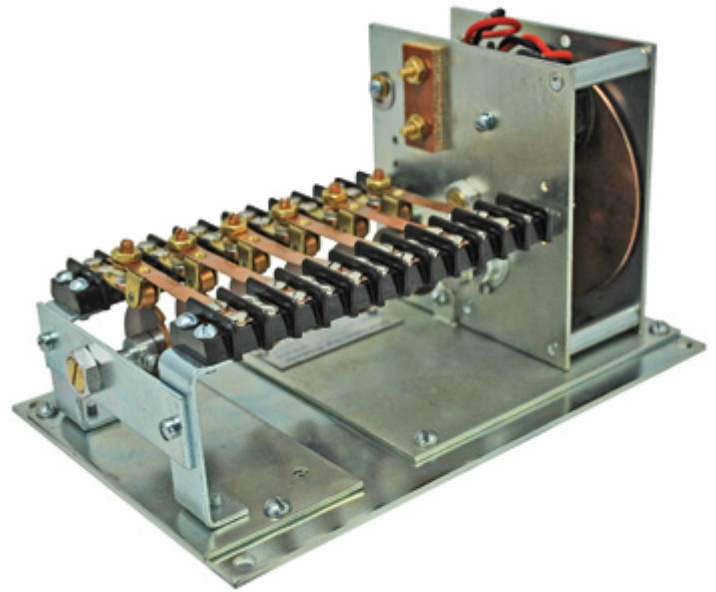


FMS Model 33 Spellers

FMS Model 33 Spellers are designed for applications where electric circuits are to be flashed in particular sequences such as with spelling or other animation.

Variable in both cycle speed and cam cut, Model 33 Spellers are some of the most versatile sign controllers available. Spellers can be built with as few as one circuit, or as many as necessary to accommodate the required flashing sequence. Neon can be controlled by installing the speller on the primary side of transformers.

Model 33 units are UL and cUL listed and come with a 115 Volt Motor, 50/60 cycle. They are also available in 220 volt as a special order from your distributor.



How to Order a Model 33 Speller

All Model 33 Spellers are custom made. To order a Model 33 Speller, you will need to specify three key elements:

1. namely the number of circuits
2. the speed
3. the flashing sequence.

NUMBER OF CIRCUITS

First, you will need to determine the number of circuits required. Each distinct section of the items to be animated will require its own circuit.

SPEED

Next you will need to determine the speed, or how quickly you want the speller to complete its performance. Speed ranges are easily adjustable in the field, so specifying an exact time is not necessary. Model 33 Spellers are available in 4 adjustable speed ranges as follows:

Fast (F)2 to 8 seconds per cycle
Medium (M)4 to 20 seconds per cycle
Slow (S)8 to 40 seconds per cycle
Extra Slow (XS).....18 to 90 seconds per cycle

Not all Spellers are available in all speed ranges. In general, the larger the speller the slower the speed ranges available. Specific speed range availability is based on the number of circuits as follows:

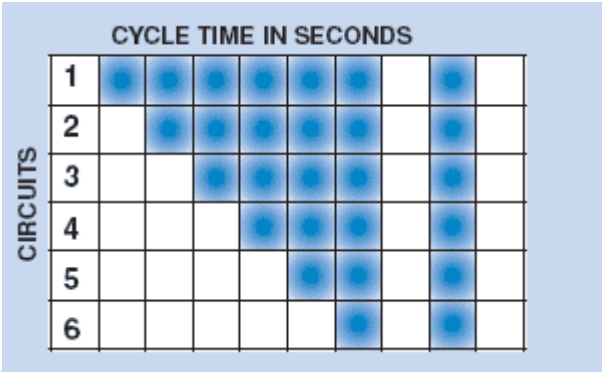
- 5 and fewerF, M, S, XS
- 6 through 10M, S, XS
- 11 through 15S, XS
- 16 through 20XS

FLASHING SEQUENCE

Finally, you will need to specify a flashing sequence. To aid customers in communicating the flashing sequence, we have developed the sequence charting system shown below. You can use one of these standard sequences, or develop a custom sequence of your own. Virtually any sequence can be constructed.

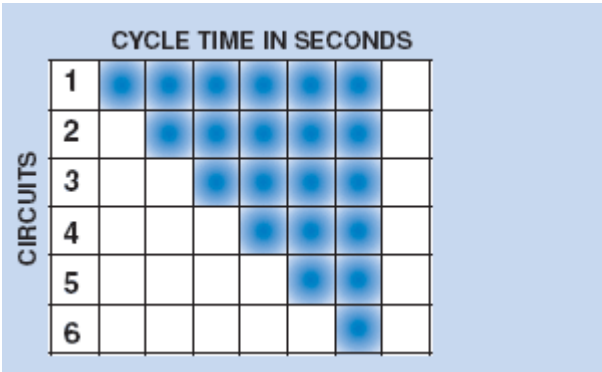
The term “cycle” refers to the time required for the flashing action to complete its performance and start to repeat. Cycle time is expressed in seconds. “Circuit” refers to the current controlled by one cam and set of contact points. The time a circuit is to be on is indicated by a blue square, the time off by a blank square. Contact us with any sequencing questions.

Guide for Constructing Speller Sequence Charts



Sequence One

- 1 on / 2 on / 3 on / 4 on / 5 on /6 on
- All off / All on / All off
- Repeat

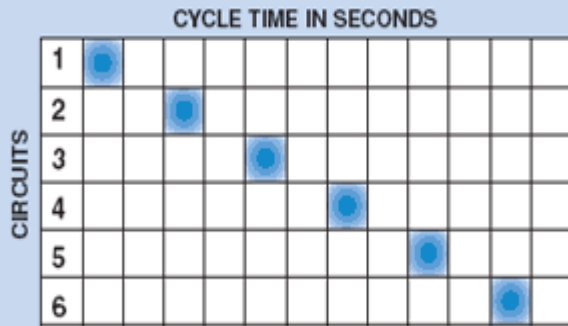
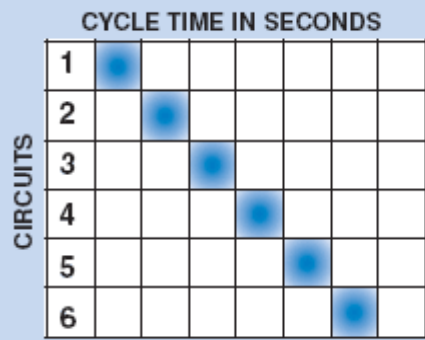


Sequence Two

- 1 on / 2 on / 3 on / 4 on / 5 on / 6 on
- All off
- Repeat

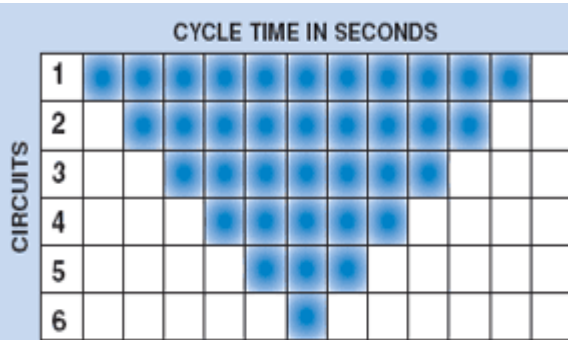
Sequence Three

- 1 on-off / 2 on-off / 3 on-off / 4 on-off / 5 on-off / 6 on-off
- All off
- Repeat



Sequence Four

- Same as Sequence Three except some off period between each on segment.



Sequence Five

- Wipe on, wipe off
- All off
- Repeat