

Leprecon®
Pro Lighting Equipment

THE LP-250 SERIES OPERATIONAL INSTRUCTION BOOKLET

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THE LP 250 SERIES OPERATIONAL INSTRUCTION BOOKLET

The **LP 250** series includes the LP-250 6 channel and the LP-255 12 channel analog lighting controller. The controls on these single scene control boards can be broken into 5 basic sections.

The 250 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 and an individual channel adjustment section.

This controller uses a power source of 105-125 VAC 50-60 HZ. Its output is a variable DC voltage (0-10V nominal) from each channel.

POWER UP

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. Refer service to qualified personnel.

TRIM ADJUSTMENT

Under the "power" LED you will notice another green LED marked "max". This LED's brightness is directly related to the maximum output trim. The factory trim adjustment is 10 volts, and is adjusted by 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 control faders and switches located on the front panel next to the power section.

This is a straight 6 channel chase operating in a sequence of 1-2-3-4-5-6 only. There is a yellow chase LED to indicate the speed you have selected for the chase.

The chase "on/off" switch is a rocker switch that turns the chase function on or off.

Chase level fades the chase up and down and chase rate adjusts the rate of stepping, or speed of the chase.

BUMP

At the bottom left of the controller are the switches for the bump button modes. This section has two selector switches with corresponding yellow LED's. These switches allow the operator to use the bump buttons located beneath each of the controller channels to achieve different results.

The switch marked "on/off" is the bump enable switch. The yellow LED will be glowing when this switch is on. If you want you may deactivate the bumps so accidental channel bumps will be avoided.

Above the "on/off" switch is the "solo/add" switch. When pressing a channel's bump button, while in the "add" mode, that channel will be bumped to full intensity. The bump button will "add" that channel to the existing look on stage; it will not effect the scene setup in any other way.

When the "solo/add" switch is in the "solo" position the yellow LED will glow whenever a bump button is depressed. The channel will bump to full intensity and the controller will black out all of the channels that are in the "X" and "Y" scenes. But not independent and chase. This effect will last only as long as the bump button is depressed. When the bump button is released the scene will then return to its normal preset condition.

HINTS: When the "solo" feature is activated only that channel will appear. You may rearrange channels while the bump button is depressed then return to a new stage look. This will give the effect of very fast scene changes with a minimum of fader work. The chaser bump button can be used to momentarily solo a change in place of a scene, or add the chase to the scene.

MASTER

The "master" section is to the right of the bump section. (See figure D) The green LED above the Master Fader lets you know the intensity of the "Master" fader. This fader determines the maximum intensity of all six channels in the **LP-250** and all 12 channels in the **LP-255**. The independent fader determines the maximum level of any channel set to independent.

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 brightness of output LEDs located at the top is directly related to each channel's output. 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. First determine which pin is common with your controller.

The **LP-250** has one 8 pin male jones output connector. Channels 1-6 are Pins 1 thru 6, Pin 7 has a 28 volt DC supply and the common pin is number 8.

On the **LP-255** there are two 8 pin jones connectors. The first connector has channels 1-6 on pins 1-6. The second connector has channels 7-12 on pins 1-6. Pin 7 has 28 volts DC on both connectors. Pin 8 is common.

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

To adjust the minimum voltage, bring only channel One down. (All other channels must remain at maximum output.) With the screwdriver in the "min" pot adjust the output voltage to desired minimum. (Factory adjust is "0" volts.) Once the trim has been adjusted it should not need to be readjusted unless dimmers with different trim requirements have been introduced.

LP 250 PARTS LIST

DESCRIPTION	PART	CAE ORDER NUMBER
RESISTORS-----		
100 OHM, .25 W	R46, R47, R48, R49, R50, R51	01-0049
240 OHM, .25 W	R8, R12	01-0058
2K OHM, .25 W	R3, R4, R6, R10, R11, R15, R18, R19, R24, R27, R28, R34, R35, R37, R39, R41	01-0080
4.7K OHM, .25 W	R9	01-0089
10K OHM, .25 W	R20, R22, R23	01-0097
100K OHM, .25 W	R21	01-0121
200K OHM, .25 W	R16	01-0128
470K OHM, .25 W	R30, R31, R32, R42, R43, R44	01-0137
2.2 MEG, .25 W	R17, R52	01-0153
470 OHM, .25 W	R2	01-9001
33K NETWORK	R25	01-9013
CAPACITORS-----		
.1 mf, 50 V	C5, C6, C7	02-0008
.1 mf, 250 V	C1	02-1001
1.0 mf, 50 V	C3	02-1022
1.0 mf, 35 V	C8, C9	02-2026
1K mf, 50 V	C2	02-2041
DIODES-----		
IN 4002	D2, D3, D4, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39	03-0002
IN 4148	D7, D8, D9, D10, D11, D12	03-0004
BRIDGE 1A, 200 V	D1	03-0013
LED GREEN .2 Dia.	D40, D41, D43, D46, D47, D48, D49, D50, D51	03-1009
LED YELLOW .2 Dia.	D42, D44, D45	03-1010
4.7 V ZENNER .5 W	D6	03-2001
15 V ZENNER 100 ma	D5	03-2003

TRANSISTOR-----

2N3904	Q2	04-0011
2N6109	Q1	04-0013

INTEGRATED CIRCUIT-----

LM 324 N	IC2, IC4, IC6, IC7, IC8, IC9	06-0001
LM 340LAZ-15	IC10	06-0012
CD 4017	IC5	06-0049
LM 317T Regulator	IC1	06-0057
CD 4046	IC3	06-0058

POTENTIOMETERS-----

100K SLIDER ALPS	R13, R14, R26, R29, R33, R36, R38, R40, R45	08-0001
10K LINEAR ROT.	R5, R7	08-1029

SWITCHES-----

ROCKER DPDT	S1, S2, S3, S4	09-0038
MOMENTARY	S5, S6, S7, S8, S9, S10	09-0044

MISCELLANEOUS-----

6 PIN HEADER	P2	07-0020
2 PIN .156 Cen.	P3	07-0028
IEC INLET	P1	07-3006
ST 4-28 Trans.	T1	10-0017
MOV 130 V		15-9005

LP 255 PARTS LIST

DESCRIPTION	PART	CAE ORDER NUMBER
RESISTORS-----		
100 OHM, .25 W	R46, R47, R48, R49, R50, R51, R71, R72, R73, R74, R75, R76	01-0049
240 OHM, .25 W	R8, R12	01-0058
2K OHM, .25 W	R3, R4, R6, R10, R11, R15, R18, R19, R24, R27, R28, R34, R35, R37, R39, R40, R65 R66, R67, R68, R69, R70	01-0080
4.7K OHM, .25 W	R9	01-0089
10K OHM, .25 W	R20, R22, R23	01-0097
100K OHM, .25 W	R21	01-0121
200K OHM, .25 W	R16	01-0128
470K OHM, .25 W	R30, R31, R32, R42, R43, R44, R59, R60, R61, R62, R63, R64	01-0137
2.2 MEG, .25 W	R17, R52	01-0153
470 OHM, .25 W	R2	01-9001
33K NETWORK	R25	01-9013
CAPACITORS-----		
.1 mf, 50 V	C5, C6, C7, C8	02-0008
.1 mf, 250 V	C1	02-1001
1.0 mf, 50 V	C3	02-1022
1.0 mf, 35 V	C9	02-2026
1K mf, 50 V	C2	02-2041
DIODES-----		
IN 4002	D2, D3, D4, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D52, D53, D54, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64, D65, D66, D67, D68, D69	03-0002
IN 4148	D7, D8, D9, D10, D11, D12	03-0004

DIODES-----

BRIDGE 1A, 200 V	D1	03-0013
LED GREEN .2 Dia.	D40, D41, D43, D46, D47, D48, D49, D50, D51, D70, D71, D72, D73, D74, D75	03-1009
LED YELLOW .2 Dia.	D42, D44, D45	03-1010
4.7 V ZENNER .5 W	D6	03-2001
15 V ZENNER 100 ma	D5	03-2003

TRANSISTOR-----

2N3904	Q1	04-0011
2N6109	Q2	04-0013

INTEGRATED CIRCUIT-----

LM 324 N	IC2, IC4, IC6, IC7, IC8, IC9, IC11	06-0001
LM 340LAZ-15	IC10	06-0012
CD 4017	IC5	06-0049
LM 317T Regulator	IC1	06-0057
CD 4046	IC3	06-0058

POTENTIOMETERS-----

100K SLIDER ALPS	R13, R14, R26, R29, R33, R36, R38, R40, R45, R53, R54, R55, R56, R57, R58	08-0001
10K LINEAR ROT.	R5, R7	08-1029

SWITCHES-----

ROCKER DPDT	S1, S2, S3, S4	09-0038
MOMENTARY	S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S16	09-0044

MISCELLANEOUS-----

6 PIN HEADER	P2, P4	07-0020
2 PIN .156 Cen.	P3	07-0028
IEC INLET	P1	07-3006
ST 4-28 Trans.	T1	10-0017
MOV 130 V		15-9005