 60Hz.)
4. Attach an extension cord to the top set of lights of the tree, which may be the star or angel in your application.
5. Connect the other end of the extension cord to Output #1 of the device.
(Output #1 is furthest from the controls.)
6. Repeat steps 4 and 5 for each group of lights working down the tree from highest to lowest. Connect cords to the device working towards the controls.

Tip: Select Pattern '00' - All On to test your lights and cords as they are connected.

7. Multiple light strings can be connected to a single outlet. 4 to 6 cords and outputs are recommended for a single tree.

Tip: Do not exceed 3 amps (360 watts) on a single output or a total of 5 amps (600 watts) on all outputs.

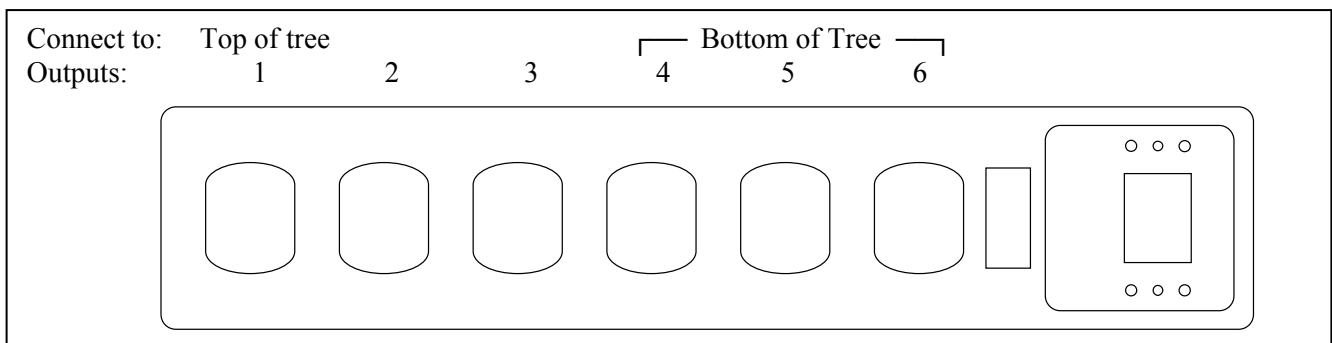
8. Once all the lights are connected to the outputs of the device, select one of the following patterns to test the order:

For 6 outputs use pattern '02' - Classic (6)

For 5 outputs use pattern '21' - Classic (5)

For 4 outputs use pattern '33' - Classic (4)

Lights should start out dim and get brighter starting from the bottom and going toward the top.



Instructions

B. Traffic Light Installation (Decorative Use Only)

1. Place device close to traffic lights. Unit should not be covered. Unit can be mounted in an enclosure that is heat tolerant and vented.
2. Keep away from combustibles. For indoor use only.
3. Plug the device into a power outlet (120VAC 60Hz.)
4. Plug in the traffic light as labeled below:

Tip: Select Pattern '00' - All On to test your lights and cords as they are connected.

5. You can connect multiple signals to the same set of outputs for signals that face 4 directions.

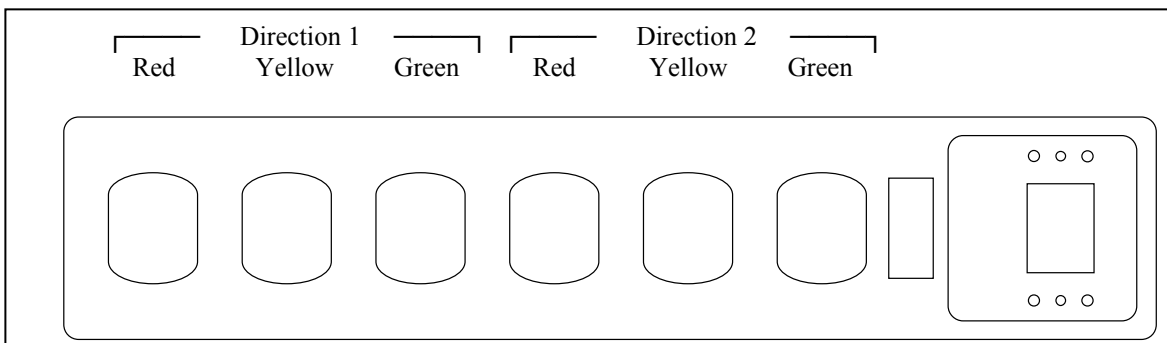
Tip: Do not exceed 3 amps (360 watts) on a single output or a total of 5 amps (600 watts) on all outputs.

6. Once all the lights are connected to the outputs of the device, select one of the following patterns to test the order:

- 47 - Traffic Light
- 48 - Traffic Light Delayed
- 49 - Traffic Light Digital
- 50 - Traffic Light Delayed Digital

Direction 1 will start on Red and move to Green.

Direction 2 will start on Yellow and move to Red.



Instructions

C. Controls

1. Power Switch / Circuit Breaker

Directs power to controls and outputs. Loads over 5 amps can trip this breaker and shut down the device.

2. Display

- Display is active when device is first powered up or after button is pressed.
- Display shows pattern number by default. Pressing a speed button will briefly display the speed number before defaulting to pattern number.
- Approximately 1 minute after the last button is pressed, the display times out (turns itself off) and the pattern and speed settings are saved.

3. Software Version

Holding both pattern buttons down will display the software version.

4. Pattern buttons

- Pattern buttons are used to select the pattern number. A description of the patterns is on page 2.
- Pressing a pattern button will turn the display on. Continuing to press will increase or decrease the pattern number.
- Every time the pattern is changed the previous speed setting is saved.

5. Speed buttons

- Pressing a speed button will briefly display the speed number before reverting to pattern number. Continuing to press will increase or decrease the speed number.
- A 'Hi' or 'Lo' will be displayed if the minimum or maximum speed number is reached.
- Each pattern has its own stored speed setting. This is to say changing the speed of a given pattern does not change the speed of the other patterns.
- The speed buttons have a different function for User Defined pattern numbers 52 - 81. (See Advanced User Defined Programming starting on page 7.

6. Medley Modes (Patterns 97-99)

- Medley Mode automatically selects a different pattern to display every 7 minutes according to the order on page 3.
- When Medley Mode selects a pattern, it also selects the saved speed for that pattern.
- The speed of each pattern can be changed while Medley has the pattern selected by pressing the speed buttons.

Instructions

C. Controls (cont'd)

7. Saving Settings

- The device will automatically retrieve saved settings upon power up and changing patterns.
- Speeds and patterns are saved by the following rules:
 1. One minute after the last button is pressed.
 - At the same time the setting is saved (one minute idle), the display turns off.
 2. When a different pattern is selected.
 - The current speed is saved for the current pattern when one of the pattern buttons is pressed to select a different pattern.
 3. Medley Mode (Patterns 97-99)
 - Medley Mode automatically selects patterns according to the list on page 3. The speed of each pattern can be changed while Medley has the pattern selected.
 - Rules 1 and 2 apply to saving speeds in Medley Modes.

D. User Defined Pattern #51 – (For Advanced Users)

Pattern numbers 00 – 50 are pre-defined by the manufacturer and cannot be changed. Pattern 51 can be customized by the user to create simple patterns. This is done by configuring the User Defined Settings (Patterns 52-81).

Patterns 52-81 are **only** available when the speed of Pattern 00 is set to 39 (it's maximum or "Hi"). Setting Pattern 00 to another speed makes Patterns 52-81 unavailable in normal operation. This helps prevent your customized pattern from being accidentally changed.

Each user defined Output has a:

Dwell - Time for the output to remain off when Pattern 51 is initiated

Level 1 - Power Level for the Output after the Dwell is complete

Time 1 - Time for Level 1 to remain on (minimum is 1)

Level 2 - Power Level for the Output after Time 1 at Level 1 is complete

Time 2 - Time for Level 2 to remain on (minimum is 1)

When Time 2 at Level 2 is complete, Level 1 for Time 1 is re-initiated. Level 1 and Level 2 continue to alternate.

Hint: If you want an output to be a single power level, make both Level 1 and Level 2 the same value.

Instructions

D. User Defined Pattern #51 – (For Advanced Users) (con't)

User Defined Settings configured with Sample Speed Settings (Traffic Signal):

Type	Pattern #	Description	Sample Speed Setting
User Defined Settings	52	Output 1 Dwell	06
	53	Output 2 Dwell	04
	54	Output 3 Dwell	00
	55	Output 4 Dwell	00
	56	Output 5 Dwell	10
	57	Output 6 Dwell	06
	58	Output 1 Level 1	39
	59	Output 1 Time 1	06
	60	Output 1 Level 2	00
	61	Output 1 Time 2	06
	62	Output 2 Level 1	39
	63	Output 2 Time 1	02
	64	Output 2 Level 2	00
	65	Output 2 Time 2	10
	66	Output 3 Level 1	39
	67	Output 3 Time 1	04
	68	Output 3 Level 2	00
	69	Output 3 Time 2	08
	70	Output 4 Level 1	39
	71	Output 4 Time 1	06
	72	Output 4 Level 2	00
	73	Output 4 Time 2	06
	74	Output 5 Level 1	39
	75	Output 5 Time 1	02
	76	Output 5 Level 2	00
	77	Output 5 Time 2	10
	78	Output 6 Level 1	39
	79	Output 6 Time 1	04
	80	Output 6 Level 2	00
	81	Output 6 Time 2	08

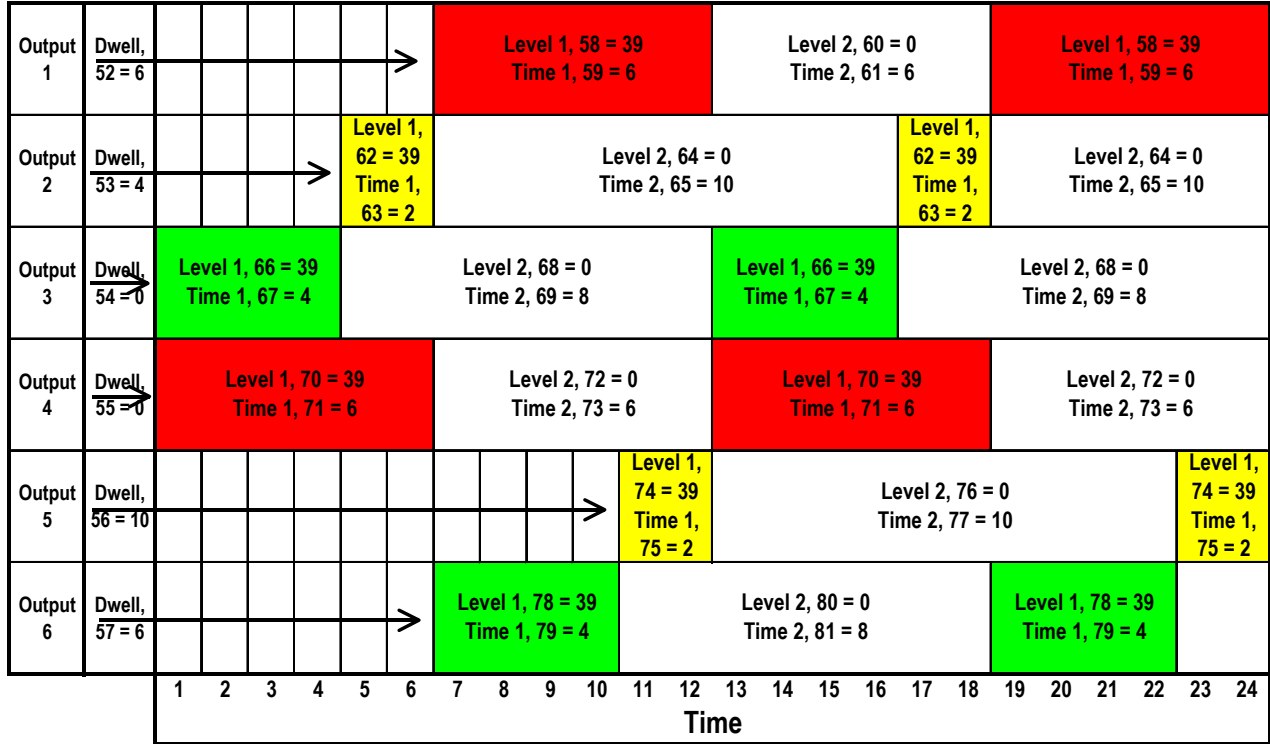
These configuration settings are set by first selecting the pattern number (52-81) and then changing the speed for each pattern number (52-81).

Tip: The output gives real-time feedback while changing Level settings.

Instructions

D. User Defined Pattern #51 – (For Advanced Users) (con't)

Traffic Signal created by the Sample Speed Settings on page 8:



Power as a percentage of Maximum (approx.) for Pattern #51

Level 1, Level 2 Settings	Power %	Level 1, Level 2 Settings	Power %	Level 1, Level 2 Settings	Power %	Level 1, Level 2 Settings	Power %
00	0	10	44	20	65	30	83
01	26	11	46	21	67	31	84
02	28	12	48	22	69	32	86
03	29	13	50	23	71	33	87
04	31	14	52	24	73	34	89
05	33	15	55	25	75	35	90
06	35	16	57	26	77	36	91
07	37	17	59	27	78	37	92
08	40	18	61	28	80	38	93
09	42	19	63	29	81	39	94

Instructions

D. User Defined Pattern #51– (For Advanced Users) (con’t)

Time in seconds (approx.) for a Time setting and Pattern #51 Speed Setting

* Time 1 and Time 2 have a minimum value of 1. Dwells can be set to zero.

Dwell, Time1, Time2 Settings	Speed Setting for Pattern #51																			
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
00*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01	6.3	5.7	5.3	4.7	4.2	3.9	3.6	3.2	2.9	2.7	2.4	2.2	2.0	1.8	1.7	1.5	1.4	1.3	1.1	1.1
02	12.6	11.5	10.5	9.5	8.4	7.9	7.2	6.3	5.9	5.3	4.7	4.4	3.9	3.6	3.4	2.9	2.7	2.5	2.3	2.1
03	18.9	17.2	15.8	14.2	12.6	11.8	10.8	9.5	8.8	8.0	7.1	6.6	5.9	5.4	5.0	4.4	4.1	3.8	3.4	3.2
04	25.2	22.9	21.0	18.9	16.8	15.8	14.4	12.6	11.7	10.7	9.5	8.8	7.9	7.2	6.7	5.8	5.4	5.0	4.6	4.2
05	31.5	28.7	26.3	23.7	21.0	19.7	18.0	15.8	14.6	13.3	11.8	11.0	9.9	9.0	8.4	7.3	6.8	6.3	5.7	5.3
06	37.8	34.4	31.5	28.4	25.2	23.7	21.6	18.9	17.6	16.0	14.2	13.2	11.8	10.8	10.1	8.7	8.1	7.6	6.9	6.3
07	44.2	40.1	36.8	33.1	29.4	27.6	25.2	22.1	20.5	18.7	16.6	15.5	13.8	12.6	11.8	10.2	9.5	8.8	8.0	7.4
08	50.5	45.9	42.1	37.8	33.6	31.5	28.8	25.2	23.4	21.3	18.9	17.7	15.8	14.4	13.5	11.6	10.8	10.1	9.2	8.4
09	56.8	51.6	47.3	42.6	37.8	35.5	32.4	28.4	26.4	24.0	21.3	19.9	17.7	16.2	15.1	13.1	12.2	11.4	10.3	9.5
10	63.1	57.3	52.6	47.3	42.1	39.4	36.0	31.5	29.3	26.7	23.7	22.1	19.7	18.0	16.8	14.6	13.5	12.6	11.5	10.5
11	69.4	63.1	57.8	52.0	46.3	43.4	39.6	34.7	32.2	29.4	26.0	24.3	21.7	19.8	18.5	16.0	14.9	13.9	12.6	11.6
12	75.7	68.8	63.1	56.8	50.5	47.3	43.3	37.8	35.1	32.0	28.4	26.5	23.7	21.6	20.2	17.5	16.2	15.1	13.8	12.6
13	82.0	74.5	68.3	61.5	54.7	51.3	46.9	41.0	38.1	34.7	30.8	28.7	25.6	23.4	21.9	18.9	17.6	16.4	14.9	13.7
14	88.3	80.3	73.6	66.2	58.9	55.2	50.5	44.2	41.0	37.4	33.1	30.9	27.6	25.2	23.5	20.4	18.9	17.7	16.1	14.7
15	94.6	86.0	78.8	71.0	63.1	59.1	54.1	47.3	43.9	40.0	35.5	33.1	29.6	27.0	25.2	21.8	20.3	18.9	17.2	15.8
16	101	91.7	84.1	75.7	67.3	63.1	57.7	50.5	46.9	42.7	37.8	35.3	31.5	28.8	26.9	23.3	21.6	20.2	18.3	16.8
17	107	97.5	89.4	80.4	71.5	67.0	61.3	53.6	49.8	45.4	40.2	37.5	33.5	30.6	28.6	24.7	23.0	21.4	19.5	17.9
18	114	103	94.6	85.2	75.7	71.0	64.9	56.8	52.7	48.0	42.6	39.7	35.5	32.4	30.3	26.2	24.3	22.7	20.6	18.9
19	120	109	99.9	89.9	79.9	74.9	68.5	59.9	55.6	50.7	44.9	41.9	37.5	34.2	32.0	27.7	25.7	24.0	21.8	20.0
20	126	115	105	94.6	84.1	78.8	72.1	63.1	58.6	53.4	47.3	44.2	39.4	36.0	33.6	29.1	27.0	25.2	22.9	21.0
21	132	120	110	99.3	88.3	82.8	75.7	66.2	61.5	56.0	49.7	46.4	41.4	37.8	35.3	30.6	28.4	26.5	24.1	22.1
22	139	126	116	104	92.5	86.7	79.3	69.4	64.4	58.7	52.0	48.6	43.4	39.6	37.0	32.0	29.7	27.8	25.2	23.1
23	145	132	121	109	96.7	90.7	82.9	72.5	67.4	61.4	54.4	50.8	45.3	41.5	38.7	33.5	31.1	29.0	26.4	24.2
24	151	138	126	114	101	94.6	86.5	75.7	70.3	64.0	56.8	53.0	47.3	43.3	40.4	34.9	32.4	30.3	27.5	25.2
25	158	143	131	118	105	98.6	90.1	78.8	73.2	66.7	59.1	55.2	49.3	45.1	42.1	36.4	33.8	31.5	28.7	26.3
26	164	149	137	123	109	103	93.7	82.0	76.1	69.4	61.5	57.4	51.3	46.9	43.7	37.8	35.1	32.8	29.8	27.3
27	170	155	142	128	114	106	97.3	85.2	79.1	72.1	63.9	59.6	53.2	48.7	45.4	39.3	36.5	34.1	31.0	28.4
28	177	161	147	132	118	110	101	88.3	82.0	74.7	66.2	61.8	55.2	50.5	47.1	40.8	37.8	35.3	32.1	29.4
29	183	166	152	137	122	114	105	91.5	84.9	77.4	68.6	64.0	57.2	52.3	48.8	42.2	39.2	36.6	33.3	30.5
30	189	172	158	142	126	118	108	94.6	87.9	80.1	71.0	66.2	59.1	54.1	50.5	43.7	40.5	37.8	34.4	31.5
31	196	178	163	147	130	122	112	97.8	90.8	82.7	73.3	68.4	61.1	55.9	52.1	45.1	41.9	39.1	35.6	32.6
32	202	183	168	151	135	126	115	101	93.7	85.4	75.7	70.6	63.1	57.7	53.8	46.6	43.3	40.4	36.7	33.6
33	208	189	173	156	139	130	119	104	96.6	88.1	78.1	72.9	65.0	59.5	55.5	48.0	44.6	41.6	37.8	34.7
34	214	195	179	161	143	134	123	107	99.6	90.7	80.4	75.1	67.0	61.3	57.2	49.5	46.0	42.9	39.0	35.7
35	221	201	184	166	147	138	126	110	103	93.4	82.8	77.3	69.0	63.1	58.9	50.9	47.3	44.2	40.1	36.8
36	227	206	189	170	151	142	130	114	105	96.1	85.2	79.5	71.0	64.9	60.6	52.4	48.7	45.4	41.3	37.8
37	233	212	194	175	156	146	133	117	108	98.7	87.5	81.7	72.9	66.7	62.2	53.9	50.0	46.7	42.4	38.9
38	240	218	200	180	160	150	137	120	111	101	89.9	83.9	74.9	68.5	63.9	55.3	51.4	47.9	43.6	39.9
39	246	224	205	185	164	154	141	123	114	104	92.3	86.1	76.9	70.3	65.6	56.8	52.7	49.2	44.7	41.0

Instructions

D. User Defined Pattern #51 – (For Advanced Users) (con't)

Time in seconds (approx.) for a Time setting and Pattern #51 Speed Setting

* Time 1 and Time 2 have a minimum value of 1. Dwells can be set to zero.

Dwell, Time1, Time2 Settings	Speed Setting for Pattern #51 (con't)																			
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
00*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01	0.9	0.9	0.8	0.7	0.63	0.57	0.53	0.49	0.45	0.39	0.35	0.32	0.29	0.26	0.24	0.23	0.20	0.19	0.17	0.15
02	1.9	1.7	1.6	1.4	1.3	1.1	1.1	1.0	0.9	0.8	0.7	0.63	0.57	0.53	0.49	0.45	0.39	0.37	0.33	0.30
03	2.8	2.6	2.4	2.1	1.9	1.7	1.6	1.5	1.4	1.2	1.1	0.9	0.9	0.8	0.73	0.68	0.59	0.56	0.50	0.45
04	3.8	3.4	3.2	2.8	2.5	2.3	2.1	1.9	1.8	1.6	1.4	1.3	1.1	1.1	1.0	0.9	0.8	0.74	0.66	0.60
05	4.7	4.3	3.9	3.5	3.2	2.9	2.6	2.4	2.3	2.0	1.8	1.6	1.4	1.3	1.2	1.1	1.0	0.9	0.83	0.75
06	5.7	5.2	4.7	4.2	3.8	3.4	3.2	2.9	2.7	2.4	2.1	1.9	1.7	1.6	1.5	1.4	1.2	1.1	1.0	0.90
07	6.6	6.0	5.5	4.9	4.4	4.0	3.7	3.4	3.2	2.8	2.5	2.2	2.0	1.8	1.7	1.6	1.4	1.3	1.2	1.1
08	7.6	6.9	6.3	5.6	5.0	4.6	4.2	3.9	3.6	3.2	2.8	2.5	2.3	2.1	1.9	1.8	1.6	1.5	1.3	1.2
09	8.5	7.7	7.1	6.3	5.7	5.2	4.7	4.4	4.1	3.5	3.2	2.8	2.6	2.4	2.2	2.0	1.8	1.7	1.5	1.4
10	9.5	8.6	7.9	7.0	6.3	5.7	5.3	4.9	4.5	3.9	3.5	3.2	2.9	2.6	2.4	2.3	2.0	1.9	1.7	1.5
11	10.4	9.5	8.7	7.7	6.9	6.3	5.8	5.3	5.0	4.3	3.9	3.5	3.2	2.9	2.7	2.5	2.2	2.0	1.8	1.7
12	11.4	10.3	9.5	8.4	7.6	6.9	6.3	5.8	5.4	4.7	4.2	3.8	3.4	3.2	2.9	2.7	2.4	2.2	2.0	1.8
13	12.3	11.2	10.3	9.1	8.2	7.5	6.8	6.3	5.9	5.1	4.6	4.1	3.7	3.4	3.2	2.9	2.6	2.4	2.2	2.0
14	13.2	12.0	11.0	9.8	8.8	8.0	7.4	6.8	6.3	5.5	4.9	4.4	4.0	3.7	3.4	3.2	2.8	2.6	2.3	2.1
15	14.2	12.9	11.8	10.5	9.5	8.6	7.9	7.3	6.8	5.9	5.3	4.7	4.3	3.9	3.6	3.4	3.0	2.8	2.5	2.3
16	15.1	13.8	12.6	11.2	10.1	9.2	8.4	7.8	7.2	6.3	5.6	5.0	4.6	4.2	3.9	3.6	3.2	3.0	2.7	2.4
17	16.1	14.6	13.4	11.9	10.7	9.7	8.9	8.2	7.7	6.7	6.0	5.4	4.9	4.5	4.1	3.8	3.4	3.2	2.8	2.6
18	17.0	15.5	14.2	12.6	11.4	10.3	9.5	8.7	8.1	7.1	6.3	5.7	5.2	4.7	4.4	4.1	3.5	3.3	3.0	2.7
19	18.0	16.3	15.0	13.3	12.0	10.9	10.0	9.2	8.6	7.5	6.7	6.0	5.4	5.0	4.6	4.3	3.7	3.5	3.2	2.9
20	18.9	17.2	15.8	14.0	12.6	11.5	10.5	9.7	9.0	7.9	7.0	6.3	5.7	5.3	4.9	4.5	3.9	3.7	3.3	3.0
21	19.9	18.1	16.6	14.7	13.2	12.0	11.0	10.2	9.5	8.3	7.4	6.6	6.0	5.5	5.1	4.7	4.1	3.9	3.5	3.2
22	20.8	18.9	17.3	15.4	13.9	12.6	11.6	10.7	9.9	8.7	7.7	6.9	6.3	5.8	5.3	5.0	4.3	4.1	3.7	3.3
23	21.8	19.8	18.1	16.1	14.5	13.2	12.1	11.2	10.4	9.1	8.1	7.3	6.6	6.0	5.6	5.2	4.5	4.3	3.8	3.5
24	22.7	20.6	18.9	16.8	15.1	13.8	12.6	11.6	10.8	9.5	8.4	7.6	6.9	6.3	5.8	5.4	4.7	4.5	4.0	3.6
25	23.7	21.5	19.7	17.5	15.8	14.3	13.1	12.1	11.3	9.9	8.8	7.9	7.2	6.6	6.1	5.6	4.9	4.6	4.1	3.8
26	24.6	22.4	20.5	18.2	16.4	14.9	13.7	12.6	11.7	10.3	9.1	8.2	7.5	6.8	6.3	5.9	5.1	4.8	4.3	3.9
27	25.5	23.2	21.3	18.9	17.0	15.5	14.2	13.1	12.2	10.6	9.5	8.5	7.7	7.1	6.6	6.1	5.3	5.0	4.5	4.1
28	26.5	24.1	22.1	19.6	17.7	16.1	14.7	13.6	12.6	11.0	9.8	8.8	8.0	7.4	6.8	6.3	5.5	5.2	4.6	4.2
29	27.4	24.9	22.9	20.3	18.3	16.6	15.2	14.1	13.1	11.4	10.2	9.1	8.3	7.6	7.0	6.5	5.7	5.4	4.8	4.4
30	28.4	25.8	23.7	21.0	18.9	17.2	15.8	14.6	13.5	11.8	10.5	9.5	8.6	7.9	7.3	6.8	5.9	5.6	5.0	4.5
31	29.3	26.7	24.4	21.7	19.6	17.8	16.3	15.0	14.0	12.2	10.9	9.8	8.9	8.1	7.5	7.0	6.1	5.8	5.1	4.7
32	30.3	27.5	25.2	22.4	20.2	18.3	16.8	15.5	14.4	12.6	11.2	10.1	9.2	8.4	7.8	7.2	6.3	5.9	5.3	4.8
33	31.2	28.4	26.0	23.1	20.8	18.9	17.3	16.0	14.9	13.0	11.6	10.4	9.5	8.7	8.0	7.4	6.5	6.1	5.5	5.0
34	32.2	29.2	26.8	23.8	21.4	19.5	17.9	16.5	15.3	13.4	11.9	10.7	9.7	8.9	8.2	7.7	6.7	6.3	5.6	5.1
35	33.1	30.1	27.6	24.5	22.1	20.1	18.4	17.0	15.8	13.8	12.3	11.0	10.0	9.2	8.5	7.9	6.9	6.5	5.8	5.3
36	34.1	31.0	28.4	25.2	22.7	20.6	18.9	17.5	16.2	14.2	12.6	11.4	10.3	9.5	8.7	8.1	7.1	6.7	6.0	5.4
37	35.0	31.8	29.2	25.9	23.3	21.2	19.4	18.0	16.7	14.6	13.0	11.7	10.6	9.7	9.0	8.3	7.3	6.9	6.1	5.6
38	36.0	32.7	30.0	26.6	24.0	21.8	20.0	18.4	17.1	15.0	13.3	12.0	10.9	10.0	9.2	8.6	7.5	7.0	6.3	5.7
39	36.9	33.5	30.8	27.3	24.6	22.4	20.5	18.9	17.6	15.4	13.7	12.3	11.2	10.3	9.5	8.8	7.7	7.2	6.5	5.9

Instructions

E. Troubleshooting

Problem	Cause	Remedy
Power Switch / Circuit Breaker trips.	1. Too much current.	1. Reduce the load on the outputs.
Output remains on full power.	1. Program calls for full power. 2. TRIAC overheated. 3. TRIAC damaged.	1. Try a different Pattern. 2. Reduce the load on the outputs and allow two minutes to cool. 3. Contact the manufacturer: support@emotionslighting.com
Pattern is not saved after shutdown.	1. Pattern is saved after display timeout.	1. Power down the unit after the display timesout, approximately 1 min after the last button is pressed.
Speed is not saved after shutdown.	1. Speed is saved after display timeout or pattern is changed.	1. Power down the unit after the display timesout, approximately 1 min after the last button is pressed. Or, change the pattern before shutdown.
Output does not come on when expected.	1. Poor connection. 2. Wrong Pattern.	1. Use Pattern '00' to troubleshoot lights. 2. Make sure the pattern supports the number of outputs you are trying to use.
Patterns 52-81 are not available as described in the User-Defined section.	1. These User Defined Settings are locked.	1. Unlock these settings by changing the speed of pattern 00 to 39 or "Hi".
Lights do not Dim and Brighten in the correct order.	1. Lights are not connected to the correct output.	1. Disconnect lights at the device and select program '00'. Plug in the light sets one at a time while verifying the correct light is in the correct output. See diagrams on page 4 for Christmas Tree or page 5 for Traffic Lights.

F. Warranty

To qualify for this warranty, the product must be purchased from a dealer authorized by Simons Controls, LLC. Warranty applies to first retail purchaser/owner during the first year of ownership. Warranty excludes: normal wear, damage, neglect, storage conditions, failure to follow warnings, power surge and Acts of God.

The product may be replaced or refurbished at the manufacturer's discretion.

Keep your sales receipt. Return shipping for warranty service is paid by purchaser/owner.