# Battery Charger Board Wiring

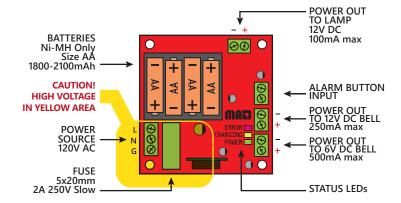


# For Emergency Lamp Systems

#### **OPERATING PRINCIPLE**

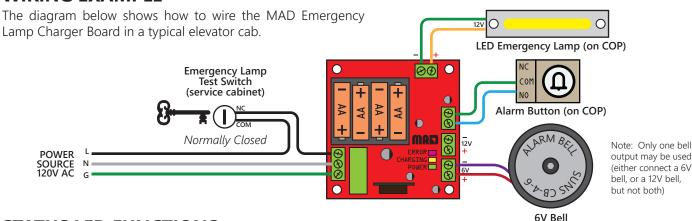
The MAD Emergency Lamp Charger Board can be used in conjunction with a compatible bell and LED emergency lamp, providing power for alarm functions and backup cab lighting for a minimum of four hours during a power failure.

When power is present at the 120V AC Input, the microprocessor-controlled intelligent battery charger monitors the battery state and maintains the on-board batteries in a charged, ready-to-use condition. Closing the contacts on the alarm button input (e.g. by pressing an alarm button on the COP) will activate the bell and lamp outputs.



When the AC power fails, the lamp output activates automatically and remains on until power returns or until the batteries are depleted. A low-battery cutoff circuit shuts off the lamp when the batteries are almost drained, ensuring they are not damaged by excessive discharge. Batteries are recharged automatically when AC power is restored.

## WIRING EXAMPLE



#### STATUS LED FUNCTIONS



Full charge in progress after initial power-up.
Duration will be up to 16h.

**Normal**Battery charging is complete; board is idle.

ERROR — 1x/sec

Normal
Periodic top-up charge in progress. Occurs weekly.
Duration will be up to 4h.

ERROR 4x/sec
CHARGING POWER

Battery error
Batteries not connected or
voltage out of range.
Check batteries.

ERROR \_\_\_\_\_\_ 1x/sec
CHARGING \_\_\_\_\_
POWER \_\_\_\_\_

Temperature error
Cannot charge batteries
because board is either
too hot or too cold.

### **SPECIFICATIONS**

12V LAMP OUTPUT:

AC POWER INPUT: 120V AC 60Hz 3W Max TEMPERATURE: 0°C-40°C (ambient)
FUSE (AC INPUT): 250V 2A Slow-blow 5x20mm BACKUP TIME: Minimum 4h with 100mA lamp

ALARM TERMINALS: Connect only to dry contacts rated for (typical 8h with good batteries)

bell voltage and current STANDARDS: Conforms to ASME Standard A17.5 12V DC 100mA Max (continuous) Certified to CSA Standard B44.1

6V BELL OUTPUT: 4-6V DC, 500mA Max (intermittent) BATTERIES: **Ni-MH batteries only**, size AA / HR6 12V BELL OUTPUT: 12V DC 250mA Max (intermittent) 1.2V 1800-2100mAh capacity. 4 pieces

1.2V 1800-2100mAh capacity, 4 pieces Replace all batteries at the same time.