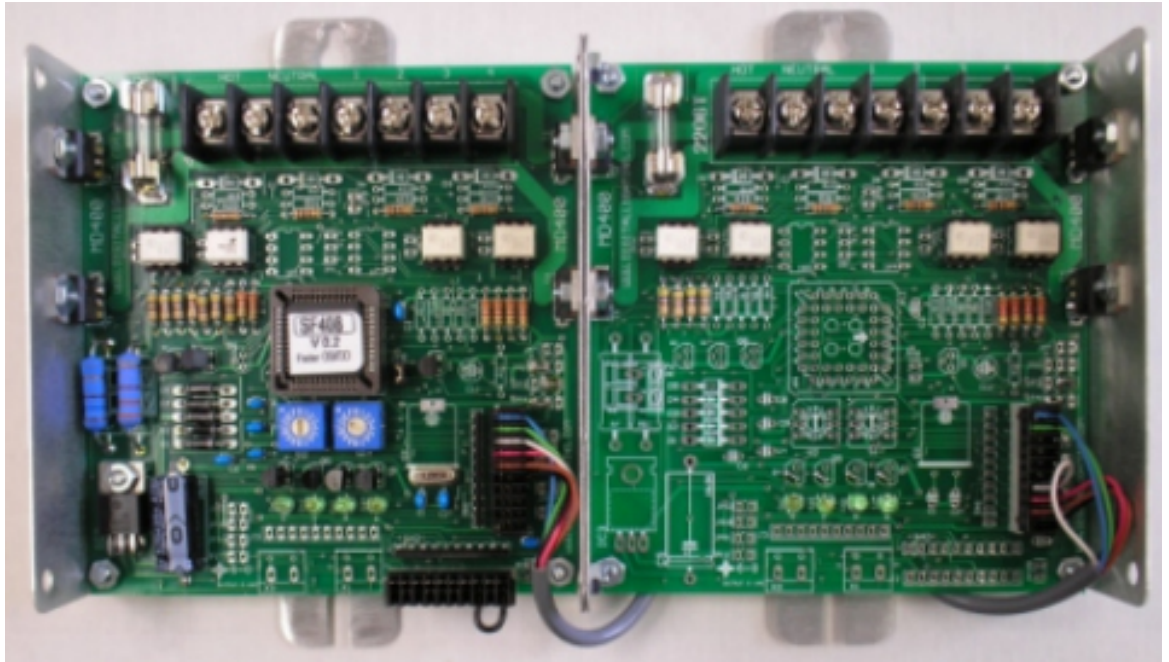




# Digital Lighting Systems, Inc.

## MF802

8 Channel "Mini-Fader/ Chaser"  
Cross Fader/ color mixing/ Animation chaser  
MF802-12(12VAC)/ MF802-24(24VAC)/  
MF802-120(120VAC)/ MF802-220(220VAC)  
MF802-12DC/ MF802-24DC



Animation series

USER'S MANUAL



## General Description

The **MF802** is an Eight channel single-phase AC lighting controller (Cross-Fader/Lighting animation) capable of producing slow level changes( Color Mixing ) as well as Quick ON/ OFF ( Animation)

A functional block diagram of the **MF802** is shown in Figure 1. **MF802** contains the equivalent of 2 sets of four solid-state relays (**SSR**) 8 dimmers, with two power line feed. Each dimmer is rated at a maximum output current of 2.5 Amperes. The **SSR** dimmers are controlled by low-voltage DC signals from the logic circuit on the board. These signals are electrically-isolated by Optical couplers from all line voltage elements. The **MF802** logic board contains a powerful microprocessor programmed to generate 16 user-selectable light sequences or patterns at an adjustable rate (the **MF802** is also available with a "SPELLER" pattern or custom patterns upon request). A rotary selector is used to select the pattern and a second one is used to set the rate or speed. Patterns and speed can be monitored by Eight LED's that represent the outputs of the **MF802**. The **MF802-120 and MF802-220** Require Logic power from an external step down transformer with output rates at **300mA 8 VAC to 12 VAC**

*Please contact the factory for additional information by telephone 1-305-969-8442 or email info@digitallighting.com*

Figure 1 - MF802 Functional Block Diagram

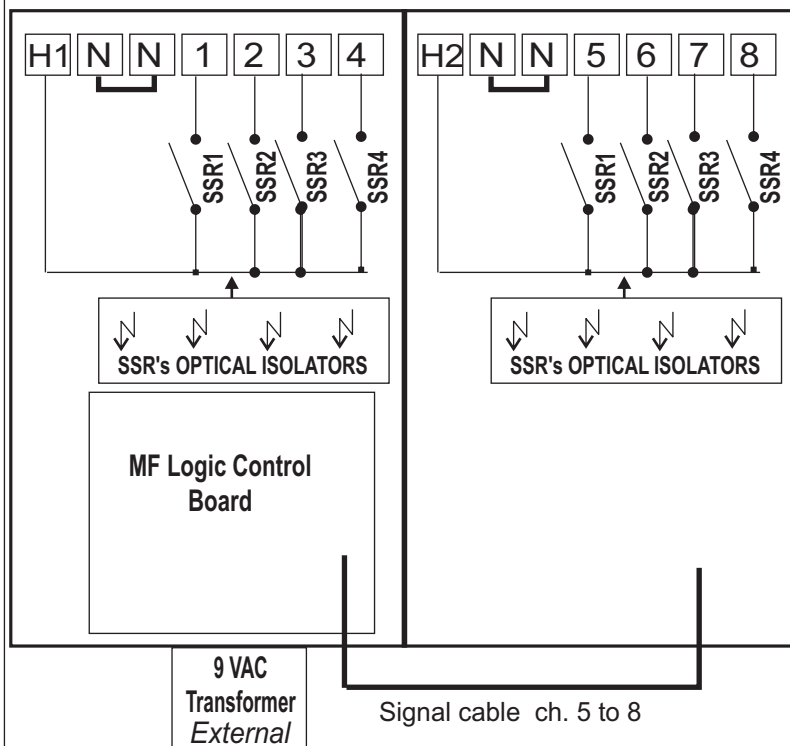


Table 1 - Terminals Definition

NAME	DESCRIPTION
1,2,3,4	Output Of Solid-State Relays #1,2,3,4
H1	Hot Line Feed For Relays 1 , 2 , 3 & 4.
N	Neutral Bus/ Common Connections.
5,6,7,8	Output Of Solid-State Relays #5,6,7,8
H2	Hot Line Feed For Relays 5 , 6 , 7 & 8.
N	Neutral Bus/ Common Connections.

Table 2 - Maximum Electrical Ratings

Electrical Characteristic	Terminal	Maximum
Relay Load Current	1 to 8	2.5 Amps.
Input Current	H1,H2	10 Amps.
Input Voltage	depends on model VAC/VDC	



MF802-120 Detail

Figure 2 - MF802-

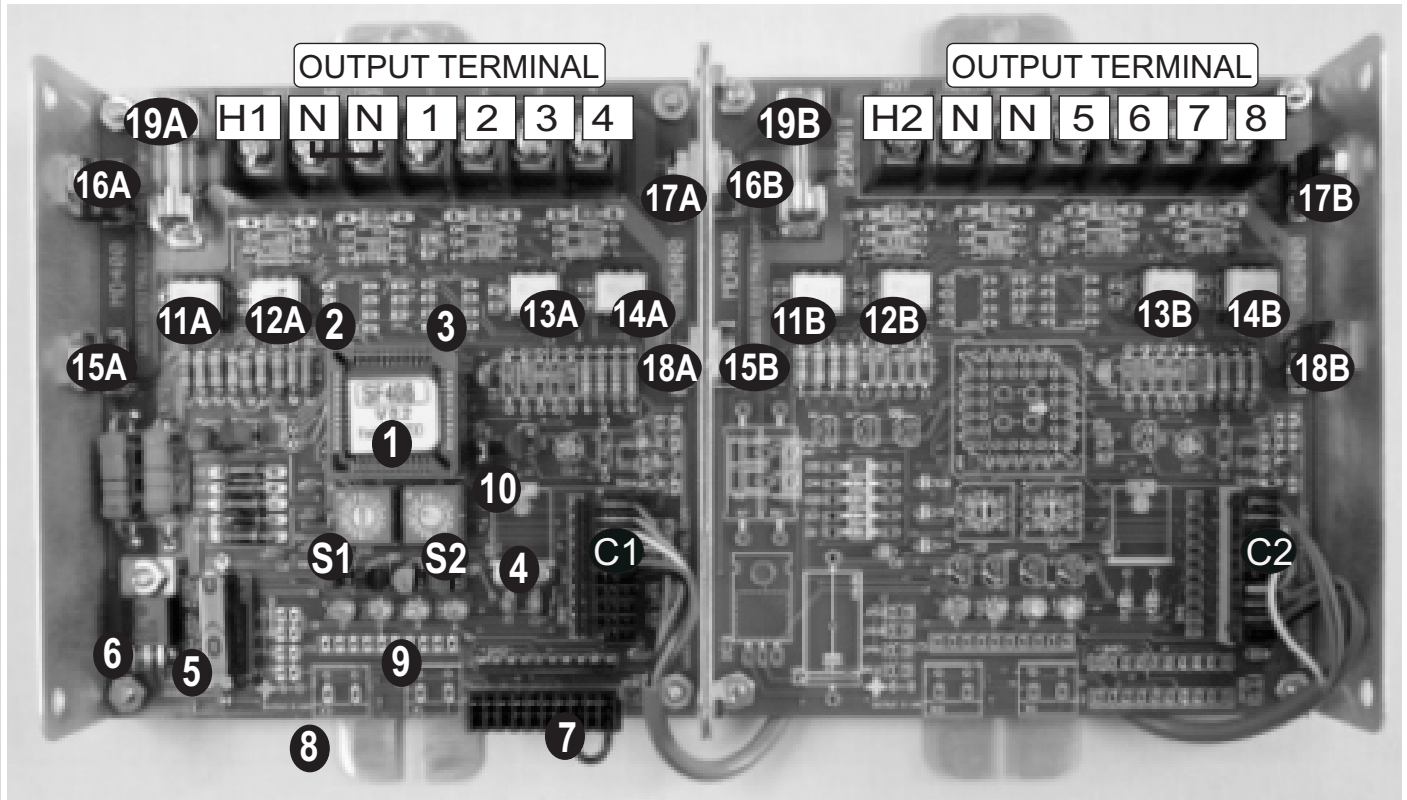


Table 3 - MF802-120 Circuit Legend

1	Microprocessor.
2	Not Used
3	Not Used
4	Quartz Crystal.
5	Power Supply Capacitor.
6	Voltage Regulator.
7	4 or 3 channel jumper selection
8	Logic power connector
9	Output LED Monitors.
10	Jumper for Chasing
11A,12A,13A,14A	Optical Couplers # 1,2,3,4
11B,12B,13B,14B	Optical Couplers # 5,6,7,8
15A,16A,17A,18A	Triacs # 1,2,3,4 for VAC; MOSFETs for VDC
15B,16B,17B,18B	Triacs # 5,6,7,8 for VAC ; MOSFETs for VDC
19A,19B	Fuses 5mm, 10Amps
S1	Speed selector 0 = Slowest ; F = fastest
S2	Pattern Selector
C1,C2	Connectors for CH 5,6,7,8 control cable



**Mechanical Installation**

The **MF802** modules are designed to be mounted in NEMA enclosures( by others).

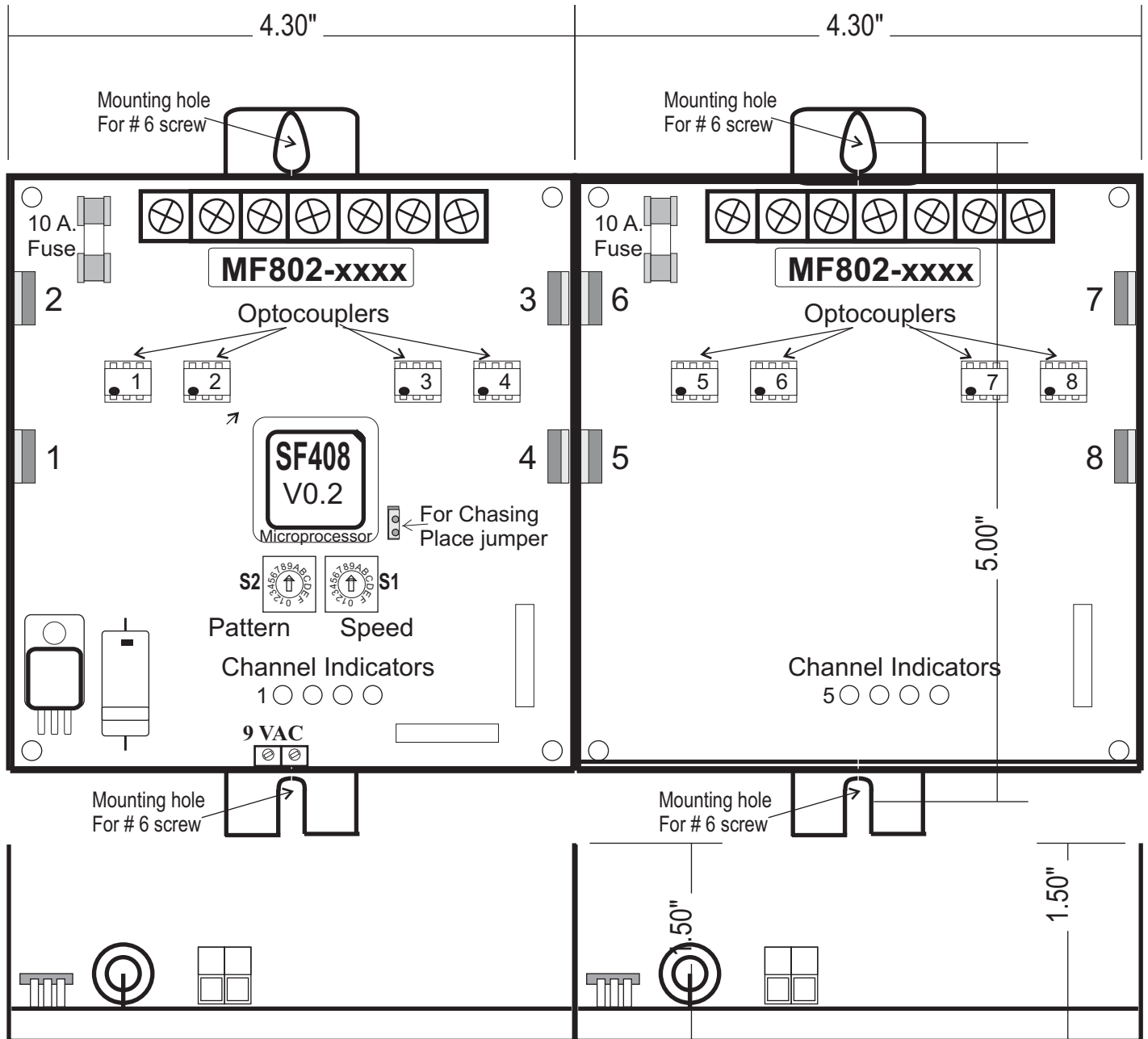


Figure 3 - MF802 Dimensional Diagram

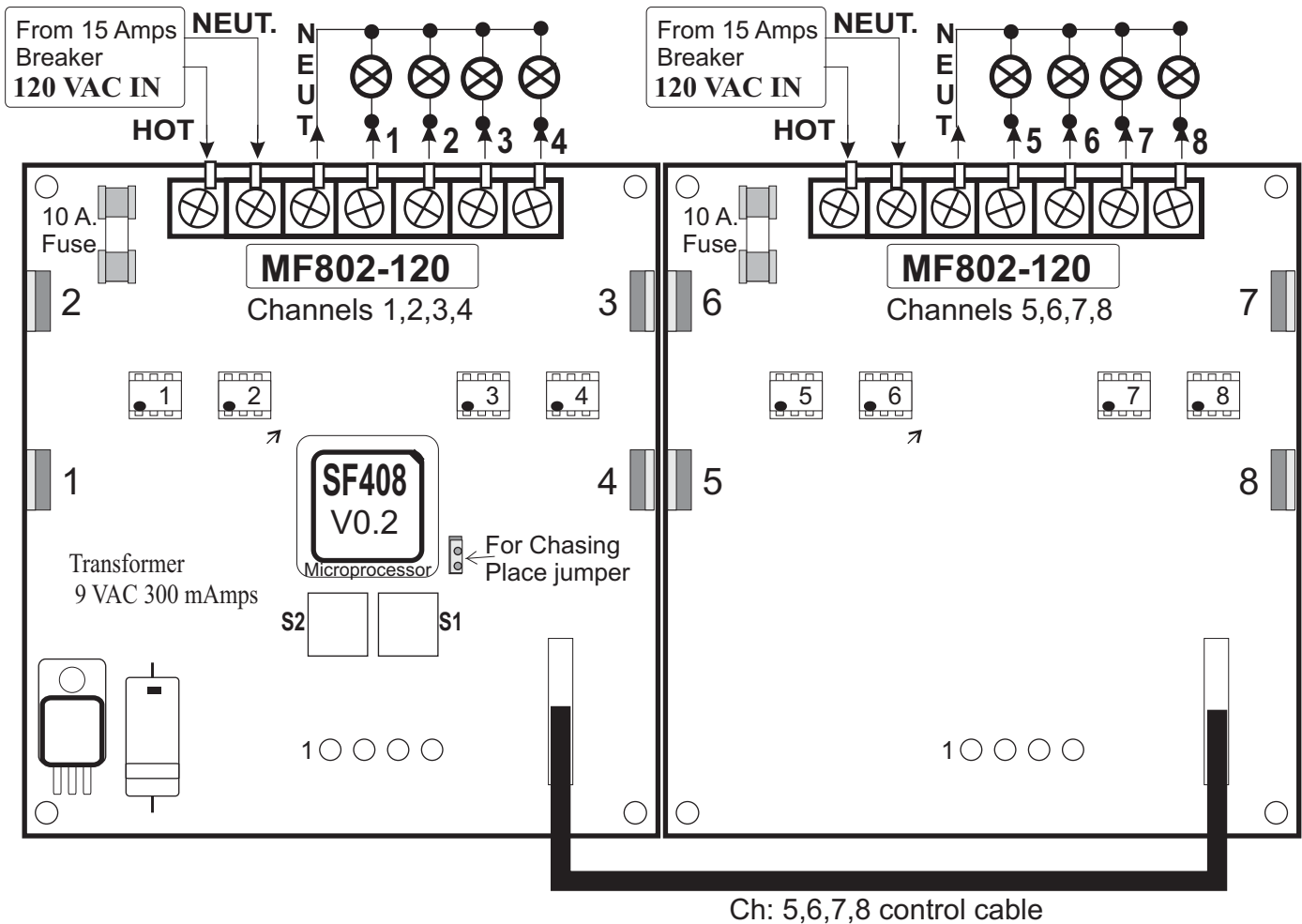


**MF802-120 General Wiring Instructions for 120V version.**

Wiring Notes

- **DO NOT EXCEED** 300 W (2.5 Amps. ) per circuit output @ 120VAC.
- MF802 Fader packs may be fed by one 15 A (maximum) branch circuit and may have up to four separately dimmed loads.
- Loads connected to outputs must be dimmable.
- **CAUTION: DO NOT** attempt to parallel outputs to increase capacity.
- Installations must conform to local and/or NEC code requirements.
- Each load must have its own Neutral wire for full load operation.
- All line voltage wires must have copper conductors of adequate Gauge with 90° C wire insulation.
- **POWER EACH LOAD DIRECTLY BEFORE CONNECTING IT TO THE MF802, TO ENSURE PROPER WIRING.**

Figure 4 - MF802 Typical 120 VAC Wiring.



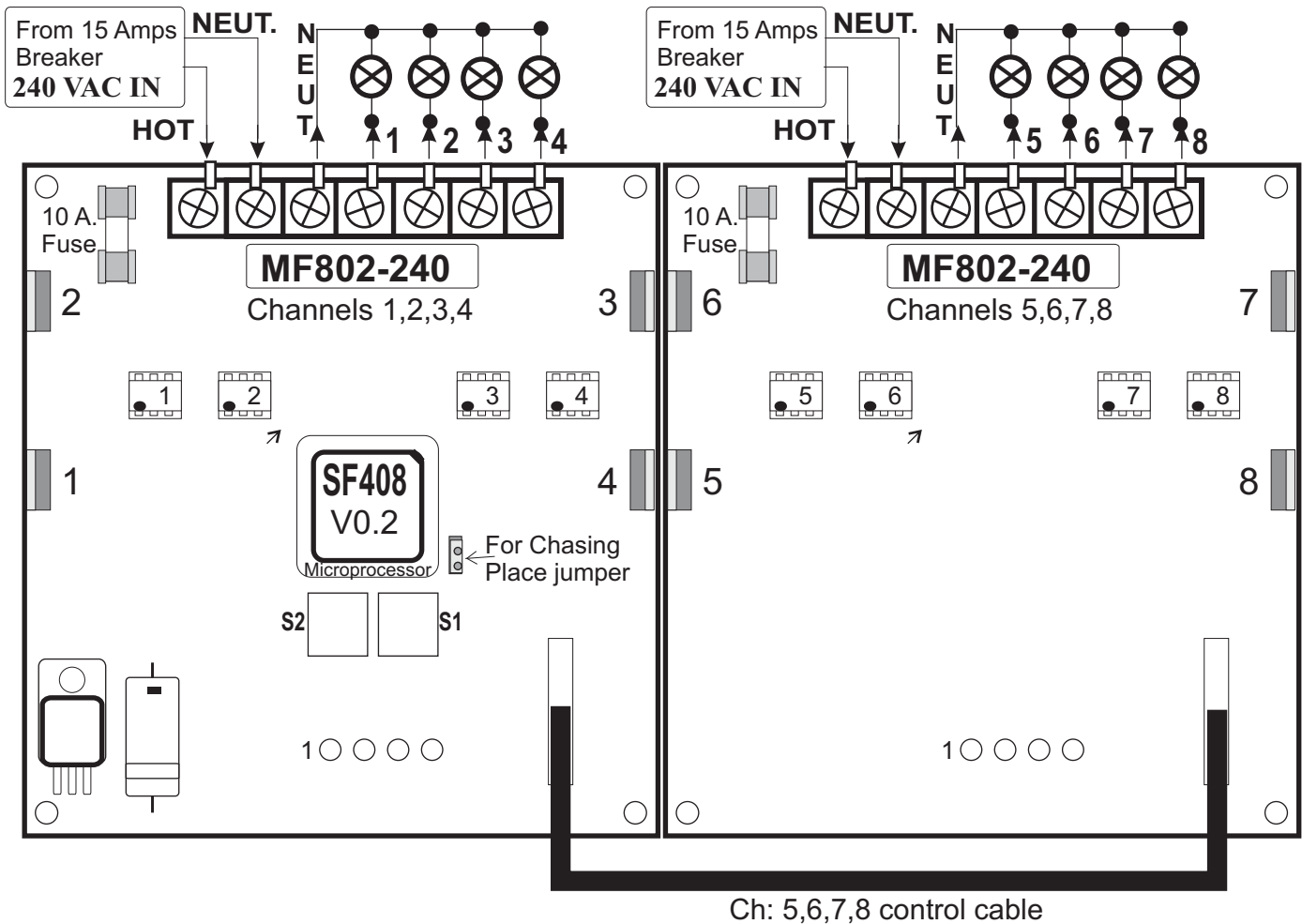


## MF802-220 General Wiring Instructions for 220-240V version.

### Wiring Notes

- **DO NOT EXCEED** 600 W (2.5 Amps. ) per circuit output @ 240VAC.
- MF802 Fader packs may be fed by one 15 (maximum) branch circuits and may have up to four separately switched loads.
- Loads connected to outputs must be dimmable.
- **CAUTION: DO NOT** attempt to parallel outputs to increase capacity.
- Installations must conform to local and/or NEC code requirements.
- Each load must have its own Neutral wire for full load operation.
- All line voltage wires must have copper conductors of adequate Gauge with 90° C wire insulation.
- **POWER EACH LOAD DIRECTLY BEFORE CONNECTING IT TO THE MF802, TO ENSURE PROPER WIRING.**

Figure 5 - MF802 Typical 220 VAC Wiring.





**MF802-24 Or MF802-12 General Wiring Instructions 24VAC /12VAC**

Wiring Notes

- **DO NOT EXCEED** 60 W (2.5 Amps. ) per circuit output @ 24VAC. Or 30 W @ 12 VAC
- MF802 Fader packs may be fed by one 15 (maximum) branch circuits and may have up to four separately switched loads.

With MF802-24 you may use a single 24 VAC-250 VA or better transformer  
.With MF802-12 you may use a single 12 VAC-150 VA or better transformer.  
Follow transformer's installation & wiring instructions from manufacturer.

Figure 6 - MF802 Typical 12 VAC or 24 VAC Wiring.

Power inputs to transformers should be on the same phase

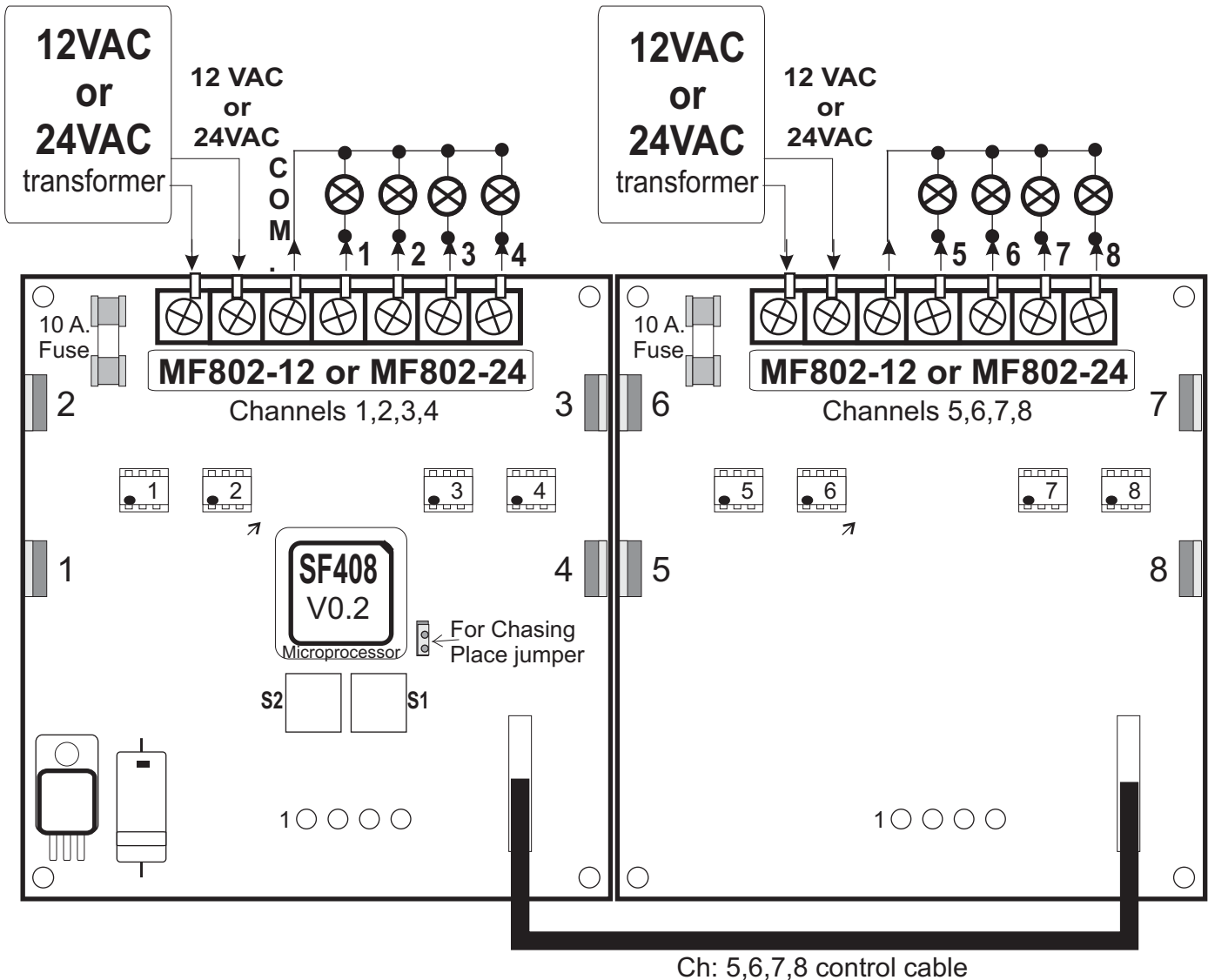
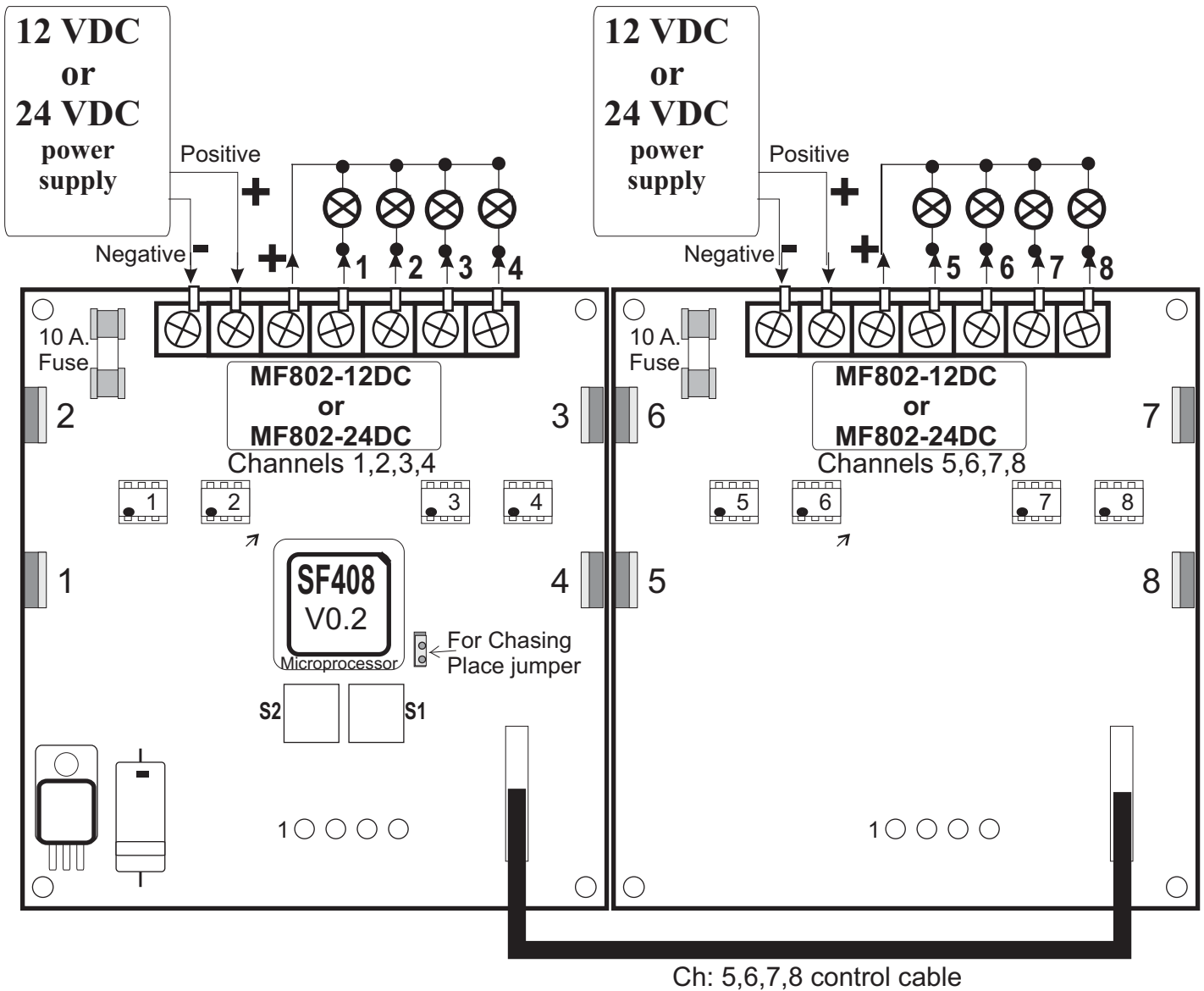




Figure 7 - MF802 Typical 12 VDC or 24 VDC Wiring.

**Common POSITIVE ( Anode ) / Switched Negative (cathode)**







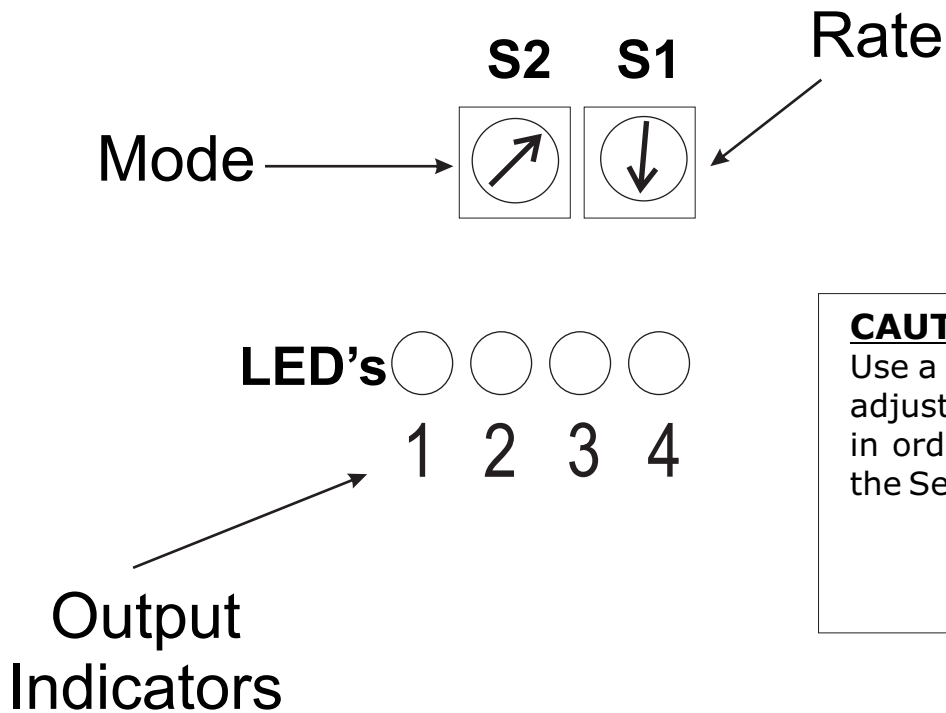
### Controls

The controls consist of two rotary 16-position (**0-9** and **A-F**) selectors. **S2 (PATTERN)** is used for selecting the desired Fade pattern. Positions **0** will scroll through the patterns automatically to provide an ever changing light show. The **MF802** outputs can be turned to static **ON** by selecting **F**. When **0** is selected, the **MF802** goes into an automatic pattern change mode. All other positions cause the **MF802** to play a single pattern indefinitely. **S1** is used to select one of 16 individual Fade rates (**Rate**). Minimum speed is achieved by selecting position 0. Speed doubles with each subsequent selector position.

### Indicators

LED indicators 1 to 4 indicate the status (On-Dimmed-Off) of their corresponding

Figure 8 - MF802 Indicators and Control Selectors



### **CAUTION**

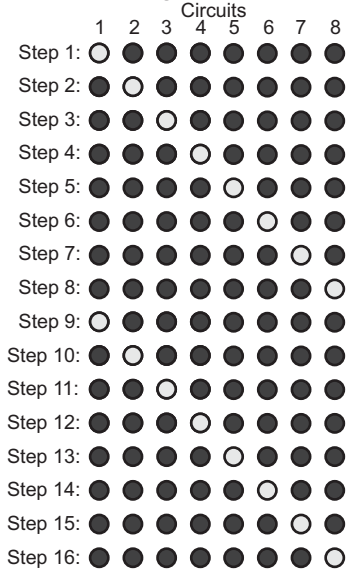
Use a small Screw driver for adjusting selector positions in order to avoid damaging the Selectors slots.



**Patterns for MF802**

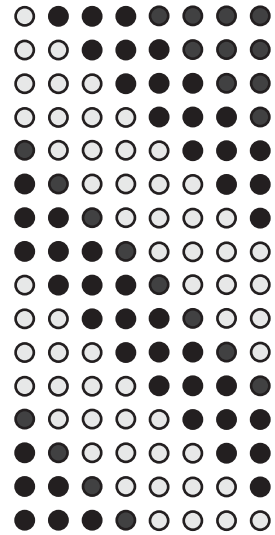
1

Light Fade



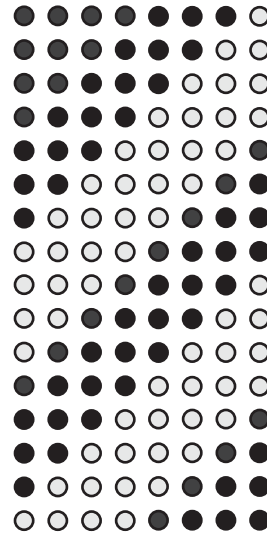
2

Fill & Swipe Forward



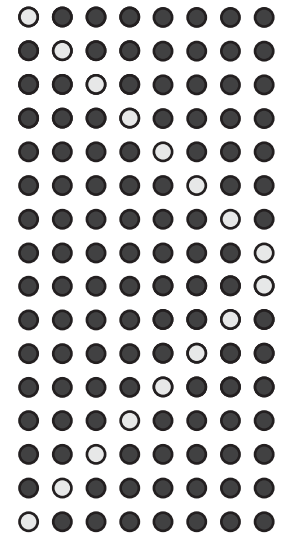
3

Fill & Swipe Back



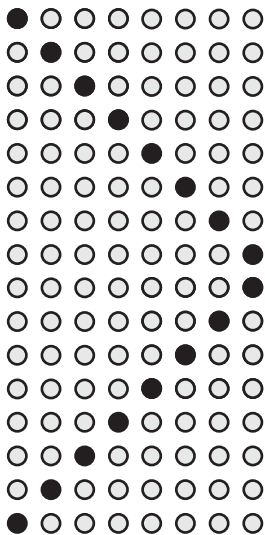
4

Light Bounce



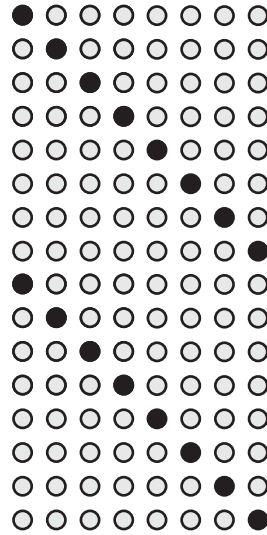
5

Dark Bounce



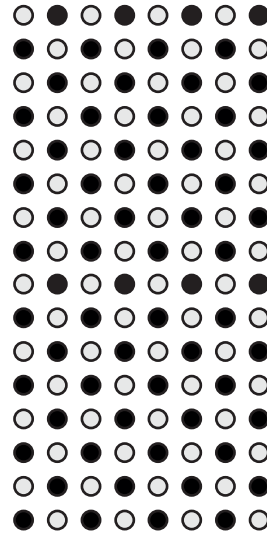
6

Dark Fade



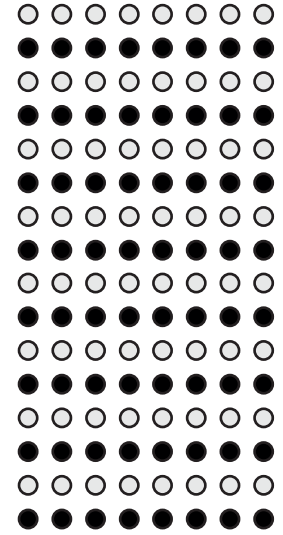
7

Flip-Flop



8

Flash All



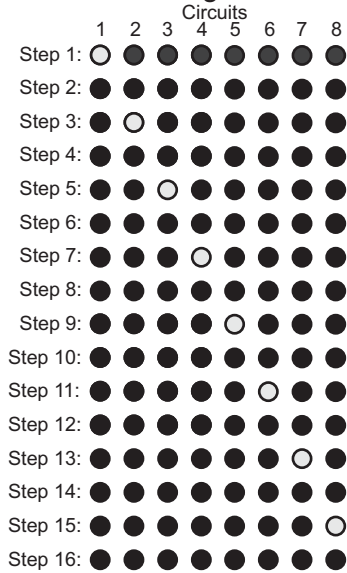
KEY: ○ ON  
● OFF



**Patterns for MF802**

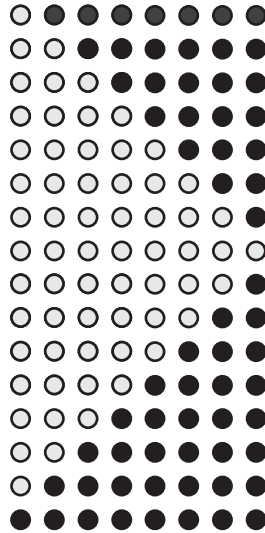
**9**

Flash Light Fade



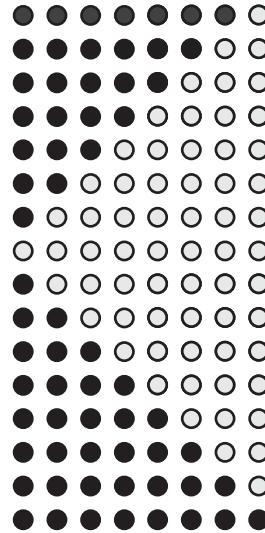
**A**

Spring Forward



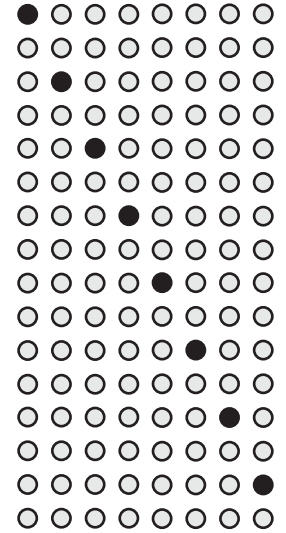
**B**

Spring Back



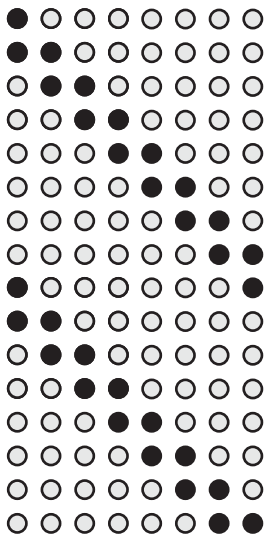
**C**

Flash Dark Fade



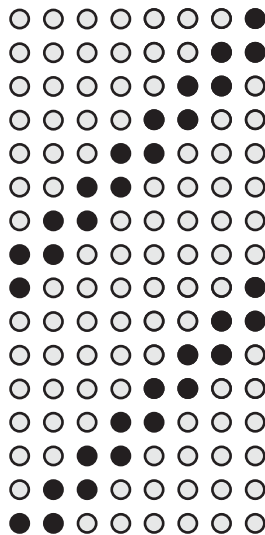
**D**

Crawl Forward



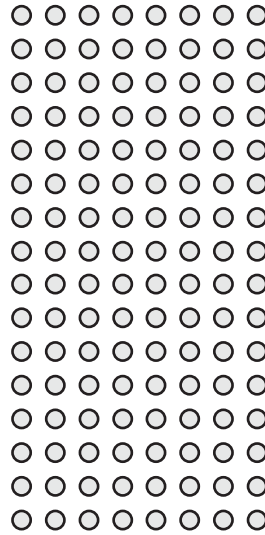
**E**

Crawl Back



**F**

ALL ON



**0**

AUTO

Automatic Cycle  
of Patterns 1-F  
4 x each  
then repeat

KEY: ○ ON  
● OFF

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## LIMITED WARRANTY

**Digital Lighting Systems**, warrants to the purchaser that its products have been carefully manufactured and inspected and are warranted to be free from defects of workmanship and materials when used as intended. Any abuse or misuse contrary to normal operation shall void this warranty.

Digital Lighting Systems' obligation under this warranty shall be limited to replacement or repair of any units as shall within one year of date of invoice from **Digital Lighting Systems**, prove defective; and **Digital Lighting Systems** shall not be liable for any other damages, whether direct or consequential. **The implied warranties of merchantability and fitness for a particular purpose are limited to the duration of the expressed warranty.** Some states do not allow the exclusion of the limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, you may also have other legal rights which vary from state to state.

Defective merchandise may be returned to **Digital Lighting Systems**, prepaid, after prior notification has been given and approval obtained for the return. To obtain prior approval for the return of the defective items, contact your local Digital Lighting Systems distributor, representative, or:

### **Digital Lighting Systems, Inc.**

Attn: Customer Service Department  
12302 SW 128th ct  
Miami, FL 33186  
(305) 264-8391

Digital Lighting Systems, Inc.  
12302 SW 128th ct  
Miami, FL 33186  
[www.digitallighting.com](http://www.digitallighting.com)

Tel 305-969-8442  
Fax 305-969-8675

Upon request, replacement unit(s) will be shipped as soon as available. Unless immediate shipment of replacement merchandise is requested, **Digital Lighting Systems** will not ship replacement merchandise until defective merchandise is received, inspected, and determined to be defective.

**No labor charges in connection with warranty problems will be reimbursed by Digital Lighting Systems without prior written approval from the factory.**

**Digital Lighting Systems** distributors and representatives have no authority to change this warranty without written permission.

**Digital Lighting Systems** reserves the right to determine the best method of correcting warranty problems.

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