

REGULATED DC POWER SUPPLY

PS SERIES

PS-303 (30V/3A Single Output)

PS-305 (30V/5A Single Output)

PS-3030DU (30V/3A Dual Output)

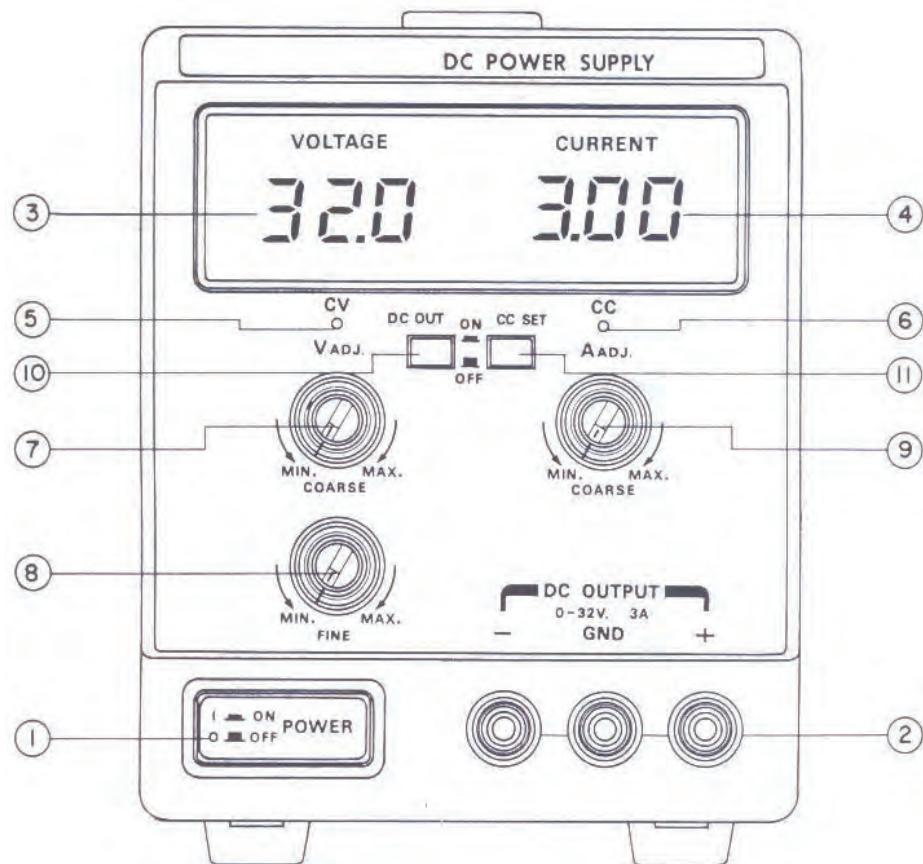
PS-3015TPR (30V/1.5A×2, 5V/5A Fixed Triple Output)

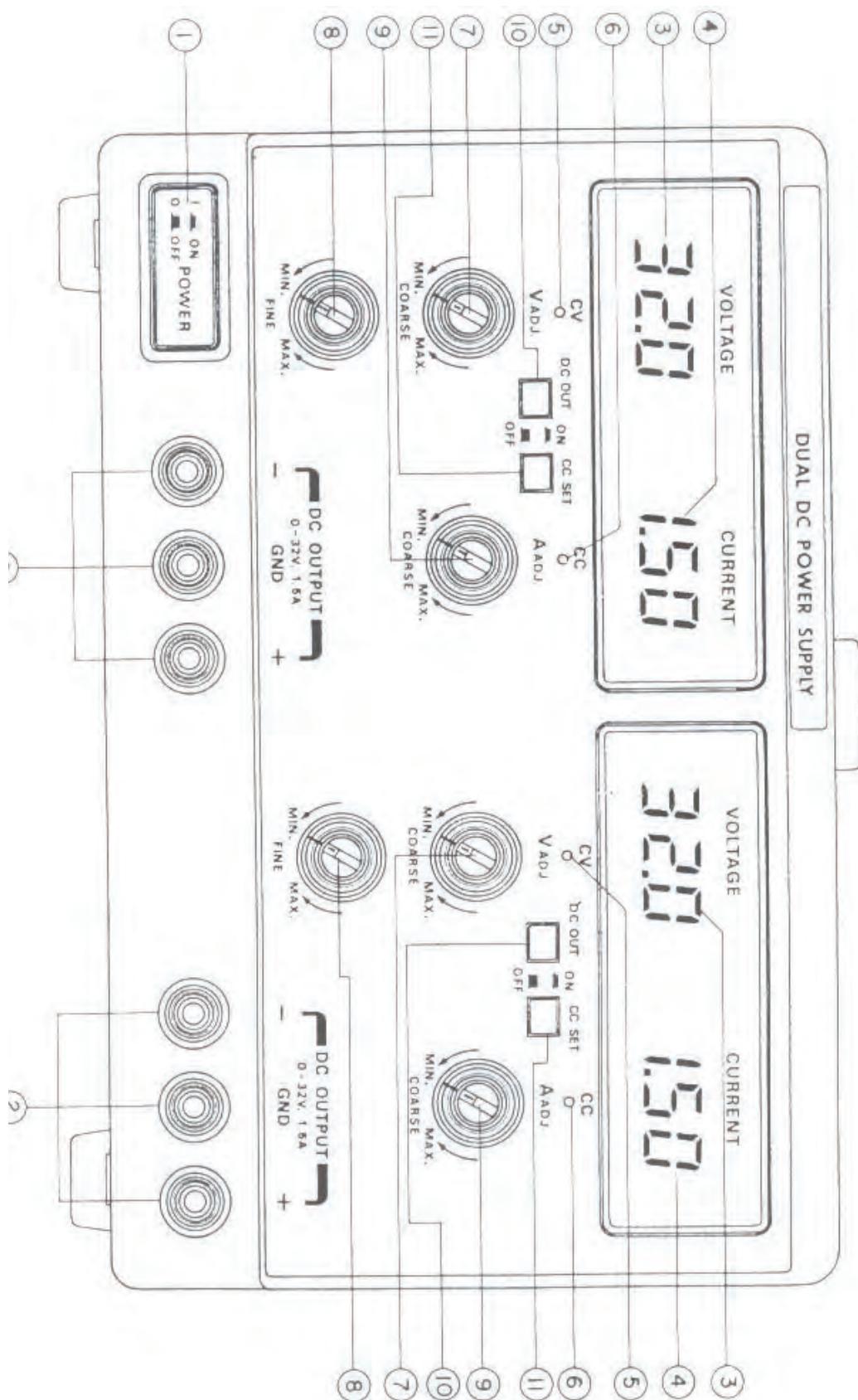
P 3625T (30V/2.5A×2, 3.3V/5V, 5A Fixed Triple Output)

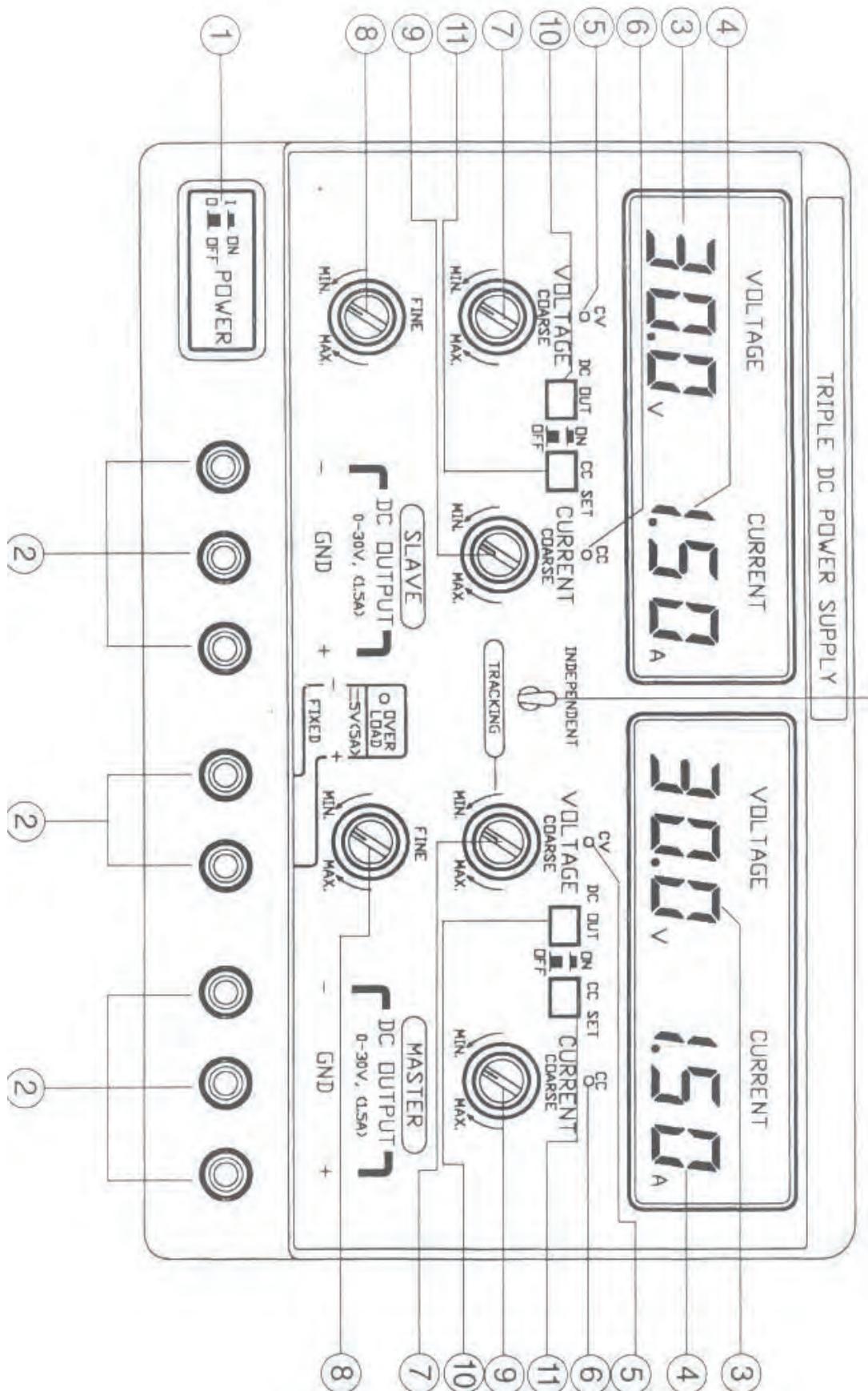
P-3035T (30V/3A×2, 5V/3A Fixed Triple Output)

INSTRUCTION MANUAL









1. DESCRIPTION

CONTROLS AND INDICATORS

- (1) POWER SWITCH : on/off switch
- (2) OUTPUT TERMINAL : positive polarity (+) is red
 - negative polarity (-) is black
 - earth and chassis ground is green
- (3) DIGITAL VOLT METER : indicates the output voltage
- (4) DIGITAL CURRENT METER : indicates the output current
- (5) CV LAMP : light when this unit in constant current operation
- (6) CC LAMP : lights when this unit is constant current operation
- (7) VOLT ADJ (COARSE) KNOB : for the coarse adjustment of the output voltage
- (8) VOLT ADJ (FINE) KNOB : for the fine adjustment of the output voltage
- (9) AMP ADJ KNOB : for the adjustment of the output current
- (10) DC OUTPUT SWITCH : on/off switch for the DC OUTPUT
- (11) CC SET SWITCH : current limiting set-up without output terminal shorting or various loads, and provide current limit value preview facility
- (12) INDEPENDENT/TRACKING SWITCH (TRIPPLE ONLY)

Covering from independent applying of S1 and S2 outputs to a serial connect. In tracking mode, because (-) of S2 and (+) of S1 are internally connected, it is output in between (+) of S2 and (-) of S1

In case short pins are used in between (-) terminal and ground, eliminate short pins from output terminals of S1 and S2.

2. SPECIFICATION

Spec. / Model		PS-303	PS-305	PS-303DU		
Output	Voltage	0~30V Single	0~30V Single	0~30V Dual		
	Current	0~3A	0~5A	0~3A		
Constant Voltage	Load regulation (0 to 100% load Variation)	8mV				
	Line regulation (0 to 100% line variation)	8mV				
	Ripple and Noise (rms)	0.5mV				
Constant Current	Load regulation (0 to 100% load Variation)	10mV	20mV	10mV		
	Line regulation (0 to 100% line variation)	4mA	8mA	4mA		
	Ripple and Noise (rms)	3mA	5mA	3mA		
Display	Voltmeter	Type	3 digits red LED			
		Accuracy	± (0.2%rdg+ 2 digits)			
		Resolution	100mV			
	Ammeter	Type	3 digits red LED			
		Accuracy	± (1.0%rdg+3 digits)			
		Resolution	10mA			
	LED indicators		Green LED : CV, Red LED : CC			
Ground Proof Voltage		± 200V				
Insulation Resistance		30MΩ @DC500V: AC input to Chassis				
		20MΩ @DC500V: Output terminal to Chassis				
Temperature	Operating Temperature	0°C to 35°C, 10 to 80 RH				
	Storage Temperature	-20°C to 60°C, 10 to 85 RH				
	Cooling Method	Free Air	Fan	Free Air		
Power	Input Power	115 / 230V Selectable				
	Power Consumption	200VA/160W	330VA/270W	400VA/320W		
Dimension(W×H×Dmm)		124×160×326		234×160×326		
Weight		5Kg	5.5Kg	7.5Kg		

* The Specification will be changed without notice.

Spec. / Model		PS-3015TPR	P-3625T	P-3035T		
Output	Voltage	0~30V Dual 5V Fixed	0~36V Dual 3.3V/5V Fixed	0~30V Dual 5V Fixed		
	Current	0-1.5A Dual 5A Fixed	0-2.5A Dual 5A Fixed	0-3A Dual 3A Fixed		
Constant Voltage	Load regulation (0 to 100% load Variation)	8mV				
	Line regulation (0 to 100% line variation)	8mV				
	Ripple and Noise (rms)	0.5mV				
Constant Current	Load regulation (0 to 100% load Variation)	10mV				
	Line regulation (0 to 100% line variation)	3mA		4mA		
	Ripple and Noise (rms)	2mA	3mA			
Fixed Output	Output	Voltage	5V±2.5%	3.3V/5V±2.5%		
		Current	5A±2.5%			
	Ripple and Noise (rms)		2mVrms			
	Line & Load Regulation		0.1%±5mV			
	Tracking Error(Slave)		±(0.5%+10mV) of the master supply			
Display	Voltmeter	Type	3 dgs red LED			
		Accuracy	± (0.2%rdg+ 2 digits)			
		Resolution	100mV			
	Ammeter	Type	3 dgs red LED			
		Accuracy	± (1.0%rdg+3 digits)			
		Resolution	10mA			
	LED indicators		Green LED : CV, Red LED : CC			
Ground Proof Voltage		± 200V				
Insulation Resistance		30MΩ @DC500V: AC input to Chassis				
		20MΩ @DC500V: Output terminal to Chassis				
Temperature	Operating Temperature	0 °C to 35 °C, 10 to 80 RH				
	Storage Temperature	-20 °C to 60 °C, 10 to 85 RH				
	Cooling Method	Free Air	Fan	Free Air		
Power	Input Power	115 / 230V Selectable	230V	115 / 230V Selectable		
Dimension(W×H×Dmm)		234×160×326				
Weight		5Kg	5.5Kg	7.5Kg		

※ The Specification will be changed without notice.

3. OPERATION

WARNING : Before connecting line power to your power supply, make sure that the AC input voltage is correct for your power source.

TURN-ON CHECKOUT PROCEDURES.

- a) Turn A adj. control fully counter clockwise.
- b) Set AC power switch push to on position, digital display and CV lamp should light.
- c) Turn VOLTAGE controls fully counter clockwise to ensure that output decrease to 0V dc then fully clockwise to ensure that output voltage increase to maximum output voltage.
- d) While depressing CC SET push button, turn the CURRENT control fully counter clockwise and then fully clockwise to ensure that the current limit value can be set from zero to maximum rated value.
- e) Connect load to output terminals.

CONSTANT VOLTAGE OPERATION

To set up a power supply for a constant voltage operation, proceed as follow;

- a) Turn on power supply and adjust V adj. Control for desired output maximum (output terminal open). CV lamp should light.
- b) While depressing CC SET push button, adjust A adj. Control for operation, if a load change causes the current limit to be exceeded, the power supply will automatically crossover to constant current mode and output voltage will drop proportionately.
- c) Push-on DC OUT push button switch for DC voltage output.

CONSTANT CURRENT OPERATION

To set up a power supply for a constant current operation, proceed as follow;

a) Turn A adj. control fully counter clockwise to ensure that output decreases to 0A, and then on the power supply.

b) Adjust V adj. Control (no load connected) for maximum output voltage allowable (voltage limit), as determined by load conditions.

During actual operation, if a load change causes the voltage limit to be exceeded. The power supply will automatically crossover to constant voltage operation at the preset voltage limit and output current will drop proportionately.

c) Adjust A adj. control for desired output current while depressing CC SET button.

d) Push-on DC OUT push button switch for DC voltage output.

CONNECTING LOADS

The output of the supply is isolated from earth ground.

Either output terminal may be grounded or the output can be floated up to 240 volts off ground.

TRACKING OPERATION (TRIPPLE OUTPUT ONLY)

To select a tracking operation output as follows;

a) Set independent and tracking select switch to tracking position.

b) Depressing CC SET push button switch and adjust A adj. control of the each for maximum output current allowable(current limit), as determined by load conditions.

c) Adjust V adj. controls (COARSE and FINE) of the MASTER fro desired output Voltage.

This time, V adj. controls (COARSE and FINE) of the SLAVE should be set on maximum.

d) Connect load using the negative (black) terminal of the SLAVE supply and the positive (red) terminal of the MASTER supply.

e) Push DC OUT switch of both.

4. MAINTENANCE

WARNING : The following instructions are for use by qualified personnel only. To avoid electrical shock, do not perform any servicing other then contained in the operating instructions unless you are qualified to do so.

Fuse Replacement

If the AC fuse blows, the CV or CC lamp will not light and the power supply will not operate. If the DC fuse blows, the CV or CC lamp and digital display is light but DC OUTPUT will not operate.

The fuse should not normally open unless a problem has developed in the unit. Try to determine and correct the cause of the blown fuse, then replace only with a fuse the correct rating and type.

The fuse located on the real panel.

line Voltage Conversion

The primary winding of the power transformer is tapped to permit operation from 115 or 230 VAC, 50/60Hz line voltage. Conversion from one line voltage to another is done by AC select switch on the real panel.

The line voltage to switch the unit was factory setted. To convert to a different line voltage, perform the following procedure;

- a) Make sure the power cord is unplugged.
- b) Change the AC selects switch to the desired line voltage position.
- c) A change in line voltage may also require a corresponding change of fuse value. Install the correct fuse value as listed on real panel.

5. CALIBRATION ADJUSTMENT

ADJUSTMENT OF THE RATING VOLTAGE.

- a) Connect digital multimeter across output terminals of supply and set the DC volt position.
- b) Turn on supply and push on DC OUT push button switch.
- c) Adjust voltage controls (COARSE and FINE) fully clockwise.
- d) Adjust S203 for a reading of rate volts $\times 1.05$ on the digital multimeter.
- e) Adjust S401 until digital multimeter reads exactly maximum rated output voltage
- f) Push-off DC OUT push button switch and adjust S202 until front panel meter reads exactly digital multimeter reading.

ADJUSTMENT OF THE RATING CURRENT.

- a) Connect load resistor and digital multimeter with series and set the range to DC 20Amp position.
- b) Turn on supply.
- c) Adjust voltage controls and current control to minimum (fully counter clockwise).
- d) Adjust S201 for a reading of 0 Amp on the digital multimeter.
- e) Adjust voltage controls and current control to minimum (fully clockwise).
- f) Adjust S501 until front panel meter reads exactly digital multimeter reading.
- g) Push-on CC SET push button switch.
- h) Adjust S204 until digital multimeter exactly the maximum rated output current.