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**MultiNeon® LTD.**  
*An Affiliate of Lowell-Light Mfg., Inc.*

### Specifications:

#### Power supply:

9 VDC, 0.5 Ampere, unregulated.

#### Operating Temperature:

0°C to +50°C.

#### Storage Temperature:

-20°C to +75°C.

**Compliance:** tested for FCC part 15 compliance.

### Output:

USITT DMX-512/1990 compliant.  
Three pin XLR connector.

### HOST Female Connection:

**Baud rate:** 38,400 bps, 8 data bits, 1 stop bit, no parity.  
RS-232 straight through cable (supplied).

### Indicators:

Two LED's located in rear panel of the unit. One red, one green.

### Operating systems:

Windows '95, '98.

### Program capacity:

- **Option 1:** 16 different programs with a combined maximum of 1150 steps of 24 DMX channels (or 8 Color/FX Creators).
- **Option 2:** maximum of 4,600 steps, 24 channels/step.
- **Option 3:** maximum of 9,200 steps, 24 channels/step.

### Step resolution:

Programmable from 0.01 second to 255 seconds, or infinity per step. (Note: some neon transformers may not be able to be flashed on & off at high rates. Consult transformer manufacturer for further info.)

### Convention:

For the rest of this document we'll refer to the personal computer (or laptop) as the "host" system.

Repairs, problems, suggestions and requests for brochures/catalogs, instructions and parts lists can be handled through your Authorized MultiNeon service center or directly through MultiNeon. Electrical repairs should be made only by MultiNeon or by a qualified electrician.

### Warranty:

Two year limited warranty, parts and labor. Contact MultiNeon Ltd. for further information.  
**1-877-new-neon**

### Service:

There are no user serviceable parts inside the PCD. **Please DO NOT open the unit.** Doing so will automatically void the warranty.

### Software updates:

Due to continuous improvements on the product, new software releases will become available in the near future. They are free of charge, and can be downloaded from our web site. Please check the web site often for latest updates and releases.

**[www.multineon.com](http://www.multineon.com)**

## Thank you for purchasing the PCDesigner 1.

Model	Description
81100	PCDesigner 1, AC Adapter 110V, Software CD, Instruction Book RS-232 Cable

It is designed to work exclusively with the MultiNeon Color/FX Creator. The PCDesigner 1 is an electronic storage unit that holds up to 16 user created programs to control the Color/FX Creator. Creation of the programs is simple and achieved by using the PCDesigner 1 software which can

be loaded from the enclosed CD-Rom. The software is IBM Windows 95/98 compatible and will not work on other computer systems. For complete instructions on using the software to create programs, see the Help files in the PCDesigner1 software.



## Connecting the PCD

- 1** Connect power to the PCD. It is recommended that the wall transformer powering the PCD be connected to a good surge suppressor.
- 2** If there are any pre-stored programs, the PCD will start running the program selected by the DIP switch automatically.
- 3** Connect the DMX cables (daisy chained) to the PCD.
- 4** Connect the RS-232 communication (straight through) cable from the host's serial port to the PCD (communication's port). Baud rate must be set on the host (if applicable) to 38,400 bps, 8 data bits, 1 stop bit, no parity.
- 5** Run the PCD software on the host.
- 6** At this point, the PCD will stop running the stand-alone program, and it will revert into slave mode. Please refer to the CD Help file for further explanations of this mode.

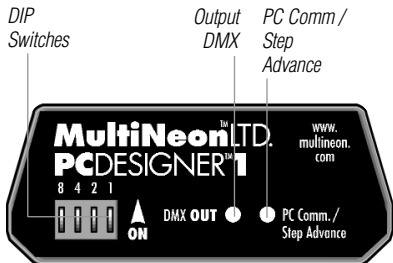
## Operation

**The PCD system consists of two parts: the hardware (or controller box) and the host distribution software.**

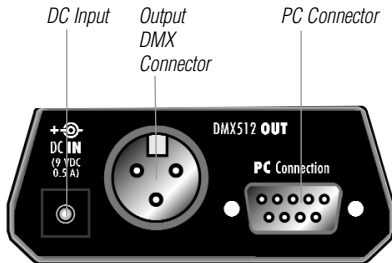
**Controls up to 8 CCR-1's sharing different addresses,** and its output is fully compliant to DMX-512/1990 as specified by the USITT. If desired, more than one unit can share the same address.

The back panel contains the connections for: DC power IN, DMX output and an RS-232 serial port used to program the PCDesigner.

### Front



### Back



**PCDesigner1 also features a highly accurate real time clock (RTC)**, which can be programmed to start and stop running a previously stored program, at a certain time each of the seven days of the week, supporting daily savings time (DST) depending on your location.

**A total of 16 different programs can be selected**

using the 4 DIP switches located in the front of the unit. Two LED's indicate the operation and status of the PCD.

**PCD can be programmed to**

run a total of 1150 steps in one program (or more, depending on the purchased option), or any combination of steps up to sixteen different programs, not to exceed 1150 steps in total.

*Example:* PCD can be programmed to run 2 programs of 50 steps each, and a third program containing 1050 steps (2 x 50 steps + 1 x 1050 = 1150 steps).

*Example 2:* will be to have 16 programs of 71 steps each.

**This dynamic allocation of programs** offers maximum flexibility to the end user, without the wasteful "hard" allocation of programs found on most DMX consoles.

**Each step can be programmed to stay a predetermined amount of time**

(step delay) before advancing to the next one, with a resolution of 10 milliseconds (0.01 seconds) and to a maximum of 255 seconds, with the possibility of staying in a step indefinitely. (Note: some neon transformers may not be able to be flashed on & off at high rates. Consult transformer manufacturer for further info.)

**Additional delays between steps may be accomplished**

by copying the same step several times. Please refer to the software operations manual for further information.

**PCD can be fully controlled from the host by using the RS-232 cable.** Once all the steps, Real time clock, DST, event settings, etc. are programmed in the host, the pre-programmed parameters can be downloaded into the PCD. Once the software application on the host is closed, the PCD will revert into a "master" or stand-alone mode, and will continue running the program set by the DIP switch.

**The "events" mode allows to turn designated programs**

(set by the DIP switch) to turn ON or OFF automatically at different hours each day. I.E program #5 can start running every weekday between 7:00 and 23:00, and between 13:00 to 18:00 on weekends. Provisions for automatic daylight savings time adjustment is also provided, and can be disabled from the host. Events programming is done within the program creation process. For more information, see the Help files in the software application.

### DMX Threshold adjustment:

This feature allows the user to set from the PCD (and under the host software control) the DMX threshold values for different ColorCreators, without the need for a 512 channels DMX console. Please refer to the software CD Help file for further information.

### Color/FX Creator self-addressing:

This feature allows the user to set a specific ColorCreator to a specific address, without the use of DIP switches. Please refer to the CD software Help Files for further information.

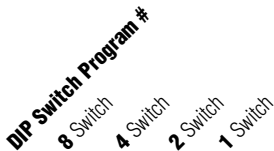
### DIP Switch settings:

Upon powering up the PCD, it will start running the program number set by the DIP switch in the rear of the unit. For example, if the switch is set to run program #5, as soon as the PCD is powered on, it will run program #5 automatically. If the program # is reset at the DIP switch, it will start running the new program automatically without the need of restarting the PCD. The switches are binary coded. Note that a value of 0 on the switch means program #1, or first program available.



### 16 User Stored Programs

Access the 16 user stored programs via the 4 DIP switches on the rear of the unit.



	8 Switch	4 Switch	2 Switch	1 Switch
1	OFF	OFF	OFF	OFF
2	OFF	OFF	OFF	ON
3	OFF	OFF	ON	OFF
4	OFF	OFF	ON	ON
5	OFF	ON	OFF	OFF
6	OFF	ON	OFF	ON
7	OFF	ON	ON	OFF
8	OFF	ON	ON	ON
9	ON	OFF	OFF	OFF
10	ON	OFF	OFF	ON
11	ON	OFF	ON	OFF
12	ON	OFF	ON	ON
13	ON	ON	OFF	OFF
14	ON	ON	OFF	ON
15	ON	ON	ON	OFF
16	ON	ON	ON	ON

## LED indicators:

There are two LED indicators on the back of the unit. A red and a green LED.

**Green LED** indicates operations related to the output of the unit (DMX-512).

**Red LED** indicates statuses related to the programming of the PCD (from the host) as well as the step advance of the unit.

## Green LED:

**OFF:** unit is not powered.

**Solid ON:** unit is powered, NO program running. Indicates the unit is in "sleep" mode. Refer to RTC operation.

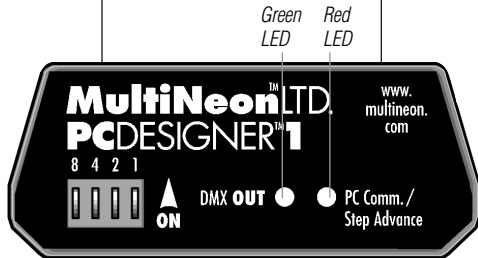
**Fast flashing (dimmed):** unit is powered ON, running a program set by the DIP switch.

**Slow flashing:** unit is powered ON, setting a "DMX threshold value" for a specific Color/FX Creator – please refer to the CCR-1 manual for detailed information. This is possible ONLY while the unit is operated on "slave" mode (under host control).

## Red LED:

**Flash:** if the unit is in stand alone mode, each flash indicates a step advance. If the unit is in slave mode, indicates handshake communication with the host.

**Solid ON:** current step was programmed to stay indefinitely on that step.



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