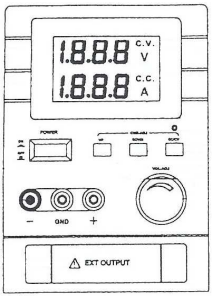
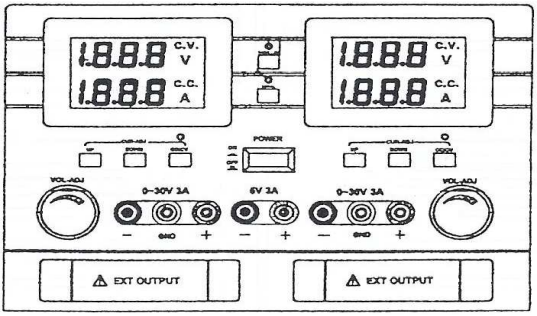
REGULATED DC POWER SUPPLY

AX-3005DBL-one channel

AX-3005DBL-3-three channel





Instruction Manual

1. Instalation and handling precautions

When placing the Power Supply in service at your workplace, observe the following precautions for best instrument performance and longest service life.

1) Avoid placing this instrument in an extremely hot or cold place. Specifically, don't leave this instrument in a closed car, exposed to sunlight in midsummer, or next to a space heater.

2) Don't use this instrument immediately after bringing it in from the cold. Allow time for it to warm to room temperature. Similarly don't move it from a warm place to a very cold place, as condensation might impair its operation.

3) Do not expose the instrument to wet or dust environments.

4) Do not place liquid-filled containers (such as coffee cups) on top of this instrument. A spill could seriously damage the instrument.

5) Do not use this instrument where it is subject to serve vibration, or strong blows.

6) Do not place heavy objects on the case, or otherwise block the ventilation holes.

7) Do not use this Power Supply in strong magnetic fields, such as near motors.

8) Do not insert wires, tools, etc, through the ventilation holes.

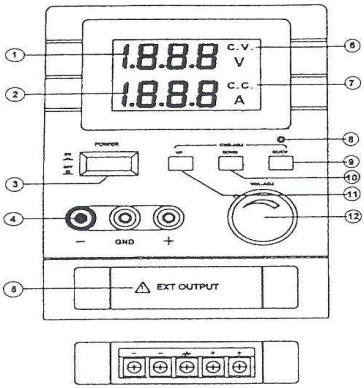
9) Do not leave a hot soldering iron near the instrument.

10) Do not place this instrument face down on the ground, or damage to the knobs may result.

11) Do not connect other power source to +.- of the output terminal.

2. Specifications

Model	AX-3005DBL	AX-3005DBL-3
IPUT VOLTAGE	230V / 110V ±10% 50~60Hz	
OUTPUT VOLTAGE	0 ~ 30V	2x0~30V 5V
CURRENT STEPWISE	50mA±5mA	50mA±3mA
OUTPUT CURRENT	0~5A	2x0~5A, 3A
LINE REGULATION	CV ≤ 0.02% + 2mV CC ≤ 0.05% + 5mA	
LOAD REGULATION	CV ≤ 0.02% + 2mV CC ≤ 0.05% + 5mA	
RIPPLE & NOISE	CV ≤ 0.5mV CC ≤ 2mA	
OPERATING TEMPERATURE	0~40°C	
RELATIVE HUMIDITY	≤ 90%	



3. Panel details – single type

Figure 1

1) Output Voltage LCD Display.
2) Output Current LCD Display.
3) On/Off Power Switch.
4) Output terminals.
5) Extended Output Terminals.
6) Constant Voltage Display.
7) Constant Current Display.
8) Current Limit Adjustment Indicator.

9) C.V. / C.C. Selection Switch.

10) Current Limit Down Setting.

11) Current Limit Up Setting.

12) Output Voltage setting.

3.1. Constant current adjustment method

1) Adjust by turning the voltage setting knob to desired voltage.

2) Press the CV/CC setting button down to light up the CC/CV setting indicator.

3) Use a wire to shorten the (+) and (-) terminal at the output terminal.

4) Push the UP or DOWN button to obtain the desired current value.

5) When pushing and hold the UP or DOWN button over 0.8 sec, the value will go up or go down continuously.

6) Release the shortend wire, connect the load to begin operation.

7) The setting of current value will be stored in the EEPROM after power off.

8) The current value will be resumed by pushing the CV/CC button when next power on.

4. Panel details – dual type

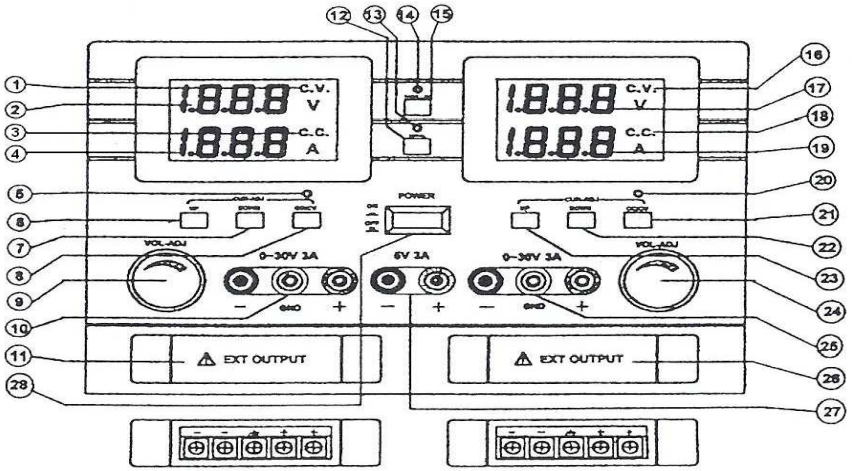


Figure 2

1) Constant Voltage Display – Ch.1

2) Output Voltage Display – Ch.1

3) Constant Current Display – Ch.1

4) Output Current Display – Ch.1

5) Current Limit Adjustment Indicator – Ch.1

6) Current Limit Up Setting – Ch.1

7) Current Limit Down Setting – Ch.1

8) C.V. / C.C. Selection Switch – Ch.1

9) Output Voltage Setting – Ch.1

10) Output Terminal – Ch.1

11) Extended Output terminals – Ch.1

12) Serial Function Select Switch

13) Serial Function Indicator

14) PARALLEL Function Indicator

15) PARALLEL Function Select Switch

16) Constant Voltage LCD Display – Ch.2

17) Output Voltage LCD Display – Ch.2

18) Constant Current Display – Ch.2

19) Output Current Display – Ch.2

20) Current Limit Adjustment Indicator – Ch.2

21) C.V. / C.C. Selection Switch – Ch.2

22) Current Limit Down Setting – Ch.2

23) Current Limit UP Setting – Ch.2

24) Output Voltage Setting – Ch.2

25) Output Terminals – Ch.2

26) Extended Output Terminals – Ch.2

27) Output Terminals for 5V 3A – Ch.3

28) Power Switch

4.1. Constant voltage setting method

1) Turn on power switch.

2) Adjust voltage setting knob to the desired voltage which can be shown in the LCD display.

3) Connect the load, make sure the load current not exceeding the maximum output current.

4.2. Constant current adjustment method

1) 1.Adjust by turning the voltage setting knob to desired voltage.

2) Press the CV/CC setting button down to light up the CC/CV setting indicator.

3) Use a wire to shorten the (+) and (-) terminal at output terminal.

4) Push the UP or DOWN button to obtain the current value.

5) When pushing and hold the UP or DOWN button over 0.8 sec, the value will go up or go down continuously.

6) Release the shortend wire, connect the load to begin operation.

7) The setting of current value will be stored in the EEPROM after off.

8) The current value will be resumed by pushing the CV/CC button when next power on.

5. Serial function operating method

1) Turn on the power by pressing the POWER switch.

2) Push the SERIAL button down to light up the indicator, the dual power supply is now working under serial condition, the maximum voltage output is from 0~60V.

3) When adjusting both the voltage setting knobs independently, the total output voltage is the sum of 2 voltage readings from the LCD display.

4) Push the SERIAL button down again, the indicator will be off, and this dual power supply will work independently.

Notice: When operating at constant current condition, the constant current value should be set at the same value.

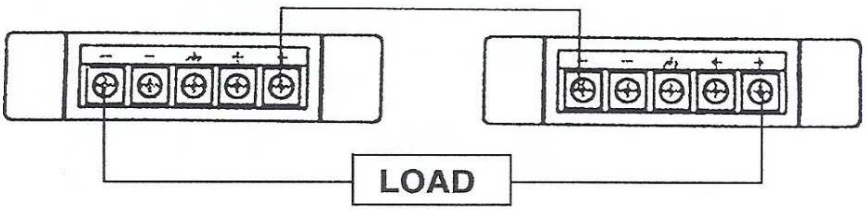


Figure 3

6. Parallel function operating method

1) Turn on the power by pressing the POWER switch.

2) Under normal condition, to adjust both voltage knob to obtain same or similar voltage value.

3) Push the PARALLEL button down to light the indicator, the unit is now working under parallel condition, the maximum current possibly obtained is 6A(3003II), 10A(3005XII).

4) To obtain desired voltage by fine tuning any of the voltage setting knob.

5) Push the PARALLEL button down again, the light will be off, this dual power supply will operate independently.

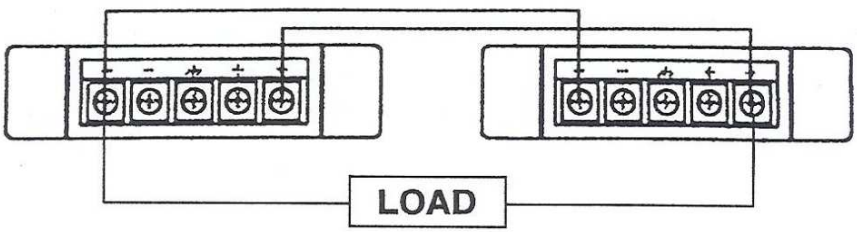


Figure 4

7. Dual function

With this function, you can simultaneously ground channel 1 and channel 2 to get +30V and –30V outputs, proceed as follows :

1. First do not turn on power.
2. Short the output (+) terminal of channel 1 and channel 2 with a short wire.
3. Turn on the power switch, push “serial” button down to light up the indicator, and you can get negative output voltage of 0~30V from channel 1 and positive output voltage of 0~30V from channel 2. as shown in the diagram.
4. In order to limit the current for +/- supply, you can perform the setting of CV/CC procedures to get the desired current output.
5. Do not forget to remove short wire of output terminals when operating in other mode.

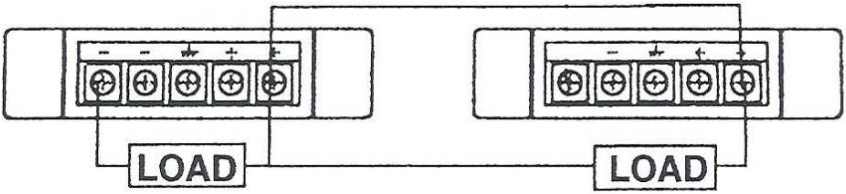
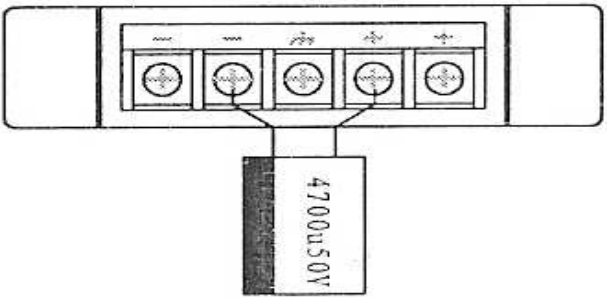


Figure 5

8. Notices

1) When the operation is under PARALLEL condition, when activating the SERIAL button, the operation will be changed from PARALLEL condition to SERIAL condition.
2) When the operation is under SERIAL condition, when activating the PARALLEL button, the operation will be changed from SERIAL condition to PARALLEL condition.
3) When the unit is used in inductance load (like DC electric buzzer), install a 4,700uF ~ 2,200uF/50V electrode capacitor across the extension terminal, connection please refer to Fig 8

4) When the unit is used with the high frequency instruments (like ultrasonic soldering tool),



the electric power supply should be grounded.

Figure 6