

CRL 202 Power Unit Ten-Lite System

The Ten-Lite System is powered by the CRL 202 Electronic Power Unit. This power unit operates up to fifty stations within the Ten-Lite System, or up to 250 lamps lit at a time.

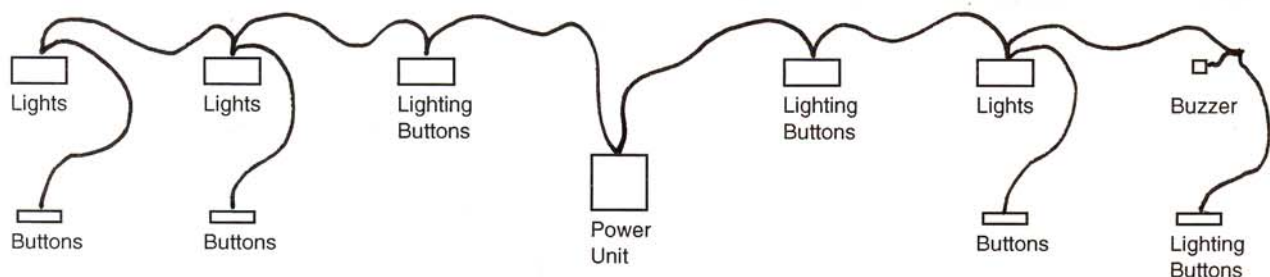
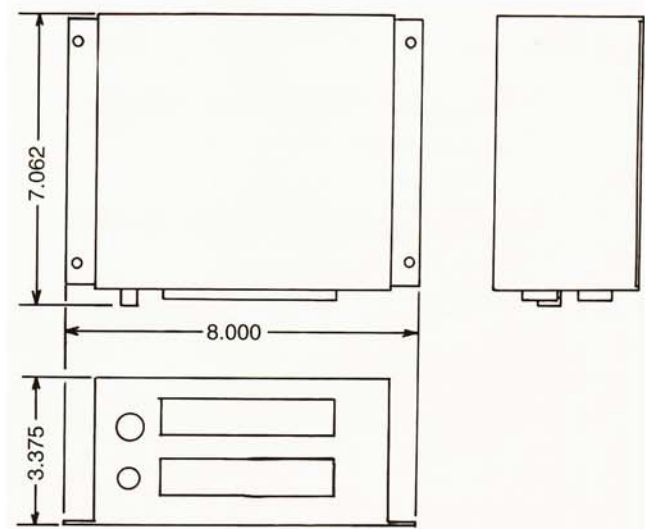


The CRL 202 Power Unit is placed as much in the center of the office as possible. Normal locations include utility room, basement, dark room, under laboratory counter and under reception counter. If placed in a cabinet under 18 X 18 X 18 inches, ventilation holes should be drilled in the top and the bottom of the cabinet. Six 1¼ inch holes should provide sufficient cooling. No materials should be stacked against or within several inches of the unit as they will prevent cooling. The CRL 202 Power Unit plugs into a standard 120 volt, 50 or 60 HZ electrical outlet using a grounding plug. If a grounded outlet is not available, an adapter should be used with the grounding wire connected to a cold water pipe or other proper electrical ground. As the CRL 202 Power Unit uses less power than many electric clocks when the lights are not on, it is not necessary to turn it on and off each day.

All stations of the Ten-Lite System are connected to the CRL 202 Power Unit using #84 Cable. This cable has been engineered by Theta Corporation and is manufactured to our specifications. It provides a proper balance between size, cost and proper function within the average System. The #84 Cable is routed from the CRL 202 Power Unit to a station, from that station to the next station, from that station to the next station, and so on. At the last station in the string, the cable ends.

It is not necessary to return to the power unit from each station with the cable. With normal spacing of thirty feet between stations, **not more than 12 stations with square lighting pushbuttons or round display lights should be connected on one string of cable from the power unit.**

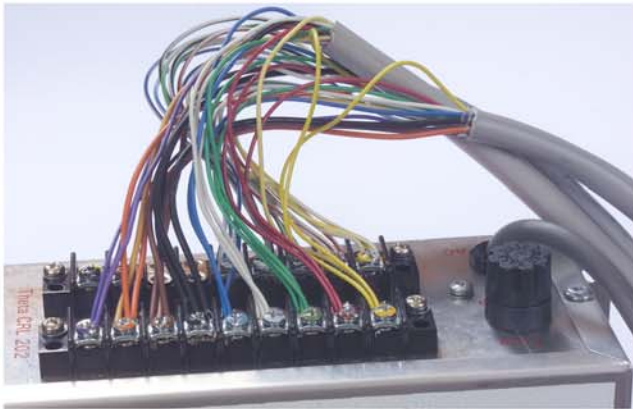
In most Systems, several strings of cable should start from the power unit to feed stations. Branch cables may be connected at any point on any cable in the System to add additional components where convenient. An example of a Ten-Lite System wiring is shown on this page.



Typical Ten-Lite System Wiring

Terminal Screws

All cables which are to be attached to components with terminal screws, should have the outside jacket removed about four inches. The conductors should have their insulation removed about 1/4 inch. All conductors of each color are clamped under the screw of that color. In all cases, the System is wired in parallel. Terminal screws have rising terminal clamps. These are square washers under the head of the screws which rise with the screw heads as the screws are loosened. After loosening the screw, all conductors of the color of the screw are placed under the square washer and the screw is firmly tightened to clamp the conductors in place. The conductors do not have to be wrapped around the screw. The screw should be tight enough so that any individual conductor may be pulled with about five pounds of tension without dislodging. Up to six conductors may be clamped under each screw.



Theta Phone Output

The CRL 202 Electronic Power Unit has an auxiliary output of 12 volts DC to operate Theta intercom phones. This output is on the red & black screws labeled "Phone". See instruction sheets on Theta Phones for installation instructions on Theta Phones.

Ten-lite System Output

The output for the Ten-Lite System is on the fourteen colored screws labeled "Ten-Lite". These screws provide the 25 volt AC circuits to operate the Ten-Lite System. The CRL 202 Electronic Power Unit has electronic latching circuits to keep lights on after the momentary contact pushbuttons in the system are released. A reset circuit is provided to turn off the

lights when a momentary contact reset pushbutton is pressed. The reset will also be operated if a load of more than 4 amps total is detected on the orange terminal screw or a load of more than 2 amps is detected on any one of the ten colored light circuits. A temperature sensor will turn the unit off if the temperature inside the power unit's transformer exceeds 100° centigrade.

Power Requirement

The CRL 202 Electronic Power Unit plugs into a 120 volt AC grounded outlet. A 3AG 4 Ampere fuse protects the unit from internal faults. **The power plug should be unplugged while changing the fuse.**

Trouble Indicator Light

The Trouble Indicator Light **will not light** during normal operation of the unit. If the Trouble Indicator Light is lit continuously, there is a short in the system wiring between the orange wire and the black wire, metal housing of one of the components, or a building ground such as a water pipe or metal stud. If the Trouble Indicator Light flashes as one particular button is pressed, there is a short on that particular light's wire. If the Trouble Indicator Light flashes as all buttons are pressed, there is either a short to the violet wire or a defect within the Power Unit. Please call Theta Corporation for help in diagnosing any problem.