



COLORBLAST™ USER GUIDE

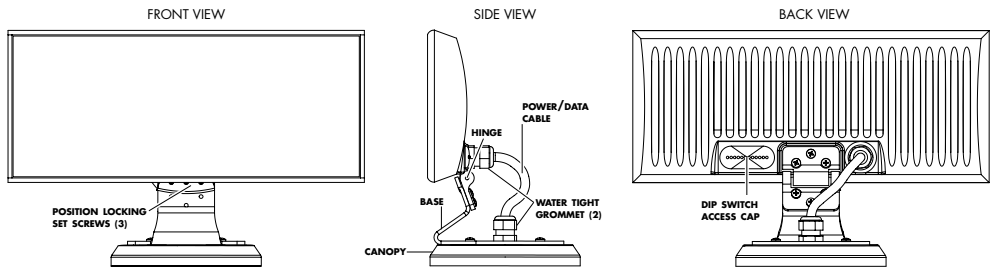
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ITEM # 102-000001-00, 102-000001-01
U.S. PATENTS 6,016,038 AND 6,150,774
OTHER PATENTS PENDING

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PUB-000013-00 Rev. 00
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Fig. 1: ColorBlast Light Fixture



A GLOSSARY OF TERMS

BRIGHTNESS: aka (that's detective talk for also known as) "intensity" or "luminance" of light. A measure of the rate of flow of light energy (luminous flux) per unit area leaving a surface in a particular direction. (For the purpose of this guide, a lower level of Brightness has nothing to do with being intellectually challenged.)

COLOR: Color specification can be described in many ways, but in general three qualities describe "color": brightness (the intensity of the color), hue (the wavelength which determines how similar it is to one or a combination of the perceived colors red, yellow, green or blue), and saturation (the amount of white light mixed in). We can see approximately 200 hues with the naked eye. The other colors we can identify are due to variations in brightness and saturation.

COLOR WASH: A Color Wash Effect moves sequentially around the spectrum of colors in either clockwise (ROYGBIV) or counterclockwise (VIBGYOR) Cycle Direction at user definable speeds. Color Wash differs from the Random Color Effect which has no distinct or sequential pattern of color generation.

CROSS FADE: Cross Fade Effects slowly increase the intensity of one color of light while simultaneously reducing the intensity of another color. A Cross Fade Effect differs from a Color Wash Effect in that a Cross Fade alternates between only two colors while the Wash cycles through the color spectrum. In Cross Fades, users will select a Starting Color and an Ending Color (don't choose the same color!) and then select the desired Speed to go from the first to the second and back again.

CYCLE DIRECTION: The sequence in which colors move through the spectrum. The sequence can be in either clockwise (ROYGBIV) or counterclockwise (VIBGYOR) direction.

DMX AND DMX512: DMX is a shortened form of "digital multiplex." It describes a standard method of data transmission that makes possible the interconnection of lighting control equipment by different manufacturers. The DMX512 protocol was developed in 1986 by a committee of the USITT (United States Institute for Theater Technology) to provide a standard interface with which to control dimmers from lighting consoles. In DMX512, each data link supports up to 512 dimmers (hence the name and number - clever, no?).

DIP SWITCH: Dip switches are tiny binary devices located on the back of each C-Series lighting fixture in banks of 12, signaling either ON or OFF. With a single dip switch there

GETTING STARTED

Congratulations on your purchase, not to mention your good taste. Welcome to a more colorful world brought to you by Color Kinetics and Chromacore®, our patented technology that generates colored light and effects using a microprocessor to control Red, Green and Blue LEDs. This guide contains important information not only on operating your new ColorBlast™, but also on using it safely. For your protection, please read it carefully before you embark on your colorful adventure. There are very few rules, but those that exist are there for your safety.

Included in this box:

- (1) ColorBlast with base and canopy assembly
- (2) fastening screws for indoor installation
- (1) swivel bracket for indoor installation
- (1) user guide

IN THE BEGINNING

Setting Up Your New System

This section examines how to find your way around ColorBlast and how Chromacore tells ColorBlast to "think."

Layout of the Land

Fig. 1: ColorBlast Light Fixture below indicates the components of each ColorBlast fixture.

Installation

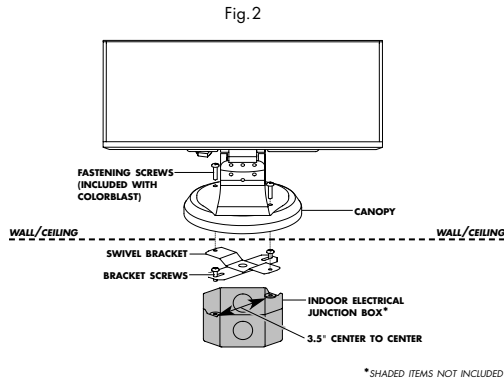
This fixture should be installed by a qualified electrician in accordance with NEC and relevant local codes for Class 2 power sources.

ColorBlast can be installed indoors or outdoors. When mounting on walls and ceilings, an electrical junction box must be in place (electrical junction box is not included with ColorBlast) and a 24V DC Class 2 power supply must be available for each light. Color Kinetics offers a number of power supply options. Contact Color Kinetics for recommended power supplies.

MOUNTING COLORBLAST INDOORS

Flush mounting to electrical box on surface i.e., wall, ceiling
Attach the flat legs of the swivel bracket to the electrical junction box using the screws supplied with the junction box. (See Fig. 2.)

Place the two fastening screws (included with ColorBlast) through the two holes in the base and canopy assembly as shown in Fig. 2. Insert the screws in the holes in the bent leg of swivel bracket, but do not tighten them. Rotate the light to the desired position. Tighten the screws to hold the light in place.



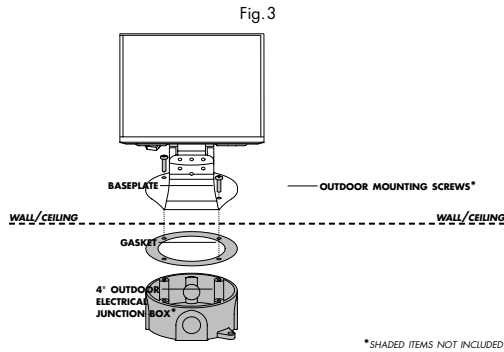
Standing on floor without connecting to electrical box

When the light will be standing on the floor or other level surface, you can choose to use it with or without the canopy. We recommend removing the cable from passing through the baseplate, so that the unit lies flat. To remove the cable from the baseplate, loosen the locknut on the topside of baseplate. Pull the cable through the grommet. If you wish to remove the canopy, remove the locknut on the underside of the baseplate. Remove the canopy and remove the grommet from the baseplate. The unit can now be placed securely on the floor.

MOUNTING COLORBLAST OUTDOORS

When used outdoors, ColorBlast must be mounted to a 4" electrical junction box rated for outdoor use. To insure a tight seal, the canopy must first be removed.

To remove the canopy, remove the locknut on the underside of the baseplate. Remove the canopy and replace the locknut on the grommet. To mount to an outdoor electrical junction box, be sure to use the screws that come with the junction box (not included with ColorBlast). **Note: Do not use the screws included with ColorBlast.** Place the two outdoor mounting screws through the two holes in the baseplate. Place the screws through the gasket (supplied with the outdoor electrical junction box) and into the electrical junction box. Tighten the screws to hold the light in place, as shown in Fig. 3 below.



B=blue, I=indigo, V=violet}. Also, a popular friend of all users of ColorBlast lighting.

SATURATION: This Variation refers to the purity of color, or the amount of white light which has been mixed into a color. More technically, it describes how much of a color is near the dominant wavelength. Primary colors are fully saturated, while pastels are less saturated.

SHOW: In Stand Alone operation, a "Show" is the display generated by one complete cycle of an Effect. In Networked operation, a "Show" is determined by the controller being used.

SPEED: Determines the duration of an Effect. In Color Wash, Speed is defined as the amount of time which elapses between the initial display of the Starting Color in cycle one (red in ROYGBIV, or violet in VIBGYOR), and its next display which begins cycle two. In Cross Fade, Speed is defined as the amount of time which elapses between the initial display of the Starting Color to the display of the Ending Color and back again (round trip). In Random Color, Speed is defined as the amount of time a color is displayed before it "jumps" to the next color. In Variable Color Strobe, speed determines how fast the colors advance around the spectrum which in turn affects what color will be flashed at each stroke.

STAND ALONE: aka "built-in," "on board," or "automatic" (when automatic mixes with magic). Refers to a method of Control. Stand Alone means that the unit is controlled by the built-in microprocessor, thus utilizing "on-board" Effects which are set via the unit's dip switches. Stand Alone differs from Networked in that the unit is controlling itself versus taking direction from an external source such as a DMX512 controller or PC.

STARTING COLOR: Allows the user to define the beginning color of an Effect. For instance, if a Cross Fade goes from red to blue, the Starting Color Variation would be set to red and the Ending Color would be set to blue. Each time the unit is reprogrammed with this Effect, it will begin with red.

STROBE: A "stop motion," or rapid series of very short intense light flashes which can make actions seem intermittent. The Color Kinetics Variable Color Strobe Effect cycles through a sequence of colors, generating flashes of different color which can then be customized with various Speed, Cycle Direction or Strobe Rate settings. The Color Kinetics Fixed Color Strobe allows for a single color to be flashed which can then be customized by altering the Strobe Rate.

STROBE RATE: Refers to the number of flashes per second or how many times in one second the light is illuminated.

MAKING ELECTRICAL CONNECTIONS TO COLORBLAST

WARNING: DO NOT HOT SWAP. Make sure the power supply is off before connecting or disconnecting fixtures. Otherwise, damage to the fixture may result.

Power connections

ColorBlast requires 24V DC. Once the product is installed, run the power/data cable to your power supply (for most multiple light installations) or your Power/Data Adapter (for most single light installations).

NOTE: Each light must receive power directly from a power supply. It is not possible to daisy chain power from ColorBlast to ColorBlast. ColorBlast must use only the cable supplied with the unit. Use of other cables may result in light failure. Custom cable lengths are available from Color Kinetics.

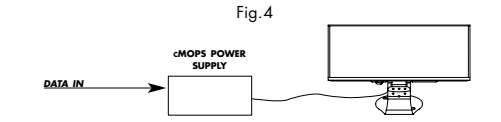
ColorBlast cable contains five color-coded wires. The color-coding is:

- Black = Ground
- White = +24VDC
- Red = Data input +
- Green = Data input -
- Bare = Data shield

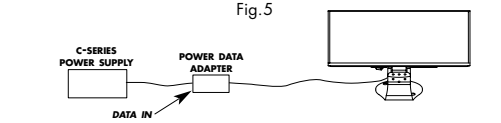
For details on connecting ColorBlast to a power supply, refer to the power supply documentation.

Data connections

For multiple light installations, data connections for ColorBlast can be made through the power supply (See Fig. 4).



For single light installations, data connections can be made through the Power/Data Adapter (See Fig. 5).



Do the DIP

Your ColorBlast has been pre-programmed with an assortment of Shows. The back of each ColorBlast light holds the key to setting your colorful world. Control, Effects and Variations are all determined by setting the DIP switches. We suggest you reposition DIP switches with a blunt object such as a stylus or pen cap, not with a sharp object which may damage the units.

In order to select or change the Control, Effects, or Variations, disconnect the power to ColorBlast, configure the DIP switches according to the desired Show, and then reprogram the unit. New Shows will not be displayed until the unit is reprogrammed.

TALK THE TALK

For the most part, the language of Color Kinetics and Chromacore is oriented around three categories: Control, Effects, and Variations.

If you look at nothing else in this guide, don't miss Table 1: Settings Table. This table is the key to what each DIP switch setting governs. You'll see from this table that in general, DIP Switches #10-12 determine the method of Control and the Effect. DIP Switches #1-9 govern the Variations within the Effects.

Control

"Control" refers to input - how the user chooses to control ColorBlast in order to produce the desired Shows. ColorBlast can operate via either of these control methods:

SWITCH #	1	2	3	4	5	6	7	8	9	10	11	12
FIXED COLOR	Add levels of Red	Add levels of Green	Add levels of Blue	On	On	On						
COLOR WASH	Speed .5 sec - 2 hrs	Saturation	Brightness	Cycle Direction	On	On						
CROSS FADE	Ending Color red, green, blue, cyan, magenta, yellow, white, black	Starting Color red, green, blue, cyan, magenta, yellow, white, black	Speed from starting color to ending color and back again	On								
RANDOM COLOR	Speed .05 sec - 3 min	Saturation	Starting Color red, green, blue, cyan, magenta, yellow, white, black							On		
FIXED COLOR STROBE	Color red, green, blue, cyan, magenta, yellow, white, black	Strobe Rate 20/sec - 2/sec								On		
VARIABLE COLOR STROBE	Speed (color advance)	Cycle Direction	Strobe Rate 20/sec - 2/sec	On						On		
PC-DMX			PC Address							On		
DMX512												

• Networked Control (externally directed control)
If externally controlled, ColorBlast will run according to the data fed to it from the external controller. You can set ColorBlast to take external signal via either of the following methods of Networked control: DMX512 control or PC control. If this is your method of Control, you can skip directly to the "Wired" section of this user guide.

• Stand Alone ("on-board" or built-in control)
In Stand Alone mode, ColorBlast will repeat the same Show for as long as it is being powered. If you are using Stand Alone mode, proceed directly to the next section to choose the desired effect.

Effects (For Stand Alone operation only.)

"Effects" refer to what type of output, or displays, are produced. With ColorBlast you can select any of the following Effects in Stand Alone mode:

- Fixed Color
- Color Wash
- Cross Fade
- Random Color
- Fixed Color Strobe
- Variable Color Strobe

Variations (For Stand Alone operation only.)

Once you have chosen the desired Effect, you can then choose different Variations which will further modify the Effect by adjusting factors such as:

- Color
- Speed
- Brightness
- Saturation
- Cycle Direction
- Strobe Rate

Not every Variation is available with every Effect. Each Effect has a unique combination of variables. But if you follow the Color Kinetics Easy Step Program you can start experimenting to your heart's content:

1. Pick a desired Effect
2. Customize the Effect within the existing range of Variations
3. Sit back and enjoy the compliments—ColorBlast isn't the only thing with a brain!

FIXED COLOR

Fixed Color allows the static display of any one of 512 possible colors. A Fixed Color Effect is generated by blending the primary colors of Red, Green and Blue (remember additive color mixing and that smart microprocessor).

To select Fixed Color, first set the switches for the Fixed Color Effect (remember that ON is the UP position).

CHOOSE THE EFFECT: FIXED COLOR

Switches #10, 11 and 12: ON



CHOOSE THE VARIATION: FIXED COLOR

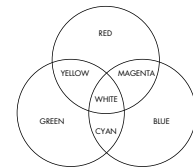
The Variation on Fixed Color is choosing one of 512 discrete colors.

◆ Discrete Color
Switches #1-3 control hues of Red. Switches #4-6 control hues of Green. Switches #7-9 control hues of Blue. To illustrate the principles behind the DIP switch configurations let's look at Blue (display of Reds and Greens follow similar principles). In general, the fewer switches in the ON position, the lighter the shade of color which is displayed. So, to get a very light "sky blue," turn ON only Switch #7. The next hue would be Switch #8 only and so on. Remember, throughout this guide, this symbol ■ indicates the switch should be ON. (See Example 1)

EXAMPLE 1

SWITCH #	7	8	9
0	No blue		
1	Lightest blue	■	
2	A little more	■	
3	A bit more	■	
4	Still more	■	
5	Even more	■	
6	More intense	■	
7	Most intense	■	

With additive color mixing (thanks to Chromacore technology's ability to think), you can mix Reds, Greens and Blues to produce secondary colors.



The illustration at right shows how secondary colors are produced.

In other words, if you want:

- Desired Color**
Green
Yellow
Magenta
Cyan
White
- Mix**
Green
Green and Red
Blue and Red
Green and Blue
Red, Green, Blue

Let's look at one more example before we move on to the next Effect. Refer to the following table

(Example 2). If you'd like to produce purple (or "Magenta") hues, you'll need to mix Red (Switches #1-3) and Blue (Switches #7-9). That means that Switches #4-6 (the Greens) should remain in the OFF position.

EXAMPLE 2

SWITCH #	1	2	3	7	8	9
0	No magenta					
1	Lightest	■			■	
2	A little more	■			■	
3	A bit more	■			■	
4	Still more	■			■	
5	Even more	■			■	
6	More intense	■			■	
7	Most intense	■			■	

EXAMPLE OF FIXED COLOR EFFECT

Full Intensity Red



COLOR WASH

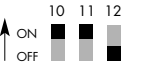
The Color Wash Effect moves sequentially around the spectrum of colors in either clockwise (ROYGBIV) or counterclockwise (VIBGYOR) direction, repeating the same cycle over and over, at user-definable speeds. The Color Wash differs from Random Color which has no distinct or sequential pattern of color generation.

To select Color Wash, first set the switches for the Color Wash Effect (remember that ON is the UP position).

CHOOSE THE EFFECT: COLOR WASH

Switches #10 and 11: ON

Switch #12: OFF



CHOOSE THE VARIATION: COLOR WASH

The Color Wash can be varied by Speed, Saturation, Brightness and Cycle Direction.

TABLE 2: COLOR WASH SPEED

SWITCH #	1	2	3	4	5	6
0	0.5 sec					
1	0.6 sec	■				
2	0.7 sec	■				
3	0.8 sec	■	■			
4	0.9 sec	■	■	■		
5	1.1 sec	■	■	■	■	
6	1.2 sec	■	■	■	■	■
7	1.4 sec	■	■	■	■	■
8	1.6 sec	■	■	■	■	■
9	1.9 sec	■	■	■	■	■
10	2.2 sec	■	■	■	■	■
11	2.5 sec	■	■	■	■	■
12	2.9 sec	■	■	■	■	■
13	3.3 sec	■	■	■	■	■
14	3.8 sec	■	■	■	■	■
15	4.4 sec	■	■	■	■	■
16	5 sec	■	■	■	■	■
17	5.8 sec	■	■	■	■	■
18	6.7 sec	■	■	■	■	■
19	7.7 sec	■	■	■	■	■
20	8.8 sec	■	■	■	■	■
21	10.2 sec	■	■	■	■	■
22	11.7 sec	■	■	■	■	■
23	13.4 sec	■	■	■	■	■
24	15.4 sec	■	■	■	■	■
25	18 sec	■	■	■	■	■
26	20 sec	■	■	■	■	■
27	24 sec	■	■	■	■	■
28	27 sec	■	■	■	■	■
29	30 sec	■	■	■	■	■
30	35 sec	■	■	■	■	■
31	40 sec	■	■	■	■	■
32	45 sec	■	■	■	■	■
33	50 sec	■	■	■	■	■
34	1 min	■	■	■	■	■
35	1.1 min	■	■	■	■	■
36	1.3 min	■	■	■	■	■
37	1.5 min	■	■	■	■	■
38	1.8 min	■	■	■	■	■
39	2 min	■	■	■	■	■
40	2.3 min	■	■	■	■	■
41	2.7 min	■	■	■	■	■
42	3 min	■	■	■	■	■
43	3.5 min	■	■	■	■	■
44	4 min	■	■	■	■	■
45	4.5 min	■	■	■	■	■
46	5 min	■	■	■	■	■
47	5.5 min	■	■	■	■	■
48	6 min	■	■	■	■	■
49	6.5 min	■	■	■	■	■
50	7 min	■	■	■	■	■
51	8 min	■	■	■	■	■
52	9 min	■	■	■	■	■
53	10 min	■	■	■	■	■
54	12 min	■	■	■	■	■
55	15 min	■	■	■	■	■
56	20 min	■	■	■	■	■
57	25 min	■	■	■	■	■
58	30 min	■	■	■	■	■
59	40 min	■	■	■	■	■
60	50 min	■	■	■	■	■
61	1 hr	■	■	■	■	■
62	1.5 hrs	■				

◆ Speed

In Color Wash, Speed is defined as the amount of time which elapses between the initial display of the Starting Color in Cycle One (Red in ROYGBIV, or Violet in VIBGYOR), and its next display which begins Cycle Two. There are 64 different speeds which can be set in the Color Wash Effect, ranging from as fast as .5 seconds to as long as 2 hours to complete a single cycle. Switches #1-6 control the speed options. For the fastest speed (.5 sec.), all switches between #1-6 are OFF. For the slowest speed (2 hrs.), all switches between #1-6 are ON. The previous table (Table 2: Color Wash Speed) illustrates the available options, and their switch settings.

◆ Saturation

In the Color Wash Effect, you can vary the Saturation by choosing light Saturation (pastels) or full Saturation. Switch #7 controls Saturation. For light Saturation, set Switch #7 OFF. Full Saturation is achieved by setting Switch #7 ON.

◆ Brightness

In the Color Wash Effect, Switch #8 controls the level of Brightness. The Brightness, or intensity, of the light can be set to either half intensity or full intensity. For half intensity, set Switch #8 OFF. For full intensity, set Switch #8 ON.

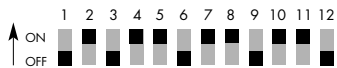
◆ Cycle Direction

The direction of the sequential flow of colors can be controlled in the Color Wash Effect through Switch #9. When Switch #9 is OFF, the direction of the flow of colors is clockwise from Red to Violet (ROYGBIV). When Switch #9 is ON, the direction of the flow of colors is counterclockwise from Violet to Red (VIBGYOR).

AUTOMATIC TRICK OF THE TRADE: YOU CAN ACHIEVE A UNIQUE CONVERGING DISPLAY WHEN TWO COLORBLAST UNITS ARE SET TO THE SAME SPEED BUT DIFFERENT CYCLE DIRECTIONS, ONE GOING CLOCKWISE, THE OTHER COUNTERCLOCKWISE.

EXAMPLE OF COLOR WASH EFFECT

Speed of 20 seconds, Full Saturation, Full Brightness, in a clockwise direction (ROYGBIV)

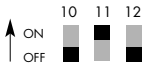


CROSS FADE

The Cross Fade allows you to set ColorBlast to smoothly move from one color to another. The Cross Fade differs from a Color Wash in that it alternates between only two colors while the Color Wash cycles through the entire spectrum of colors. The Cross Fade slowly increases the intensity of one color of light while simultaneously reducing the intensity of another color. For example, a Cross Fade set to begin with red and end in blue will first display a fully intense red, then mix in a bit of blue (producing pinkish hues), then mix more blue (to produce magenta hues), then display fully intense blue, and reverse the process (magenta, pink, red) before beginning the next cycle (red-pink-magenta-blue-magenta-pink-red).

CHOOSE THE EFFECT: CROSS FADE

Switch #11: ON
Switches #10 and 12: OFF



CHOOSE THE VARIATION: CROSS FADE

The Cross Fade can be varied by choosing one of eight Starting Colors and one of eight Ending Colors at one of eight different speeds.

◆ Starting Color

In the Cross Fade Effect, Switches #4-6 govern which color begins the fade. Choose one of the following eight colors: black, red, green, yellow, blue, magenta, cyan or white. Table 3 below illustrates all available options and their switch settings.

TABLE 3: CROSS FADE STARTING COLOR

		SWITCH #	4	5	6
COLOR	0	Black			
	1	Red	■		
	2	Green		■	
	3	Yellow	■	■	
	4	Blue			■
	5	Magenta	■		■
	6	Cyan		■	■
	7	White	■	■	■

◆ Ending Color

In the Cross Fade Effect, Switches #1-3 govern which color to fade to before it reverses back to the Starting Color. Choose one of the following eight colors: black, red, green, magenta, blue, yellow, cyan or white. Table 4 below illustrates all available options and their switch settings.

TABLE 4: CROSS FADE ENDING COLOR

		SWITCH #	1	2	3
COLOR	0	Black			
	1	Red	■		
	2	Green		■	
	3	Yellow	■	■	
	4	Blue			■
	5	Magenta	■		■
	6	Cyan		■	■
	7	White	■	■	■

Do not set your Starting Color and Ending Color to the same color. If you want a static color display, choose the Fixed Color Effect.

AUTOMATIC TRICK OF THE TRADE: SINGLE COLOR FADE. TO SET A COLORBLAST UNIT TO A SINGLE COLOR (NO SATURATION/DARKNESS TO FULL SATURATION), SET THE STARTING COLOR TO BLACK. IF YOU WANT TO GO FROM WHITE LIGHT THROUGH PASTEL SHADES TO FULL SATURATION, SET YOUR STARTING COLOR TO WHITE.

◆ Speed

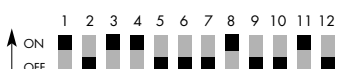
In Cross Fade, Speed is defined as the amount of time which elapses between the initial display of the Starting Color to the Ending Color and back again. There are eight different speeds which can be set for the Cross Fade Effect, ranging from as fast as 5 seconds for the round trip to as long as 1 hour to complete the round trip. Switches #7-9 control the speed options. For the fastest speed (5 sec.), all switches between #7-9 are OFF. For the slowest speed (1 hr.), all switches between #7-9 are ON. Table 5 below illustrates all available speed options and their switch settings.

TABLE 5: CROSS FADE SPEED

		SWITCH #	7	8	9
SPEED	0	5 sec			
	1	10 sec	■		
	2	30 sec		■	
	3	1 min	■	■	
	4	2 min			■
	5	15 min	■		■
	6	30 min		■	■
	7	1 hr	■	■	■

EXAMPLE OF CROSS FADE EFFECT

A. Starting from red, fading to blue at a speed of 30 seconds round trip

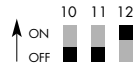


RANDOM COLOR

Random Color or "step" produces a randomly generated set of colors at user definable speeds. Colors step in discrete increments from one hue to the next. This differs from a Color Wash which sequentially and more gradually moves through the color spectrum.

CHOOSE THE EFFECT: RANDOM COLOR

Switches #10 and 11: OFF
Switch #12: ON



CHOOSE THE VARIATION: RANDOM COLOR

The Random Color Effect can be varied by Speed, Saturation and Starting Color.

◆ Speed

In Random Color, Speed is defined as the amount of time a single color is displayed before it "jumps" to the next color. There are 32 different speeds which can be set for the Random Color Effect, ranging from as fast as .05 seconds to as long as 3 minutes before jumping to the next color. Switches #1-5 control speed. For the fastest speed (.05 sec.), all switches between #1-5 are OFF. For the slowest speed (3 min.), all switches between #1-5 are ON. Table 6 below illustrates the available options, and their switch settings.

TABLE 6: RANDOM COLOR SPEED

		SWITCH #	1	2	3	4	5
SPEED	0	0.05 sec					
	1	0.06 sec	■				
	2	0.08 sec		■			
	3	0.12 sec	■	■			
	4	0.15 sec			■		
	5	0.21 sec	■			■	
	6	0.25 sec		■			■
	7	0.3 sec	■	■			
	8	0.4 sec			■		
	9	0.5 sec	■		■		
	10	0.75 sec		■		■	
	11	1 sec	■	■			
	12	1.2 sec			■		
	13	1.5 sec	■		■		
	14	2 sec		■		■	
	15	2.5 sec	■	■			
	16	3.5 sec			■		
	17	4.5 sec	■			■	
	18	5 sec		■			■
	19	7.5 sec	■	■			
	20	10 sec			■		
	21	12 sec	■		■		
	22	15 sec		■		■	
	23	20 sec	■	■			
	24	25 sec			■		
	25	30 sec	■		■		
	26	45 sec		■		■	
	27	1 min	■	■			
	28	1.5 min			■		
	29	2 min	■		■		
	30	2.5 min		■		■	
	31	3 min	■	■			■

◆ Saturation

In the Random Color Effect, you can vary the Saturation by choosing light Saturation (pastels) or full Saturation. Switch #6 controls the

amount of Saturation. For light Saturation, set Switch #6 OFF. Full Saturation is achieved by setting Switch #6 ON.

AUTOMATIC TRICK OF THE TRADE: FOR AN ASYNCHRONOUS DISPLAY OF COLORS IN COLORBLAST UNITS, SET THE UNITS TO THE SAME SPEED BUT DIFFERENT STARTING COLORS.

◆ Starting Color

You can choose from one of eight different starting colors in the Random Color Effect. From these eight different starting points it will cycle through a set of 128 colors which step in discrete increments of at least 25% of the color spectrum so no two colors in a row will have similar values. Switches #7-9 govern the Starting Color. Table 7 below illustrates all available options and their switch settings.

TABLE 7: RANDOM COLOR STARTING COLOR

		SWITCH #	7	8	9
COLOR	0	starting color 1			
	1	starting color 2	■		
	2	starting color 3		■	
	3	starting color 4	■	■	
	4	starting color 5			■
	5	starting color 6	■		■
	6	starting color 7		■	■
	7	starting color 8	■	■	■

EXAMPLE OF RANDOM COLOR EFFECT

At a speed of every 2 seconds, Fully Saturated, Starting with Color 1



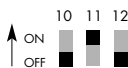
In this example, if a second ColorBlast is set to the same settings as the example above except for Starting Color, each would change colors at the same rate but not follow the same color display.

FIXED COLOR STROBE

Strobes are a "stop action," or rapid series of very short intense light flashes which can make actions seem intermittent. In the Fixed Color Strobe Effect, the same color is strobed at each flash.

CHOOSE THE EFFECT: FIXED COLOR STROBE

Switch #11: ON
Switches #10 and 12: OFF



CHOOSE THE VARIATION: FIXED COLOR STROBE

The Fixed Strobe Effect can be varied by Color and Strobe Rate.

◆ Color

In the Fixed Color Strobe Effect, switches #1-3 AND #4-6 govern which single color will be displayed during the flash. Choose one of the following eight colors: black, red, green, yellow, blue, magenta, cyan, or white. Both Switches #1-3 AND #4-6 must be configured in exactly the same way. Table 8 below illustrates the available colors and their switch settings.

TABLE 8: FIXED COLOR STROBE

		SWITCH #	1	2	3	4	5	6
COLOR	0	Black						
	1	Red	■					
	2	Green		■				
	3	Yellow	■	■				
	4	Blue			■			
	5	Magenta	■		■			
	6	Cyan		■		■		
	7	White	■	■	■	■	■	■

◆ Strobe Rate

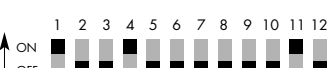
In the Fixed Color Strobe Effect, Switches #7-9 govern the strobe rate which can be set from as fast as 20 flashes per second to as slow as 2 flashes per second. For the fastest speed (20/sec.), all switches between #7-9 are OFF. For the slowest speed (2/sec), all switches between #7-9 are ON. Table 9 below illustrates all available options and their switch settings.

TABLE 9: FIXED COLOR STROBE RATE

		SWITCH #	7	8	9
STROBE RATE	0	20/sec			
	1	13/sec	■		
	2	10/sec		■	
	3	7.5/sec	■	■	
	4	5/sec			■
	5	4/sec	■		■
	6	3/sec		■	■
	7	2/sec	■	■	■

EXAMPLE OF FIXED COLOR STROBE EFFECT

Strobing Red at a rate of 20 flashes/second



VARIABLE COLOR STROBE

Strobes are a "stop motion," or rapid series of very short intense light flashes which can make actions seem intermittent. The Variable Color Strobe Effect cycles through a sequence of colors, generating strobes of different colors.

CHOOSE THE EFFECT: VARIABLE COLOR STROBE

Switches #10 and 12: ON
Switch #11: OFF



CHOOSE THE VARIATION: VARIABLE COLOR STROBE

The Variable Color Strobe Effect can be varied by Speed, Cycle Direction and Strobe Rate.

◆ Speed

In the Variable Color Strobe Effect, Switches #1-5 govern the pattern of colors displayed during the flash of the strobe. The pattern of colors displayed depends on how fast the colors are advancing through the spectrum. This advance is measured as a percentage around the spectrum. At the lower Speeds, each strobe will flash sequential colors since it is slowly advancing through the spectrum. Faster Speeds will flash colors further apart in the spectrum, with the fastest Speed flashing complementary colors. Table 10 below illustrates all available options and their switch settings.

TABLE 10: VARIABLE COLOR STROBE SPEED

		SWITCH #	1	2	3	4	5
SPEED	0	0.07%					
	1	0.13%	■				
	2	0.20%		■			
	3	0.26%	■	■			
	4	0.33%			■		
	5	0.39%	■			■	
	6	0.46%		■			■
	7	0.52%	■	■			
	8	0.55%			■		
	9	0.78%	■			■	
	10	1.00%		■			■
	11	1.20%	■	■			
	12	1.40%			■		
	13	1.60%	■		■		
	14	2.00%		■		■	
	15	2.30%	■	■			
	16	2.90%			■		■
	17	3.60%	■			■	
	18	4.20%		■			■
	19	4.90%	■	■			
	20	5.90%			■		
	21	7.20%	■		■		
	22	8.50%		■		■	
	23	10%	■	■			
	24	12%			■		
	25	15%	■			■	
	26	18%		■			■
	27	22%	■	■			
	28	26%			■		■
	29	33%	■		■		
	30	38%		■		■	
	31	49.9%	■	■	■	■	■

◆ Cycle Direction

The direction of the flow of colors can be controlled in the Variable Color Strobe through Switch #6. When Switch #6 is OFF, the direction of the flow of colors is clockwise from Red to Violet (ROYGBIV). When Switch #6 is ON, the direction of the flow of colors is counterclockwise from Violet to Red (VIBGYOR).

◆ Strobe Rate

In the Variable Color Strobe Effect, Switches #7-9 govern the strobe rate which can be set from as fast as 20 flashes per second to as slow as 2 flashes per second. For the fastest speed (20/sec.), Switches #7-9 are OFF. For the slowest speed (2/sec), Switches #7-9 are ON. Table 11 below illustrates all available options and their switch settings.

TABLE 11: VARIABLE COLOR STROBE RATE

		SWITCH #	7	8	9
STROBE RATE	0	20/sec			
	1	13/sec	■		
	2	10/sec		■	
	3	7.5/sec	■	■	
	4	5/sec			■
	5	4/sec	■		■