



SCENEMASTER SIX PORTABLE DIMMING SYSTEM

Owner's Manual
SM6



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SETUP AND CONNECTION

A Mechanical Installation

Remove all packing material from the carton and from the unit. Make certain that all vent holes are free from obstruction on all sides of the unit: the front; the bottom; and the top.

Set the SM6 on a smooth, cool surface, preferably in an area which remains cool. Maximum air temperature must not exceed 40 degrees Celsius (105 degrees Fahrenheit). Make certain that the vents have at least 6 inches of free air around them. Do not block any vent holes. It is essential that this unit have adequate cooling for safe, reliable performance.

The SM6 may be operated in any position, but the area near the unit should be clean, dry, and protected from falling objects which could damage the slide controls. It is recommended that drinks or food not be allowed near the console as they can easily be spilled and could cause a malfunction in the equipment.

B Electrical Installation

The SM6 has 6 dimming channels, each capable of driving a 1,000 watt load. The total power to be delivered to the loads simultaneously is limited by the building electrical circuits. The SM6 should be connected to two U-ground outlets on separate electrical circuits (they do not share the same circuit breaker or fuse). To avoid tripping the building circuit breakers, it is recommended that no other equipment be connected to the circuits driving the SM6.

Power input to the SM6 is via flush-mount male connectors on the back panel. Any standard heavy-gauge extension cord will work for this purpose. Always use 3-wire, grounded cables. 12AWG cable is recommended.

Note that although only the upper inlet needs to be connected to operate channels 1 through 3, BOTH inlets must be connected to operate channels 4 through 6.

C Grounding

The term "grounding" refers to a separate wire, usually with green insulation, which is connected from the equipment case to earth ground. This is not the same as the neutral, or "common" and must not be confused with it. The neutral is a separate, load-carrying conductor.

When the SM6 is connected to its power source by a flexible cable, this ground connection is made through a third wire in the cable, and the ground prong on the plug. For maximum safety, and to comply with electrical codes, this connection must be made. If you use an adapter, be sure the ground wire is connected to a good ground, such as a conduit or cold water pipe. The faceplate screw of an electrical outlet MAY NOT BE ADEQUATE.

D Load Connections

The SM6 will dim any load from 1 watt through 1000 watts per channel. The load may be incandescent, inductive or resistive. This includes conventional incandescent, quartz incandescent, "rain

lights", pin-beams, and similar "low-voltage" lighting loads containing transformers. Fluorescent and neon loads can be controlled by the SM6 with no damage to the dimmer, but the nature of these loads requires specialized circuitry to get full range dimming. Consult the factory if you need to dim such loads.

To use, merely plug the load or an extension cord to the load into the outlet which corresponds to the circuit you wish to use. Always use grounded cords. Loads may be single fixtures or combinations of lights not exceeding 1000 watts per channel.

OPERATION

This controller has a pair of calibrated linear slide controls for each channel. These slide controls make up the two scenes: X and Y. When the X-Y crossfader is moved up to the X position, the X scene is active, and the scene X controls affect the lights.

The master control affects all channels in either scene. It is a true proportional grand master and must be up to allow any channel full output. The bump buttons located between the faders will flash each channel to full output regardless of the setting of the crossfader or the master. The red blackout switch will black out all channels when activated (down) and will override all other controls.

The SM6 has a timer to allow a linear timed crossfade up to 2 minutes and 40 seconds. When the timer is set to zero (counter-clockwise) the crossfade follows the X-Y crossfader. If the timer is set fully clock-wise and the XY crossfader is pushed quickly from scene X to scene Y, then a smooth linear crossfade will be completed in 2 minutes and 40 seconds. The crossfade can be stopped or reversed at any time by moving the XY crossfader. The timed crossfade can be sped up or slowed down at any time by readjusting the timer control. The master is not affected by the timer in the Y scene but is affected in the X scene. Therefore, a timed master fade-up or down is possible in the X scene.

The green LED light is the power indicator. The LED indicators next to the X-Y crossfader track the crossfade. When the top LED is bright and the bottom LED is off, the X scene is active. During a crossfade, one LED will become dimmer while the other becomes brighter. The master control will fade both LED's just as it does the channels.

The SM6 has a footswitch option which plugs into the accessory jack in the back and allows remote crossfades and remote blackouts. The crossfade timer is fully functional with this accessory. Note: The crossfader must be in the upper, or "X" position for the footswitch to work properly.

The SM6 controllers can be slaved together in a daisy-chain to control 12 or more channels. Two or more controllers are connected together at the accessory jacks. The first controller becomes the master with its master and X-Y crossfader controlling all the slaves in the chain. The slave units' masters and X-Y crossfaders are inactive and must be down to work properly. The timers are all independently functional. Note: Units with serial numbers 63049 or earlier must be factory modified before they can be slaved; 63050 or later will do this automatically.

The BLACKOUT switch is located near the Master. Operating this switch downward causes an immediate cut-off of the output of all dimmers on the console. Turning the switch back on without changing the dimmer settings will cause all channels to "switch on" to the settings indicated.

The INDICATOR LEDS indicate that the console is on and is receiving power. BUMP BUTTONS cause the output of the respective channels to go to "full" when depressed by the operator. The BUMP, or "flash", BUTTONS override all controls, including BLACKOUT.

The channel circuit breakers on the back panel protect the dimmers against overloads and some short circuits. Should the circuit breaker trip (the center button protrudes when the breaker trips), the channel will be dead. Clear the fault and reset the breaker by pushing in the center button. If the channel remains dead, or is ON with no control over its intensity, the triac has been blown and must be replaced. Contact the factory for repairs (See "OBTAINING SERVICE").

The filter chokes associated with each dimmer are provided to reduce the electrical and mechanical lamp noise, which is a byproduct of phase control dimming with triacs. To achieve this noise reduction, the choke itself generates some audible buzz. Therefore, it is recommended that the dimmer pack be located out of the playing space if the noise is objectionable.

IN CASE OF TROUBLE

A Troubleshooting

The SM6 is a ruggedly designed unit. It can withstand occasional mistreatment, but, like any precision instrument, it should be treated with care and respect.

Often what appears to be a problem with the dimmer is something else. A review of the following paragraphs and the troubleshooting chart may save you a long distance phone call, a trip to the Service Center, or the cost of shipping and/or repair. Even if something is still wrong, this process will help you explain the malfunction to the service technician.

Note that although only the upper inlet needs to be connected to operate channels 1 through 3, BOTH inlets must be connected in order to operate channels 4 through 6.

Read the operating instructions carefully. BE SURE you know how to operate the equipment. Do not expect this equipment to operate exactly like others. Many apparent failures result from not being familiar with the operating characteristics of the unit.

There are also some basic checks that you can do to help isolate the problem. There are two forms of malfunctions common to solid state dimmers:

"failed off", in which the lights do not come on, and "failed on", in which the lights cannot be turned off. If your system has "failed off", check that a lamp load is connected and that the lamp is not burned out. Verify that the primary power (supply outlet) is live. Check all circuit breakers on the dimmer (a tripped breaker has its middle button protruding). All switches and faders should be set "on" or up full.

Make sure that the loads are plugged in and that all extension cords are continuous and that they go to the loads you think they go to. Check load circuits by plugging them into a known live "non-dim" circuit not on the dimmer pack. "Failed on" dimmers will stay on no matter how the controls are set. Pull all faders to zero, turn off the BLACKOUT switch and kill the Master. If the channel remains ON, the fault is in the Triac or control circuitry and requires a technician to repair.

The most common malfunction in solid state dimmers is a failed thyristor (triac or SCR). They can either "fail on", in which the light cannot be turned off, or "fail off", in which the light cannot be turned on. A "failed off" condition also may cause a resistor on the circuit board to burn. This failure is almost always caused by a short in the load it controls. The short can be in the cable, in the connectors, in the light fixture, or in the bulb itself. Although the dimmer circuit breaker or fuse will trip, it may not be fast enough to save the thyristor, and the thyristor will need to be replaced.

Please check the load: plug it into a known good wall outlet before plugging it into other dimming channels. **Caution:** A short in the load may trip a building breaker.

Other Problems

Channels which flicker or cut in and out are victims of an intermittent connection somewhere. Check all cables and connectors for loose connections or breaks. Broken slide controls will also cause a channel to cut in or out. This can also occur if dirt, coffee, or some other liquid is spilled into the slide control slot. Curing this problem usually requires the replacement of the control. Cleaning with WD 40 or TRI-FLOW may fix it temporarily.

B Obtaining Service

Call Dove Lighting Systems, Inc. for a RMA#

(Return Merchandise Authorization Number)

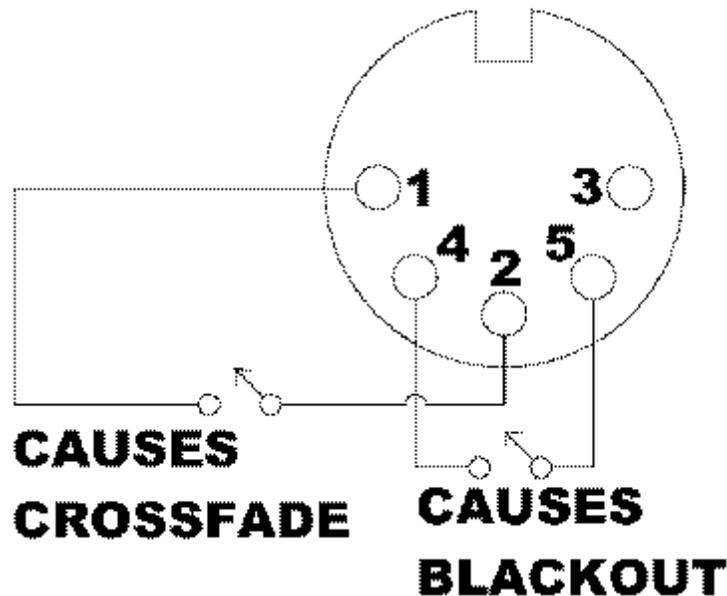
All equipment must have a RMA# for service.

SEND REPAIRS TO:

Dove Lighting Systems, Inc.
3563 Sueldo Street, Suite E
San Luis Obispo, California 93401
Phone: (805)541-8292

Please include a note describing the problem, your address, telephone number, and, the date upon which your unit should be returned.

CONNECTOR WIRING



LIMITED WARRANTY

The manufacturer agrees that its products shall be free from defects in material or workmanship over a period of one year from date of shipment from the factory. Said warranty will not apply if equipment is used under conditions of service for which it is not specifically intended. The manufacturer is not responsible for damage to its apparatus through improper installation, physical damage, or poor operating practice.

If any device is found unsatisfactory under the warranty, the buyer should notify the manufacturer, and after receipt of shipping advice, buyer may return it directly to Dove Systems, San Luis Obispo, CA, shipping prepaid. Such equipment will be replaced or put in proper operating condition, free of all charges except transportation. The correction of any defects by repair or replacement by the manufacturer shall constitute fulfillment of all obligations to the purchaser. Manufacturer does not assume responsibility for unauthorized repairs to its apparatus, even though defective.

Manufacturer shall not be liable for any consequential damage in case of any failure to meet the conditions of any warranty of shipping schedule, nor will claims for labor, loss of profits, repairs, or other expenses incidental to replacement be allowed.

No other representation, guarantees or warranties, expressed or implied, are made by the manufacturer in connections with the manufacture and sale of its equipment. This warranty is non-transferable and applies to the original buyer only.