

Leprecon®
Pro Lighting Equipment

THE LP-500 Series Operational Instruction Manual

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THE LP 500 SERIES OPERATIONAL INSTRUCTION BOOKLET

The **LP 500** series is a standard analog lighting controller. This 2 scene control board can be broken into 6 basic sections.

The 500 series has a 6 channel chase, a bump system that can change the existing look on stage momentarily, an output trim section, a master section, a dipless crossfade and an individual channel adjustment section. The **LP 500** series also has a 12 volt dimmable gooseneck work lamp.

This controller uses a power source of 105-125 VAC 50-60 HZ and its output is a continuous DC voltage across all channel.

POWER UP

When power is applied to this controller the dimmable gooseneck work lamp is immediately accessible. This lamp is available in two different wattages, 2.4 and 5 watt. The 2.4 watt bulb is standard equipment in all of our controllers. You can adjust the intensity of the lamp by a clockwise rotation of the knob marked "lite".

To engage or disengage the controller simply push the rocker switch marked "on". The green LED marked "power", located beneath the switch, will be glowing.

If the LED is not glowing, recheck your power cord and be sure the outlet that you are using is operational. If the outlet is operational and the power LED and work lamp are not working, you may have an open fuse. The fuse is located inside the controller and is mounted on the circuit board.

TRIM ADJUSTMENT

Under the "power" LED you will notice another green LED marked "max". This LED's brightness is directly related to the amount of output. The factory trim adjustment is 10 volts, and is accessible from the recessed trim pot located next to the LED.

Under the "max" trim control is another recessed control for the minimum output voltage, this is marked "min" and is factory adjusted to zero volts.

Do not readjust trim unless there is a reason for the adjustment, such as the implementation of another brand of dimmer. Do this only with a volt meter connected to the output of the controller. We will cover the procedure for trim adjustment later on in more detail.

CHASER

The chaser has two sections. Section one has two control faders and a switch and is located on the front panel next to the power section. Section two is a series of group selector switches located on the rear of the controller.

The "M", master fader controls only the "crossfader" section. The overall level that is set by the "M" fader can be seen with the LED located directly above it.

The “I”, independent, fader controls only those channels that have been selected “I” by the “M/I” rocker switches. The “I” fader also has a level LED located above it.

The switch marked “black” will disable anything assigned to the “M” fader on the board. This gives the operator instant control over the scene outputs. When the disable function is activated the red LED above it will be glowing.

HINT: This can also help in a quick change from an existing stage look to a chase sequence. Activate the “black” switch and push the chase “on/off” at the same time. Then reverse the operation to return the original stage look.

NOTE: All of the controls in the “grandmaster” section can be overridden by the chase and the bump sections.

CROSSFADER

The “crossfader” section controls the top, “X” scene, and bottom, “Y” scene, channels. There are two control faders and they operate in reverse order to accomplish a smooth crossing between the scenes. In order for the crossfade to work the “M/I” selector switches need to be in the “M” position.

The leftmost fader is marked “X” and it operates the top set of controller faders. The fader is at its maximum output when in the upward position. The “X” fader has a corresponding level LED above it.

To its right is the “Y” fader, which operates the bottom set of controllers. This fader has a maximum output when in the downward position. The “Y” fader has a output LED just below it.

With both crossfader controls in the up position the look on stage is accomplished from the “X” scene. The “Y” scene fader is off. The operator sets up the next stage look to be used on the “Y” scene controls. When it is time to change the look on stage the operator brings both “crossfader” controls to the down position. This turns down the “X” scene and turns up the “Y” scene. Creating a smooth scene transition with a rate determined by the operator.

CONTROL CHANNELS

The control section is at the right of the board. This section contains the individual channel faders, the “M/I” switches, the bump buttons and output LEDs.

The output LEDs located at the top are directly related to that channels output. The two position rocker switches located beneath the output LEDs select either the “M”, master, or “I”, independent as a fader source for that channel. The momentary switches at the bottom of each channel are for the bump button operations.

TRIM

To adjust the trim of any LEPRECON controller you need a volt meter and a small flat blade screwdriver. The first item that should be done is to determine which pin is common with your controller.

On the **LP 500** series there are two different types of output connectors that are used. They are a 15 pin cinch jones and a 27 pin cinch jones. On the 15 pin cinch jones, pins 1-12 are channels 1-12. Pin 13 is 28 volts. Pin 15 is used for common and common is isolated from ground. On the 27 pin CJ, pins 26 and 27 are common and pin 25 is the 28 volt DC supply.

With your volt meter's negative lead connected to the controller's common pin and the positive lead connected to channel number one you then raise all channels to maximum. With all channels up you adjust the "max" trim to the desired level, factory adjustment is 10 volts.

To adjust the minimum voltage you bring only channel one down, all other channels must remain at maximum output. With the screwdriver in the "min" pot you turn it counterclockwise to the near zero position.

Once the trim has been adjusted it does not need to be readjusted unless another brand of dimmers have been introduced.

LP 500 PARTS LIST

DESCRIPTION	PART	CAE ORDER NUMBER
RESISTORS-----		
160 OHM, .25 W	R42	01-0054
220 OHM, .25 W	R6	01-0057
240 OHM, .25 W	R3	01-0058
390 OHM, .25 W	R11	01-0063
1K OHM, .25 W	R38	01-0073
1.8K OHM, .25 W	R39	01-0079
2K OHM, .25 W	R2, R8, R12, R13, R14, R19, R20, R34, R36, R44, R45, R46, R47, R48, R49, R51, R52	01-0080
3.9K OHM, .25 W	R4, R59	01-0087
4.7K OHM, .25 W	R7, R9, R55	01-0089
6.2K OHM, .25 W	R23, R24	01-0092
10K OHM, .25 W	R16, R26, R37, R56, R57	01-0097
47K OHM, .25 W	R32, R33	01-0113
100K OHM, .25 W	R18, R27, R29, R31, R35	01-0121
200K OHM, .25 W	R40	01-0128
220K OHM, .25 W	R54	01-0129
330K OHM, .25 W	R22, R25	01-0133
2.2 MEG, .25 W	R17, R41	01-0153
470 OHM, 3.0 W	R58	01-9001
33K NETWORK	R50	01-9013
CAPACITORS-----		
.01 mf, 50 V	C8	02-0003
33 pf, 50 V	C11	02-0006
.1 mf, 50 V	C4, C5	02-0008
220 pf, 50 V	C10	02-0016
.1 mf, 250 V	C2	02-1001
.0033 mf, 100 V	C9	02-1012
1.0 mf, 50 V	C6	02-1022
1.0 mf, 35 V	C3	02-2026
1K mf, 50 V	C1	02-2041
DIODES-----		
IN 4002	D2, D3, D4, D11, D13, D29, D30, D31	03-3007
IN 4148	D17, D18, D19, D20, D21, D22	03-3004
BRIDGE 1A, 200 V	D1	03-0013
LED RED .2 Dia.	D8	03-1011
LED YELLOW .1 Dia.	D23, D24, D25, D26, D27, D28	03-1005

DESCRIPTION	PART	CAE ORDER NUMBER
DIODES-----		
LED GREEN .2 Dia.	D6, D7, D10, D12, D14, D15	03-1009
LED YELLOW .2 Dia.	D9, D16, D32	03-1010
4.7 V ZENNER .5 W	D5	03-2001
TRANSISTOR-----		
2N3904	Q2, Q3, Q5, Q6	04-0011
2N6109	Q1	04-0013
J174 FET	Q4	04-0017
INTEGRATED CIRCUIT-----		
LM 324 N	IC3, IC11, IC12	06-0001
RC 3403	IC4, IC5	06-0002
CD 4050	IC10	06-0036
CD 4017	IC9	06-0049
CD 4049	IC6	06-0052
LM 317LZ	IC2, IC7	06-0056
LM 317T Regulator	IC1	06-0057
CD 4046	IC8	06-0058
POTENTIOMETERS-----		
100K SLIDER ALPS	R15, R21, R28, R30, R43, R53	08-0001
10K LINEAR ROT.	R5, R10	08-1029
SWITCHES-----		
ROCKER DPDT	S1, S2, S3, S4	09-0038
MOMENTARY	S5	09-0044
MISCELLANEOUS-----		
10 PIN MALE	P4	07-0019
6 PIN HEADER	P5	07-0020
2 PIN .156 Cen.	P2, P3	07-0028
IEC INLET	P1	07-3006
ST 3-24 Trans.	T2	10-0016
ST 5-24 Trans.	T1	10-0022
MOV 130 V	MOV	15-9005

SCHEMATIC

LP 500 MASTER (PL 30-1030B)

LP 12 CONTROLLER (30-1026a)

SCHEMATIC

LD 500 MASTER (SC 30-1030B)

LP 18 CONTROLLER (30-1034A)