



**GENERAL**

The Vanner model 1860GCP is a heavy duty, Duo-Mode electronic flasher. It has been independently tested and certified to comply with the Federal specification for Ambulances KKK-A-1822C. this Duo-Mode flasher is designed to be operated manually in either the Primary or Secondary mode. Primary Mode is the standard running mode which alternately flashes the A warning lights with the B & C warning lights. All lamps operate at full power when in the Primary Mode. The Secondary Mode is normally set at the scene and alternately flashes the A warning lights with the B warning lights at full power with C lights off.

**WARNING LIGHTS**

The 1860GCP flasher can be used with most incandescent and halogen warning lights. In order to have a KKK-A-1822C certified ambulance warning light system, the lights used must also be KKK-A-1822C certified.

**CHARACTERISTICS & TIPS**

- 1) Under some load conditions this flasher may turn on for one flash when the main power is applied and the remote ground control switch is off. This is a normal condition that indicates that the flasher is operating properly.
- 2) If both the Primary and Secondary terminals are grounded, the flasher will operate in Primary Mode.
- 3) For extended service reliability it is important that the flasher not be overloaded. In some cases the unit's short circuit protection might react to the overload condition and shut off that flasher terminal.

**SPECIFICATIONS**

Maximum Output Current:	Terminal A -40 amps; Terminal B -24 amps; Terminal C -30 amps.
Input Voltage:	10-16 Vdc, 13.6 Vdc nominal
Flash Rate:	75-80 per minute at 50/50 duty cycle
Ambient Temperature:	-40°F to +150°F (-40°C to +65°C)
Fuse or Circuit Breaker	Customer supplied overload protection must be in series with +12V input and should be 25% greater than either all A lights, or all B & C lights, whichever is larger.

**TROUBLESHOOTING**

PROBLEM	ITEMS TO CHECK
All lights do not flash:	<ol style="list-style-type: none"> <li>1) Is the battery voltage less than 10Vdc?</li> <li>2) Are the wire and light connections proper?</li> <li>3) Are there too many lights connected to a single terminal?</li> <li>4) Is the remote ground control switch wired correctly?</li> </ol>
One Output does not flash:	<ol style="list-style-type: none"> <li>1) Is the battery voltage below 10Vdc?</li> <li>2) Are the wire and light connections proper?</li> <li>3) Is the affected output shorted or overloaded?</li> </ol>

## LAMP REPLACEMENT DIAGRAM FOR KKK-A-1822C

