

## Flash Bulb Sequencer Model FBS



**Price \$1245. Terms:** Net 30 or MasterCard/Visa, Shipping Prepaid in USA

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# Flash Bulb Sequencer Model FBS Description and Operation

## General

The Flash Bulb Sequencer Model FBS will fire 8 flash bulbs in sequence with programmable interval and initial delay. FBS units can be cascaded to fire any number of bulbs. The FBS is designed for any flash bulb rated to fire on 3 to 125 volts. The FBS timing is crystal-controlled for high accuracy with no calibration or adjustment.

## Physical

**Size:** 9" L x 8" W x 4" H     **Weight:** 2 pounds

Packaged in a high-impact plastic latching and gasketed case with handle. Standard case color is yellow. The connector panel is aluminum and hardware is stainless steel.

## Power Requirement

Operates on 9-16VDC input to a standard 2.1mm jack. Current consumption is 100 milliamps for 1 second after arming, 10 milliamps in safe or arm, and 1 milliamp after sequencing until switched to safe or re-armed. A compatible 12VDC wall transformer is included.

## Operation

A sequence is initiated by either a switch closure to ground, or an open-collector/drain low at the BNC **CLOSURE-IN** connector. This input has a 10K ohm pull-up to 5VDC. The first channel fires after a thumb-wheel programmable **DELAY** of 00-99 milli-seconds. The other channels fire in sequence at the thumb-wheel programmable **INTERVAL** of 01-99 milli-seconds. An interval of 00 is invalid and will prevent the sequence from initiating. An open-collector low will appear on the BNC **CLOSURE-OUT** connector one interval after the last channel fires. To cascade FBS units connect the **CLOSURE-OUT** of one unit to the **CLOSURE-IN** of the next unit, set the same interval on all units, and set the delay on all units except the first to 0. Each of the 8 channels has an independent capacitive-discharge circuit to provide high instantaneous current of 10 amps to a bulb yet with low input power and immunity to damage or interaction between channels due to output short-circuits. In the **SAFE** mode the sequence is inhibited, the output capacitors are discharged, and the bulbs can be installed without danger of firing, except due to static electricity as cautioned by the bulb manufacturer. When switching to the **ARM** mode the capacitors will charge in 1 second and a sequence will be enabled, awaiting a **CLOSURE-IN**. After a sequence has completed the **ARM** indicator will go off, and although the capacitors will recharge, another sequence will be inhibited until switching to **SAFE** then back to **ARM**. Bulb connections are two-blade polarized sockets useable with the standard screw-base utility lights with reflectors and spring clamps. Each channel has an indicator which serves both as a self-test and a bulb-test. In the **ARM** mode the channel indicators will light when a bulb is installed completing the circuit. This gives confidence that bulbs are screwed-in adequately and ready to fire. Without bulbs, each channel indicator will light during the interval in which a bulb would have been fired, providing a convenient self-test. As a further test an LED can be plugged into the socket, observing polarity, to substitute as a bulb and light along with the indicator.