



MULTI SYNCHRONIZER

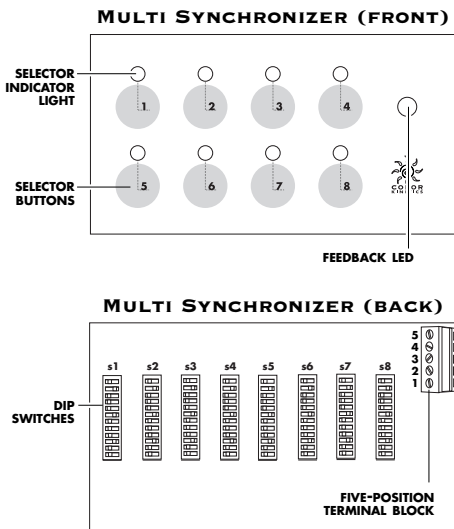
USER GUIDE

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MODEL # CON-SYN-02

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 MAN-0006 Rev. 01

Color Kinetics™ Multi Synchronizer is a digital lighting controller that can store eight lighting shows for Color Kinetics light fixtures. Multi Synchronizer is packaged in an easy to use, wall mounted assembly.



IN THE BEGINNING

Lay of the Land

The illustrations at left show the components of Multi Synchronizer.

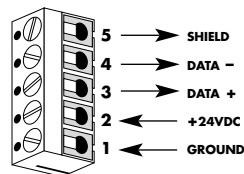
Installation

Multi Synchronizer is designed to be installed in a 3-gang electrical wall box by a professional electrical contractor. A box similar to Steel City model 3G4D is recommended.

Wiring

Connect power and data lines to the five-station screw terminal. Wiring diagrams are given below. Be sure to match the wire function to the terminal numbers as shown in Fig. 1.

Fig. 1

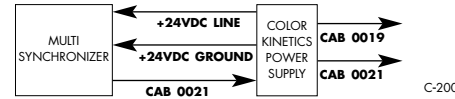


Note: Power should be turned OFF during wiring.

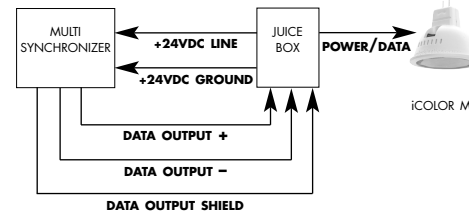
Power for Multi Synchronizer can come from one of the following sources:

- Color Kinetics power supply: C-Series, iMOPS, or cMOPS. The example below shows the wiring and cables required with iMOPS or cMOPS. Contact Color Kinetics for information about the cables listed below.

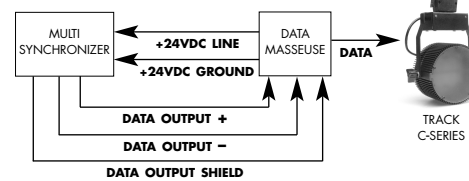
Note: The following three wiring diagrams are for both power and data.



- Juice Box: this component is required to run Multi Synchronizer with iColor™ MR, and can power Multi Synchronizer as well.



- Data Masseuse: this component is required to run Multi Synchronizer with Track C-Series, and can power Multi Synchronizer as well.



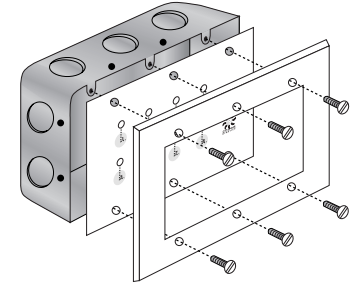
Do the Dip

Program each selector button by setting its corresponding dip switch. Before removing Multi Synchronizer from the wall box to set the dip switches, make sure that power has been disconnected from the system. There are eight banks of switches on the back side of the circuit board assembly. Each bank is labeled, and corresponds to one of the selector buttons. To select shows programmed in C-Series fixtures, refer to the user manual included with your C-Series lights. To run the new Chasing Rainbow show, refer to the Effects section of this guide.

After switches have been set, fasten Multi Synchronizer into the wall box with the six screws

included, as shown in Fig. 2. When installing Multi Synchronizer in a wall box, tighten all six screws evenly. Do not over-tighten the screws or otherwise bend the circuit board assembly, as this may damage the unit. Do not allow any part of the wall box to contact circuitry on the unit.

Fig. 2



Connect power to Multi Synchronizer. When power is applied to Multi Synchronizer it will default to show #1. The red light over the button indicates which show is currently selected.

THE WORLD ACCORDING TO COLOR KINETICS

Effects

To run the Color Kinetics pre-programmed shows, set the dip switches as described in the "Effects" section of the User Guide for your Color Kinetics lights. Multi Synchronizer switches are ON when they are moved to the left.



With Multi Synchronizer, you can see the effects of your dip switch changes in real time (i.e., as you make them). There is no need to re-power the lights after each setting change. The Feedback LED shows you which Effects and Variations are displayed on the lights.

Chasing Rainbow: A New Show

Multi Synchronizer includes a new show called Chasing Rainbow, not found in existing Color Kinetics lights. Chasing Rainbow uses a series of fixtures to produce a cascading, revolving rainbow of light. The effect is similar to each color being chased by all the other colors in the rainbow.

To select Chasing Rainbow, follow these directions:

- [1] Connect your Multi Synchronizer as described and daisy chain your lights for power and data, as required.
- [2] Assign your Color Kinetics lights unique DMX addresses by setting the dip switches on the lights as shown in the following table (Table

One: DMX Address). Start with all 12 switches OFF. Remember, C-Series use a base zero system to set DMX addresses:

Light number 1=Binary number 0
Light number 2=Binary number 3, etc.

TABLE ONE: DMX ADDRESS

BINARY NO.	LIGHT NO.	DMX CHANNEL NO.	SWITCH#					
			1	2	3	4	5	6
0	1	1						
3	2	4	■					
6	3	7		■				
9	4	10	■				■	
12	5	13				■		
15	6	16	■	■		■	■	
18	7	19		■				■
21	8	22	■			■		
24	9	25					■	■
27	10	28	■	■		■		
30	11	31		■		■	■	
33	12	34	■					■

Note: If you have fewer than 12 lights, use only the settings you need, starting at Light #1.

[3] Select the Chasing Rainbow Show by setting the switches on **Multi Synchronizer** as follows:



[4] Select your Chasing Rainbow Variations. Four Chasing Rainbow Variations are available:

- ◆ Speed
- ◆ Saturation
- ◆ Step Size
- ◆ Direction

◆ Speed
Speed refers to the time it takes for a rainbow cycle to repeat. For instance, if you set speed to 10 seconds, then 10 seconds will elapse between one appearance of a color and its next appear-

TABLE TWO: SPEED

BINARY NO.	SPEED	SWITCH#			
		1	2	3	4
0	2 sec				
1	5 sec	■			
2	10 sec		■		
3	20 sec	■	■		
4	30 sec			■	
5	45 sec	■		■	
6	1 min		■		■
7	2 min	■	■	■	
8	5 min				■
9	10 min	■			■
10	15 min		■		■
11	30 min	■	■		■
12	40 min			■	■
13	1 hr	■		■	■
14	1.5 hr		■	■	■
15	2 hr	■	■	■	■

ance on any one light. Alternatively, if 12 lights are projecting a rainbow vertically against a wall, it will take 10 seconds for a color to be chased across the 12 light rainbow. Speed options range from 2 seconds to 2 hours. Select speed by setting switches 1 through 4 as shown in *Table Two: Speed*.

◆ Step Size

Step size is the distance between sequential colors displayed by a light. Step sizes range from 16 to 384. Lower step values produce colors that are closer to each other in the color spectrum (Red-Orange-Yellow-Green-Blue-Indigo-Violet); higher step values produce colors that are further apart. In other words, in the lowest step value setting, the lights in a chain will display colors of a similar hue during a single cascade. In higher step value settings, the lights in a chain will display a rainbow of colors during a single cascade.

To select the step size, set switches #5-7 as shown in *Table Three: Step Size*. For a Chasing Rainbow without repeating colors displayed at once, follow the number-of-lights/step-size settings as indicated below. This effect is possible only when using a chain of 4, 6, 8, 9 or 12 lights. You can run other numbers of lights, of course, but colors will repeat during the cascade.

TABLE THREE: STEP SIZE

BINARY NO.	NO. OF LIGHTS	STEP SIZE	SWITCH#		
			5	6	7
0	—	16			
1	—	32	■		
2	—	96		■	
3	12	128	■	■	
4	9	170			■
5	8	192	■		■
6	6	256		■	■
7	4	384	■	■	■

◆ Saturation

Chasing Rainbow can be set to light or full saturation. Light saturation produces pastel colors. Full saturation produces fully saturated colors.

For a Chasing Rainbow wash of full saturation, set switch #8 ON.

For a Chasing Rainbow wash of light saturation, set switch #8 OFF.

◆ Direction

The direction of the chase can be set using switch #9. For a Chasing Rainbow from low numbered DMX addresses to high, set switch #9 ON.

For a Chasing Rainbow from high numbered DMX addresses to low, set switch #9 OFF.

LIMITATIONS

The data stream from Multi Synchronizer must be boosted every 32 lights or 400 feet, whichever comes first. To boost the signal from C-200, connect the data cable to the repeater port. To boost the signal from other models, please contact Color Kinetics for information about custom cables required.

One Year Limited Hardware Warranty

Color Kinetics Incorporated warrants its products, if properly used and installed, will be free from defects in materials and workmanship and will substantially conform to Color Kinetics' publicly available specifications for a period of one (1) year after the date the product was purchased by the end user.

If the product fails during the warranty period, purchaser's remedy under this limited warranty shall be at Color Kinetics sole election:

- Repair the product by means of hardware and/or software or
- Replace the product with another product or
- If Color Kinetics is unable to repair or replace the particular product, refund the then current value of the product.

This limited warranty does not cover damages due to external causes, including, but not limited to, accident, problems with electrical power, usage not in accordance with product instructions, misuse, neglect, modification, repair, improper installation, or improper testing. Color Kinetics is not responsible for indirect, incidental, or consequential damages resulting from any breach of warranty or under any other legal theory including, but not limited to, lost profits, downtime, goodwill, damage to or replacement of equipment and property.

To obtain warranty service, you may contact your distributor in accordance with its instructions, or you may contact Color Kinetics. To request warranty service you should call Color Kinetics during the warranty period. Proof of purchase or registration is required. When calling within warranty, please provide:

- 1) Your name, shipping address, and telephone number
- 2) A description of the model and serial number
- 3) An explanation of the problem

A Return Authorization (RA) number & ship-to address will be provided to send the product back.

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Manufacturing Standards

Color Kinetics products are manufactured in the USA, Ireland, and China.

U.S. and Foreign Patents and Patents Pending

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