

CIRCUIT-TEST

Triple Output Power Supplies

2 x 0-30 VDC @ 3A
5 VDC @ 3A

PS-3330 (3A)

2 x 0-30 VDC @ 5A
5 VDC @ 3A

PS-5330 (5A)

OPERATION MANUAL

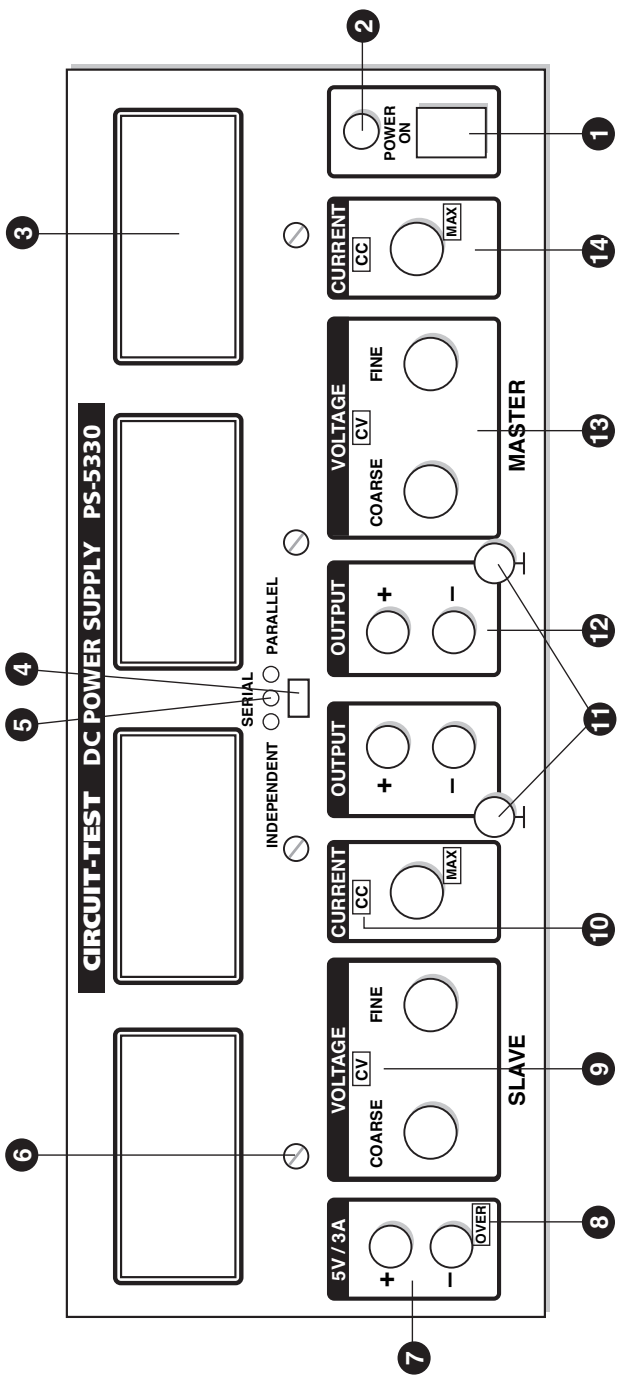
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Introduction

This unit is a bench top triple-output power supply. Variable voltage outputs may be electrically connected for Series or Parallel mode. The two main power supplies in the unit have four meters for monitoring output voltage and current. Each of the variable power supplies are also equipped with independent controls for use when the unit is *not* being operated in the Series or Parallel mode.

The power supply will find wide application in schools, laboratories, and commercial engineering and testing departments, as well as with the advanced hobbyist.



Front Panel Description

The following is an explanation of the function of each of the front panel controls and connectors.

- (1) POWER ON - This is the main power switch
- (2) POWER ON LED - This LED indicates that the power is on.
- (3) VOLTAGE/CURRENT METERS - These four meters indicate the output voltage and current as measured at the output terminals.
- (4) FUNCTION SWITCH - This switch is used to select the INDEPENDENT, SERIES or PARALLEL modes.
- (5) FUNCTION LED - This LED indicates the "mode" of the power supply (Independent, Series or Parallel).
- (6) METER ZERO - Each meter has a mechanical screw adjustment for setting the zero point.
- (7) 5 VOLT / 3 AMP OUTPUT TERMINALS
- (8) OVER LAMP - When this output is overloaded or shorted, the light will be ON.
- (9) CV LAMP - When the unit is working normally, the lamp will be ON. But when the unit is overloaded or shorted, the lamp will be OFF.
- (10) CC LAMP - When the unit is in overload or short, the light will be ON.
- (11) GROUND TERMINAL

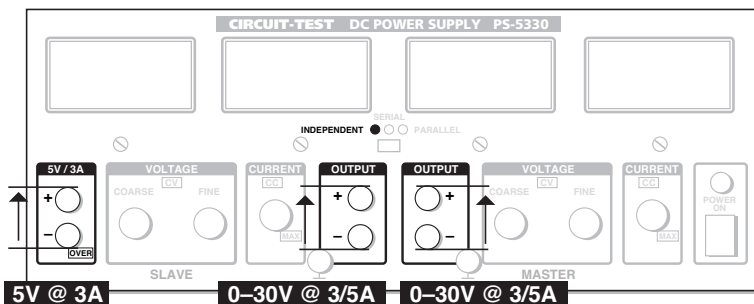
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- (12) OUTPUT TERMINALS - There are three sets of terminals (one set for each supply).
- (13) COARSE/FINE VOLTAGE ADJUST - These two controls adjust the output voltage of the two main supplies.
- (14) CURRENT ADJUST - These two controls adjust the maximum current that the two main supplies will output.

Selecting Proper Outputs

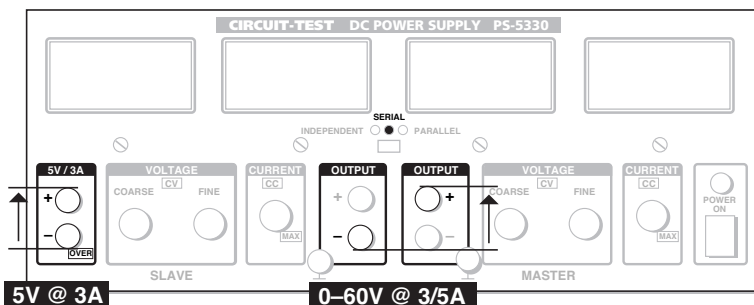
PS-3330 & PS-5330

It is recommended that the outputs illustrated in the following four diagrams, be used for the function selected (INDEPENDENT / SERIAL / PARALLEL).



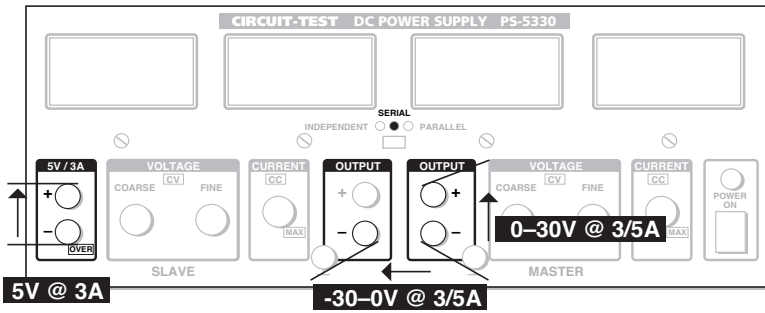
INDEPENDENT MODE

2 x 30VDC @ 3 or 5A
 PS-3330: 3A max
 PS-5330: 5A max



SERIES MODE

60VDC @ 3 or 5A
 PS-3330: 3A max
 PS-5330: 5A max

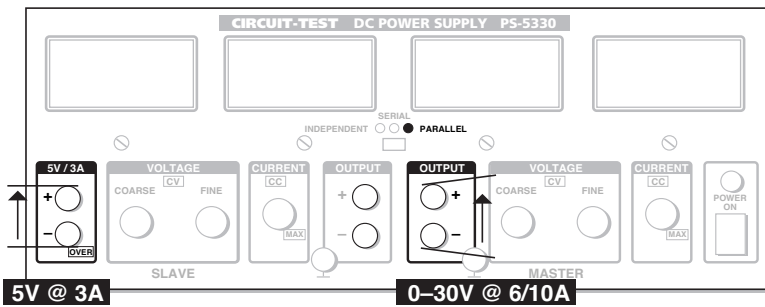


SERIES MODE

$\pm 30\text{VDC}$ @ 3 or 5A

PS-3330: 3A max

PS-5330: 5A max



PARALLEL MODE

$\pm 30\text{VDC}$ @ 6 or 10A

PS-3330: 6A max

PS-5330: 10A max

Operating Instructions

- (1) Connect the instrument to an AC power source using the line cord provided and turn the power switch ON. For maximum stability, allow the instrument to warm up for at least 20 minutes.
- (2) INDEPENDENT MODE - Set the FUNCTION switch to the INDEPENDENT mode. The two sets of voltage and current adjustment knobs may then be used to set the outputs to the desired level.
- (3) SERIES MODE - Set the FUNCTION switch to the SERIAL mode. Using the master voltage adjustment knob, set the desired output voltage.
- (4) PARALLEL MODE - Set the FUNCTION switch to the PARALLEL mode. Using the master voltage adjustment knob, set the desired output voltage. (In PARALLEL mode, multiply the top current scale by a factor of 2 for correct reading).
- (5) 5V / 3A OUTPUT - Constant regulated 5V supply.

Operating Cautions

Please note the following cautions when using your power supply, to prevent damage to the unit.

- (1) Do not connect to equipment until all settings are complete.
- (2) Verify that the AC voltage setting is the same as your available power BEFORE you apply power for the instrument.
- (3) Do not connect a voltage that is greater than the output voltage to the terminals of the instrument.
- (4) Do not short out the 5V / 3A output; this will cause the internal 4 Amp fuse to blow.

Specifications

(1) Output Voltage

INDEPENDENT mode:	2 @ 0 – 30 VDC
SERIES mode:	0 – ± 30 VDC or 0 – 60 VDC
PARALLEL mode:	0 – 30 VDC
5V / 3A Output:	5 VDC Constant
All modes:	Continuously variable with coarse and fine controls

(2) Output Current

INDEPENDENT mode:	2 @ 0 – 3A (PS-3330) 2 @ 0 – 5A (PS-5330)
SERIES mode:	0 – 3A (PS-3330); 0 – 5A (PS-5330)
PARALLEL mode:	0 – 6A (PS-3330); 0 – 10A (PS-5330)
5V / 3A Output:	3 amp regulated
All modes:	Continuous; automatic limiting above 3A (PS-3330); or 5A (PS-5330)

(3) Current Limiting: 0 – 3A continuously variable (PS-3330)
0 – 5A continuously variable (PS-5330)

(4) Load Regulation: $\pm (0.25\% + 3\text{mV})$
(1% to 100% of rated load)

(5) Line Regulation: $\pm (0.025\% + 2\text{mV})$
($\pm 10\%$ input variation)

(6) Ripple and Noise: (to 10KHz) Less than 5mV peak to peak; 0.5mV rms typical

(7) Output Impedance: (to 10KHz) Less than 0.2Ω typical

- (8) Meter Ranges: Voltage... 0 – 30V
Current... 0 – 3A, 0 – 6A (PS-3330);
0 – 5A, 0 – 10A (PS-5330)
- (9) Meter Accuracy: 2.5% of full scale
- (10) Protection Features: Protected against: Short circuit
Replace only with 5 Amp fuse (PS-3330)
Replace only with 8 Amp fuse (PS-5330)
- (11) Power Requirements: 120 VAC \pm 10%, 60Hz,
225 Watts (PS-3330)
360 Watts (PS-5330)
- (12) Dimensions: 360 (W) x 155 (H) x 260 (D) mm
14.125 (W) x 6 (H) x 10.5 (D) inches
- (13) Weight: 9kg / 19.8lbs (PS-3330)
13.2kg / 29.2lbs (PS-5330)

Warranty

Circuit-Test Power Supplies are warranted to be free of defect in workmanship and materials for a period of two years. Should this product require any repairs within this time, return the unit freight prepaid to Circuit-Test Electronics or to a Circuit-Test distributor.

**** IMPORTANT ****

When shipping the unit, always pack the power supply in its original carton and packing materials. Then place into another carton for added protection. If the original carton and materials are not available, pack the unit in a strong carton with at least three inches of resilient packing material on all sides.

DOUBLE BOXING THE UNIT IS MANDATORY.

WE ARE NOT RESPONSIBLE FOR DAMAGES INCURRED DURING SHIPPING DUE TO IMPROPERLY PACKAGED UNITS.

When returning a power supply include the following:

- (1) Your name, return address and phone number.
- (2) Description of problem and state whether fault is intermittent or continuous. If problem is not obvious, indicate hook-up used when problem occurs.
- (3) Indicate warranty or non-warranty. For warranty repair, include a photocopy of your purchase invoice.
For non-warranty repair, give us instructions and authorization to bill your Mastercard or Visa, or to ship the unit back to you C.O.D. for service and shipping charges.
- (4) Ship freight prepaid by COURIER ONLY. Never ship by parcel post.

CIRCUIT-TEST
ELECTRONICS

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