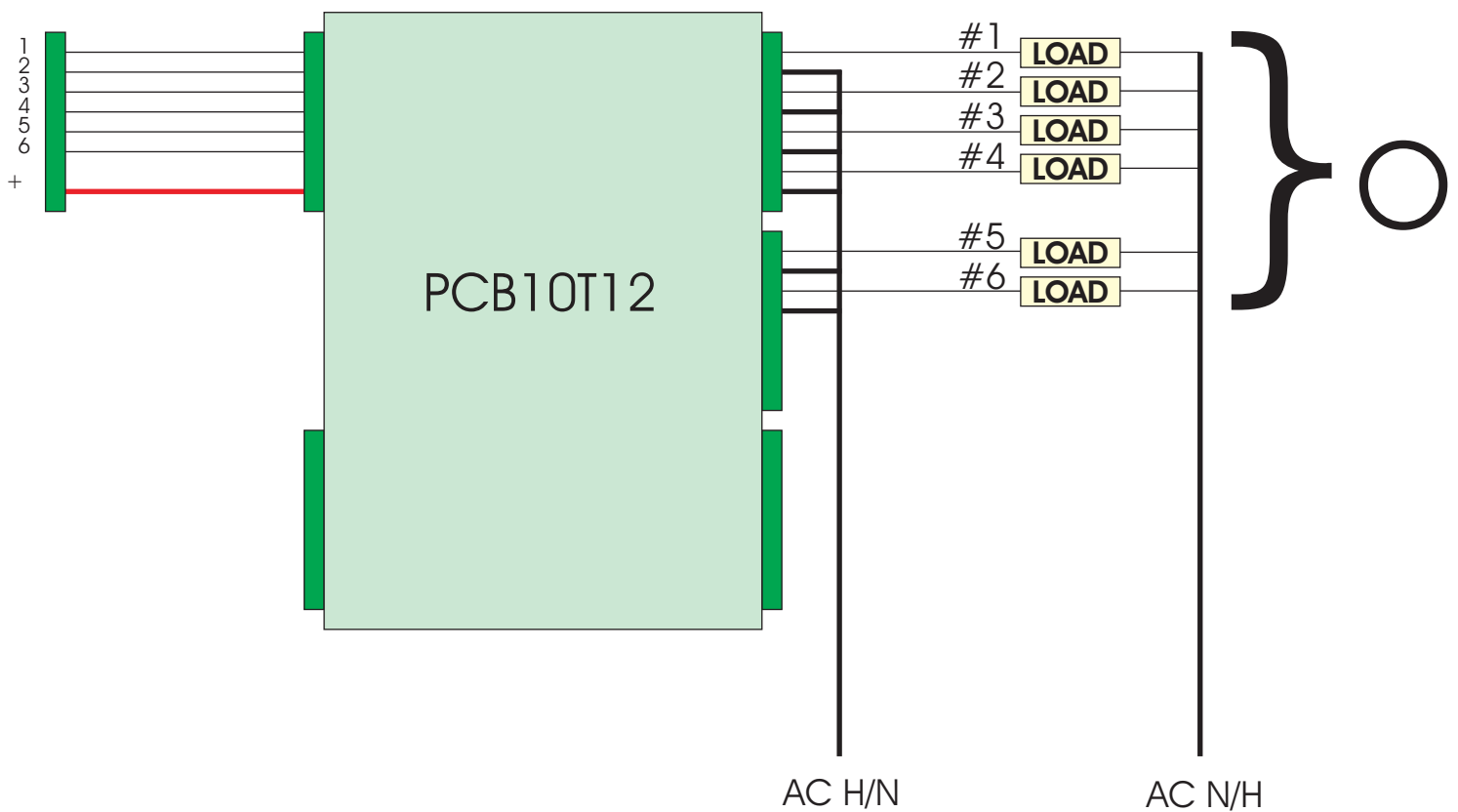# 6 point scintillate bulb wiring example

In the following example the letter "O" has 48 bulbs.

The triac board will use 6 triacs to turn on the 6 lamp loads.

The controller will output 6 control signals to turn the 6 triacs on and off.

```
1
2
3
4
5
6

+
```

PCB10T12

#1 LOAD
#2 LOAD
#3 LOAD
#4 LOAD

#5 LOAD
#6 LOAD

} O
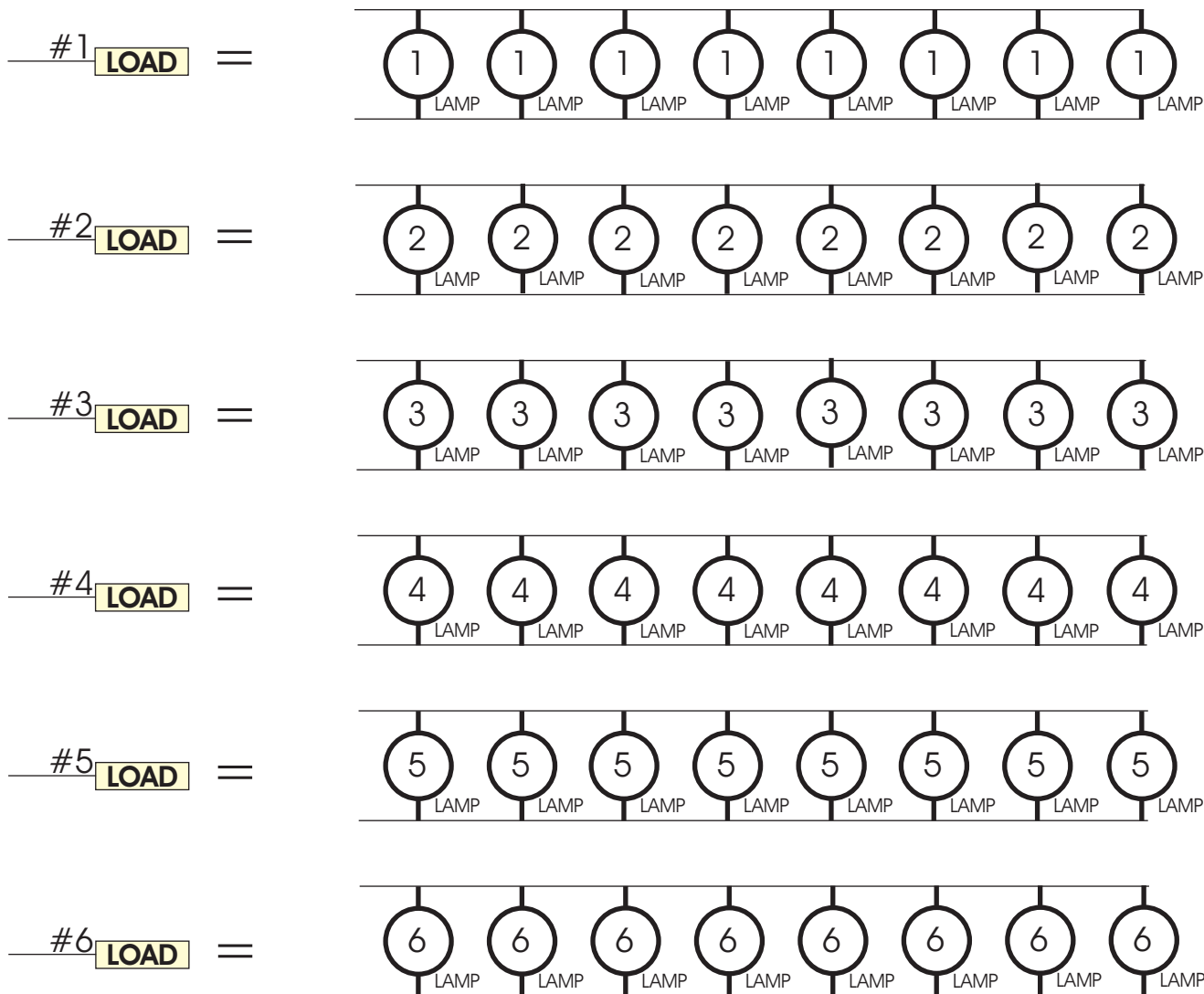
AC H/N   AC N/H

To determine how many lamps to wire in parallel to make a lamp load divide the total amount of lamps in the letter by the number 6.

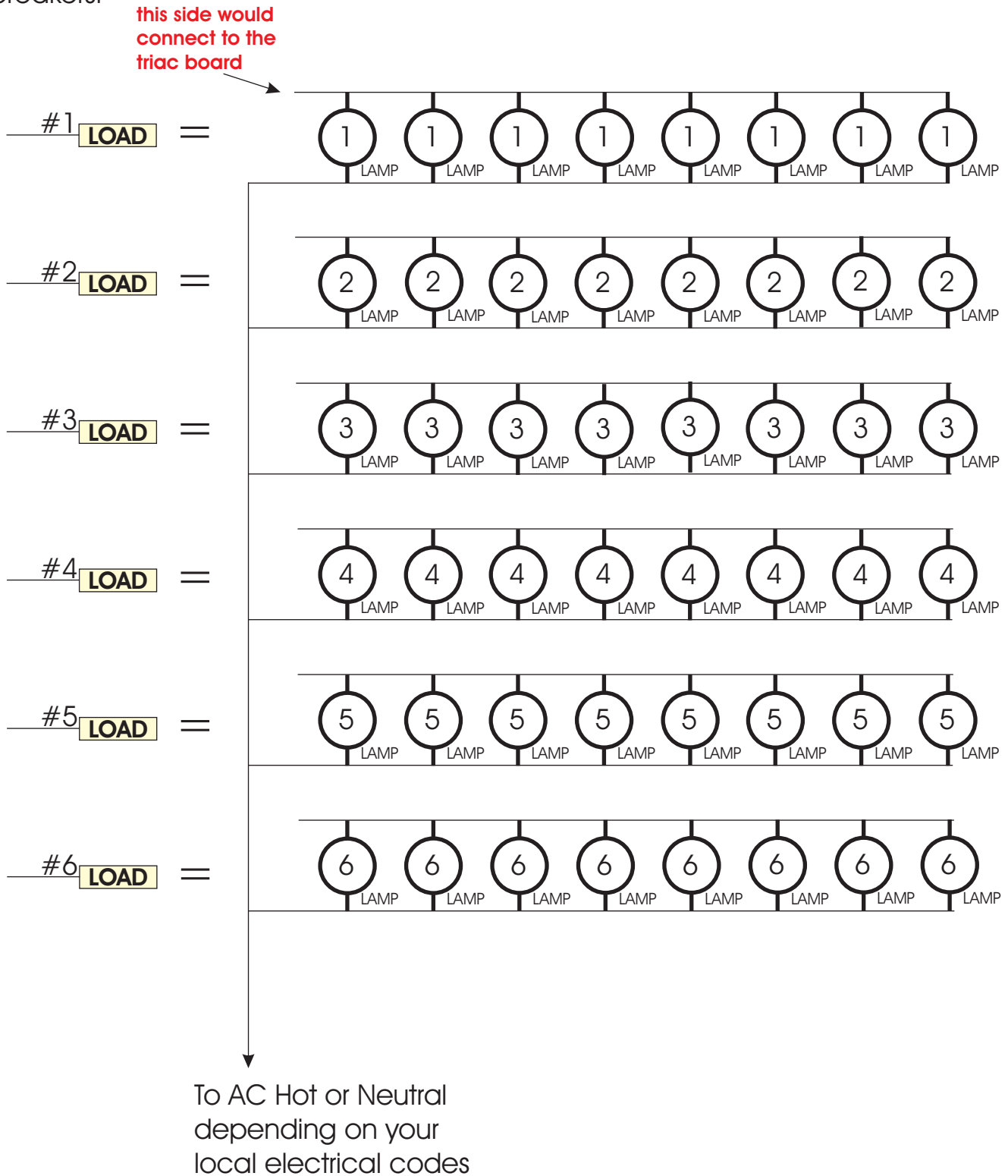$$\frac{48}{6} = 8 \text{ lamps per load}$$

In the wiring diagram below you can see how the lamps are wired in parallel to make a lamp load. 6 lamp loads are used because the software has been written to flash the lamp loads in a 6 point scintillate pattern.

#1 **LOAD** =

| 1 LAMP | 1 LAMP | 1 LAMP | 1 LAMP | 1 LAMP | 1 LAMP | 1 LAMP | 1 LAMP |

#2 **LOAD** =

| 2 LAMP | 2 LAMP | 2 LAMP | 2 LAMP | 2 LAMP | 2 LAMP | 2 LAMP | 2 LAMP |

#3 **LOAD** =

| 3 LAMP | 3 LAMP | 3 LAMP | 3 LAMP | 3 LAMP | 3 LAMP | 3 LAMP | 3 LAMP |

#4 **LOAD** =

| 4 LAMP | 4 LAMP | 4 LAMP | 4 LAMP | 4 LAMP | 4 LAMP | 4 LAMP | 4 LAMP |

#5 **LOAD** =

| 5 LAMP | 5 LAMP | 5 LAMP | 5 LAMP | 5 LAMP | 5 LAMP | 5 LAMP | 5 LAMP |

#6 **LOAD** =

| 6 LAMP | 6 LAMP | 6 LAMP | 6 LAMP | 6 LAMP | 6 LAMP | 6 LAMP | 6 LAMP |

One side of all of the lamp loads is wired together (usually the center of the lamp socket not the threaded shell) and is wired to either AC hot or AC neutral depending on your local electrical codes.

A circuit breaker can be wired in series with this common line if one will handle the AC current of the combined lamp loads. If the lamp loads total AC current draw is more than one circuit breaker can handle separate the line and add more breakers.

this side would connect to the triac board

#1 LOAD =

| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP |

#2 LOAD =

| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP |

#3 LOAD =

| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP |

#4 LOAD =

| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP |

#5 LOAD =

| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP |

#6 LOAD =

| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP | LAMP |

To AC Hot or Neutral depending on your local electrical codes

read on --->

The secret to making a letter animate evenly is the placement of the bulbs within the letter. Each lamp load's lamps should be placed ramdomly within the area of the letter.
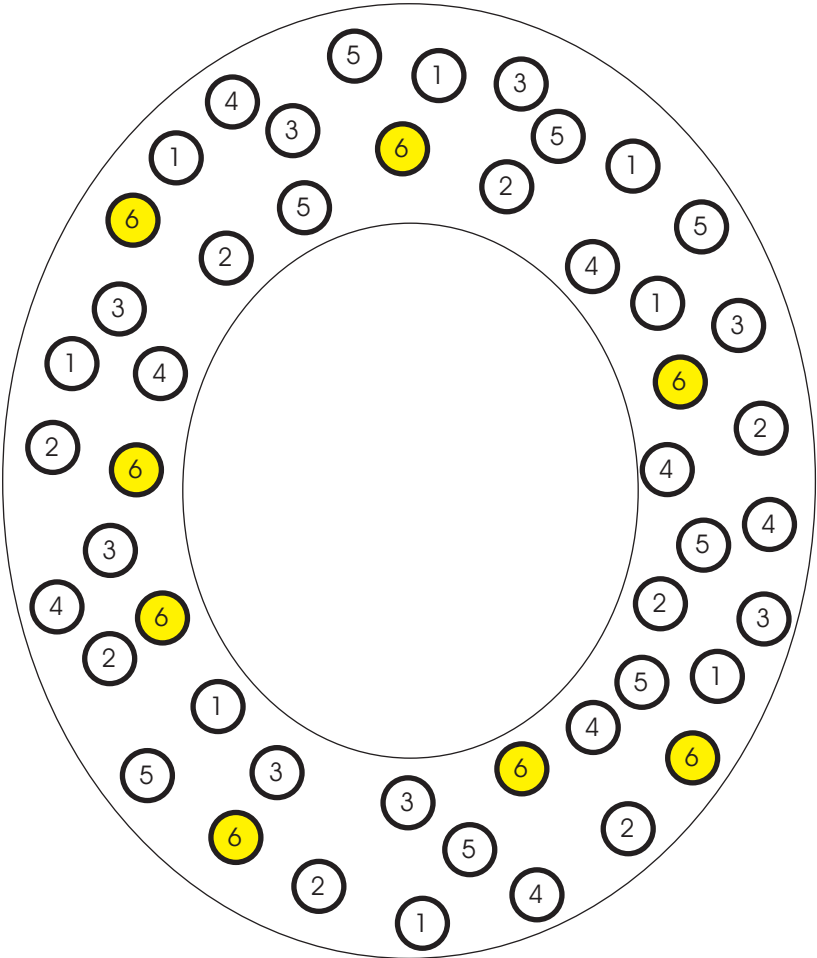
Random placement of lamp load #6 consisting of 8 lamps.

The program work sheet below shows a 6 point scintillate pattern. It shows that the pattern is 4/2, meaning that for each step in the sequence 4 lamp loads will be on while 2 lamp loads will be off.

	lamp load 1	lamp load 2	lamp load 3	lamp load 4	lamp load 5	lamp load 6
sequence step 1	●	●	●	●	○	○
sequence step 2	○	●	●	●	●	○
sequence step 3	○	○	●	●	●	●
sequence step 4	●	○	○	●	●	●
sequence step 5	●	●	○	○	●	●
sequence step 6	●	●	●	○	○	●

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