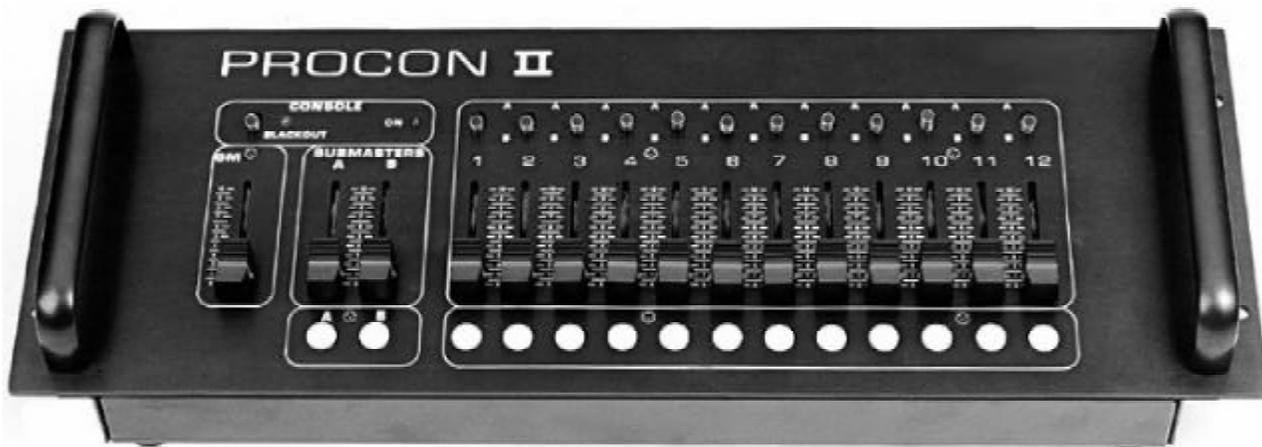


Owner's Manual

PROCON II LIGHTING CONTROL CONSOLE



TEATRONICS LIGHTING CONTROLS, INC.

1236 Los Osos Valley Rd., Ste. G
Los Osos, CA 93402

Phone: (805) 528-6900
FAX: (805) 528-9345

12/05/97

TEATRONICS LIGHTING CONTROLS, INC.

INTRODUCTION

Thank you for buying a Procon Controller from Teatronics Lighting Controls, Inc.. Before you read this owner's manual, examine your equipment carefully for damage or discrepancies in the packing list. If shipping damage is evident, contact your carrier immediately to file a claim. Contact our sales department for mysteries concerning your order or packing slip at (805) 528-6900 (8:30 - 4:30 Pacific Time).

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TEATRONICS LIGHTING CONTROLS, INC.

INTRODUCTION

Thank you for buying an *Teatronics Lighting Controls, Inc.* control console. Please read this manual thoroughly to understand your unit and to insure that you get the most out of it.

The purpose of the owner's manual is to assist you in becoming familiar with the Procon II: its installation, operation, troubleshooting and maintenance. Ownership of a sophisticated piece of electronic equipment involves more than just "buy it and use it". The Procon II was designed in response to users' requests for many features they felt were important. These features lie beneath the simplicity of appearance. To fully appreciate them and what they can do for you, read on.

The Procon II series are available in one or two scene configurations. This analog manual console derives its source of power from the dimmer pack. It works well with the entire line of *Teatronics Lighting Controls, Inc.* dimmer packs as with packs made by other manufacturers of remote controlled dimming equipment.

Take the time and care to follow these instructions and your Procon II console should provide you with long-lasting quality lighting control.

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SETUP AND CONNECTION

MECHANICAL INSTALLATION

The Procon II console has no limitations on its physical orientation; it may be mounted in any position without damage to the unit. Personal preferences usually dictate the best placement. All controls should be easy to reach by the operator with emphasis on smooth operation of the slide controls and easy access to the bump buttons. As with all electrical equipment, moisture can cause permanent damage to the circuitry; the console should be protected against rain, and beverages.

ELECTRICAL INSTALLATION

All that is required to connect the control to the dimmer pack(s) is a remote cable or cables of the proper type. This cable is connected to the output jack on the back of the console and to the input jack on the back of the dimmer pack(s). Each connector is keyed to assure proper connection; when the keys are lined up the connectors will slide together with ease. Do not force the connectors! Broken connectors are not covered by the warranty.

INTERFACE WITH DIMMERS

Remote control lighting consoles use a low voltage (usually DC) control signal to vary the outputs of the dimmer packs. The lighting industry had standardized on “zero to ten” volt DC. Unless a different control voltage was specified when your console was ordered, it is adjusted for zero to ten volt operation. When adjusted for zero to ten operation, the control voltage is zero volts when a channel is off, ten volts when a channel is on full, and varies linearly between the two extremes.

Each channel has its own control wire which runs to the dimmer pack(s). There are two types of standard output connectors on the Procon II series depending on which type of dimmer you are using. One SRC or 3-XLR connectors are required for each set of twelve channels of control. Below are instructions for use of both types of configurations.

SRC CONTROL CABLES - GLX/DPI/Genesis

Connection of the controller is very simple. It requires one 12-channel standard cable for every 12 channels of dimming.

When used with GLX/DPI/Genesis, connect one cable to each 12-channel output on the control console and the other to a 12-channel pack. Repeat the connections for each group of 12 channels on the console.

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SETUP AND CONNECTION (continued)

XLR CONTROL CABLES - WARRIOR

Connection to the controller is very simple. It requires one 4-channel cable for every four channels of dimming.

In use with Warrior dimmers, connect one cable to each 4-channel console output and the other end to a Warrior. A glowing Light Emitting Diode (LED) on the console will show that it is receiving power. Repeat the connections for each group of four channels on the console.

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OPERATION (Procon II One-Scene)

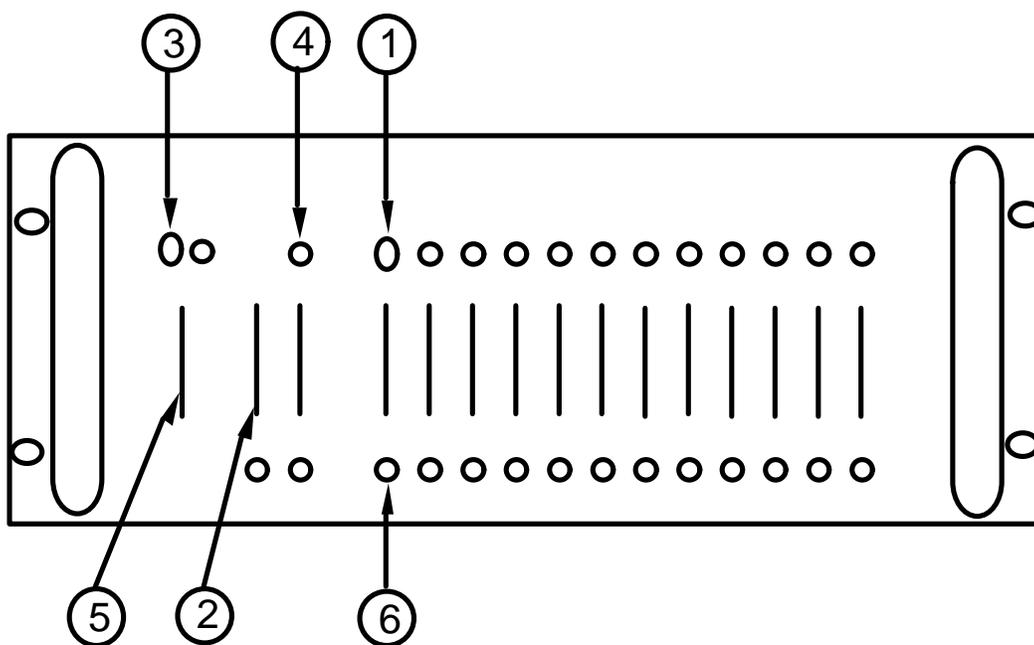
Teatronics Lighting Controls, Inc. one-scene consoles are designed to be used with the Warrior and the GLX line of dimmer packs.

Each channel has a mode selector switch “1” and a calibrated linear control “2”. In the up, or “A” position, the A Submaster will proportionally adjust the output of that channel (and all other channels set to “A”). In the down, or “B” position, that channel will be proportionally controlled by the B Submaster (along with all others set to “B”).

The BLACKOUT switch “3” is located above the Grand Master. Operating this switch downward causes an immediate cutoff of the output of all dimmers on the console. Turning the switch back on without changing the dimmer settings will cause all channels to “switch on” to the setting indicated.

A green LED “4” directly above the submaster, controls indicates that the console is on and receiving power. A Grand Master control “5” is provided for total control console proportioning.

BUMP BUTTONS “6” cause the output of the respective channels to go to “full” when depressed by the operator. These BUMP (or flash) buttons override all channel and submaster controls. In addition to one per channel, each A or B has a bump button as well, allowing a group of dimmers to be flashed.



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OPERATION (Procon II Two-Scene)

The operation of the Procon II two-scene may be best understood by dividing the various controls into groups. The groups for the purpose of this manual are: The Master Section (1), The Crossfader Section (2). The Submaster Section (3). The Channel Sectiona (4). The Effects Section (5) (see page 7 for diagram).

MASTER SECTION (1)

The controls grouped into the master section are the Grand Master slider and the Blackout switch. These two controls have a global effect on the rest of the console. The Grand Master slider proportionally adjusts the level of the scene selected by the crossfader.

When the Blackout switch is in the up position, the console is in normal operation with the indicator LED showing green. When in the down position, the console is in Blackout mode, taking all channel outputs to a level of zero. The LED changes to red when the console is in the Blackout mode.

CROSSFADER SECTION (2)

The controls grouped into the crossfader section are the X scene slider and the Y scene slider. In a two scene console typically one scene is 'active' while the other scene is being pre-set for the next lighting cue. The crossfader controls select which is the active scene, and which is the inactive scene (which may be altered without affecting the outputs). The X scene slider affects the top row of channel controls (the X scene) whereas the Y scene slider affects the bottom row of channel controls (the Y scene). The Y scene slider is 'up-side-down' from all other sliders on the console in that it's output is at maximum when the slider is all the way down (toward the operator) and is at zero when the slider is all the way up (toward the chase control). The Y scene slider is oriented this way so that smooth fades from one scene to the other may be made by moving both the X and the Y scene sliders together. However, the two scene sliders do not have to be moved together. By splitting the crossfaders, one scene may be faded out before the other scene is faded in, or the inactive scene may be faded in before the active scene is faded out.

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OPERATION/Two-Scene (continued)

SUBMASTER SECTION (3)

The controls grouped into the submaster section are the A, B, C, and D submaster sliders and corresponding bump buttons. Each submaster controls a group of channels, and in turn is controlled by the Grand Master (through the crossfader). The channels that each submaster controls are selected by the channel selector switches as described in the next section.

CHANNEL SECTION (4)

The controls grouped into the channel section are all the channel sliders, and the associated submaster selector switches. Up until this point, the controls that have been discussed typically affect a group of channels. The sliders and switches in the channel section affect only their own channel, that is the controls for channel 1 have no affect on the output of channel 2 or any other channel. On the Procon II there are four controls for each channel (five if you count the momentary button described below). These controls are the two sliders (X and Y scene) and a submaster selector switch for each slider. Each channel's output level is dependent on the settings of a number of sliders and switches. The various possibilities of switch settings are numerous. A few of the possibilities are discussed here and should give the user a fair understanding of the versatility of the Procon II.

Standard two scene operation without submastering can be accomplished by placing all the submaster sliders at full. Since the submasters are all at full, the position of the submaster selector switches on each channel does not affect the output, however in the interest of neatness, it is recommended that all the switches be switched either up or down. In this configuration, the Grand Master controls the overall level of all channels and the crossfaders are used to fade from the X scene to the Y scene.

Two scene operation with submastering is the same as above, except the submasters may be used to adjust the overall level of the channels which are switched to them. In this configuration some of the channels in each scene will be switched to one submaster and some to the other. The crossfader controls which two submasters are active; A & B are active if in the X scene, C & D are active if in the Y scene.

EFFECTS SECTION (5)

The controls grouped into the effects section are the bump controls: bump on/off switch, and bump buttons on each channel and each submaster, and the chase controls: chase on/off switch, forward/reverse switch, 8-channel/4-channel switch, rate slider, and level slider. The bump buttons (also called momentary or flash buttons) are used to alter the channel (or submaster) level to full without moving the slider. The bump on/off switch disables the bump buttons when in the off position. When the bump switch is on, the bump button adds the channel to the output of the console just as if the associated slider had been moved to full.

OPERATION/Two-Scene (continued)

The Procon II includes a chase unit which chases the first four or eight channels of the console depending on the position of the 8 channel/4 channel switch. The chase on/off switch turns off the chase unit so that if the chase level is accidentally brought up, the outputs will not start chasing. The forward/reverse switch determines the direction of the chase; in forward mode, the chase sequence starts with channel 1 and counts up. In reverse mode, the chase sequence starts with either channel 4 (if in 4 channel mode) or channel 8 (if in 8 channel mode) and counts down. The chase rate slider controls how long the chase leaves one channel on before sequencing to the next. The level slider controls the level each channel is sequentially brought up to. The chase unit in the Procon II 'piles-on' to the outputs of channels one through eight. That is, it only serves to increase the level of the channel above what it is set at. Therefore, if channels one through eight are at 80%, the chase will have no effect on the outputs until the chase level control is brought above 80% (a setting of 8). The chase level is not affected by the Grand Master but is affected by the Blackout switch.

ADJUSTMENTS

The Procon II console has an internal adjustment to set the control voltage at the high end of the slide pot travel. This adjustment is usually factory set for zero to ten volt operation. If other than zero to ten volt operation is desired (and was not specified when the console was ordered) the adjustment may be altered to yield the correct control voltage, so long as the control voltage falls within the limits of the Procon II's circuitry. Any voltage from 9.1 to 12.6 may be obtained at the Procon II's outputs.

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CONTROL OUTPUT PINOUT

CONTROL OUTPUT

CANNON SRC-16
(Facing the Chassis Plug)

<u>Pin Number</u>	<u>Function</u>
1	Channel 1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	+15 Volts
13	None
14	None
15	Signal Common
16	Channel 12

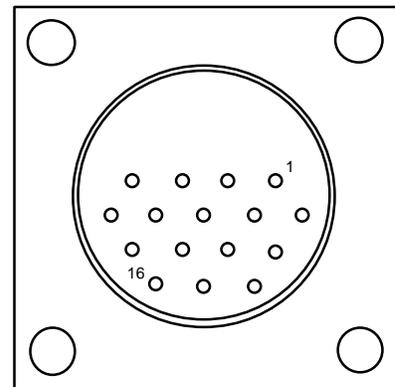
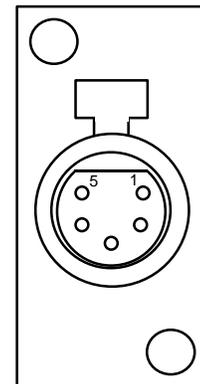


Figure 1
Output Connections

CONTROL OUTPUT

XLR 5 PIN
(Facing the Chassis Plug)

1	Channel 1
2	2
3	3
4	4
5	+15 Volts
Case	Signal Common



MAINTENANCE

The Procon II console requires no maintenance, other than keeping dust and liquids out of the console. The console should be covered when not in use to prolong the service life of the slide pots. Dirt and moisture are a slide pot's worst enemy. A slide pot's second worst enemy is the do-gooder who sprays WD-40 into them. WD-40, volume control cleaners, tuner cleaners, and similar products dissolve the lubricant inside the slide pot. This will shorten the life of the pot and make operation less smooth. Only when a slide pot is so worn out that it must be replaced anyway should WD-40 or the like be used; in this case spray cleaners may prolong the life long enough to order replacement slide pots.

TEATRONICS LIGHTING CONTROLS, INC.

IN CASE OF TROUBLE

The Procon II is a solid-state analog control console. Of the components used in lighting systems, this console is probably the least likely to fail. The following paragraphs may help in the event the lighting system fails to work properly.

First lets get the obvious things out of the way; check that the console is connected to the dimmers and that the dimmers are on. Also be sure the loads are connected and not burned out. Next, and most obvious, is to make sure that the “on” LED indicator is lit and the console is NOT in Blackout.

Now that the obvious things are out of the way we can try to isolate the problem further. If the “on” indicator LED is not lit, unplug the control cable from the console and measure to see if the +15 volt supply voltage is present. If you have 5-pin XLR cables you will measure between the connector case and pin 5, or if you have a SRC cable then measure between pin 15 (gnd) and pin 12 (+15V). In either case if you do not have 15 volts DC present the control console is most likely o.k. and we recommend you proceed to the owners manual for the dimmer. If 15 volts is present, go to the next paragraph.

Plug the control cable back into the console, making sure the connector fits snugly, but do not force the connector. The connectors are keyed to ensure a proper connection. If you are using XLR type control cables make sure you are plugged into the first connector (1-4) of the console since this is where the console gets its power. If you still have no LED indicator the console most likely has failed and should be returned to the factory for repair.

If you have a green “on” LED indicator, but no control of the dimmers go through the following routine. Place the Grand Master slide pot at full, all submasters at full, all channels at full, and the crossfaders both at the full position. If you still have no response, return console to the factory.

If, after performing these tests, you still cannot get proper operation, you may send your unit to the factory service center, freight prepaid, with a note describing the specific complaint and the results of the checks noted above. Send to:

Teatronics Lighting Controls, Inc.

1236 Los Osos Vallet Road
Suite G
Los Osos, California 93402

TEATRONICS LIGHTING CONTROLS, INC.

IN CASE OF TROUBLE (continued)

All units need to be scheduled for return. Customers who wish to return units for repair need to obtain an RMA Number prior to sending their unit back to; 1) allow coordination of the technicians workload and , 2) insure that units **not currently supported by the factory** are not sent in without permission.

Be sure to **PACK THE UNIT WELL** and insure it for its replacement value. Save and reuse the original factory packing materials, or ship it in a road case if possible.

Those who wish to do their own repairs may buy parts from the factory. Unauthorized repairs such as this will void the warranty and the buyer may be charged for subsequent factory repair, even though the product may have originally been covered by the warranty. Call the factory service department for any information about our service policy, ordering parts or for help repairing a unit. The phone number is (805) 528-6900 weekdays from 8:00 am to 5:00 pm Pacific Time.

TEATRONICS LIGHTING CONTROLS, INC.

LIMITED WARRANTY

Teatronics Lighting controls, Inc. (TLC) agrees that its products shall be free from defects in material or workmanship for a period of one year from date of delivery. Said warranty will not apply if equipment is used in conditions of service for which it is not specifically intended. The manufacturer is not responsible for damage to its apparatus through improper installation, physical damage, or poor operating practice.

TLC's sole responsibility under this warranty shall be to repair or replace, at TLC's discretion, such parts as shall be determined to be defective upon inspection by TLC or their authorized agent. Such equipment shall be replaced or put in operating condition, free of all charges except transportation, and the correction of any defects by repair or replacement by TLC shall constitute fulfillment of all obligations to the original purchaser or retail customer. **FREIGHT TERMS ON WARRANTY REPAIRS ARE FOB TLC FACTORY OR DESIGNATED REPAIR FACILITY.** Collect shipments or freight allowances shall not be acceptable. TLC does not assume responsibility for unauthorized repairs to its goods, even when determined to be defective.

TLC shall not be liable for any incidental, general, or consequential damages in case of any failure to meet the conditions of any warranty or shipping schedule. Nor will any claim be allowed for labor costs, loss of profits or income, repair costs, or any other expenses incidental to replacement or repair of the item under said warranty.

The owner's obligations during the warranty period described herein are to notify TLC in writing within ONE WEEK (7 calendar days) of any suspected defect, and with TLC's authorization (RMA), to return the item or apparatus prepaid to the TLC factory.

No other representations, guarantees, or warranties, expressed or implied, are made by the manufacturer in connection with the manufacture and sale of its equipment. This warranty is nontransferable and applies only to the original purchaser or retail customer.

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