

# QUICKSTARTGUIDE



**For the following models:**  
5005, 5010, 5020, 5040

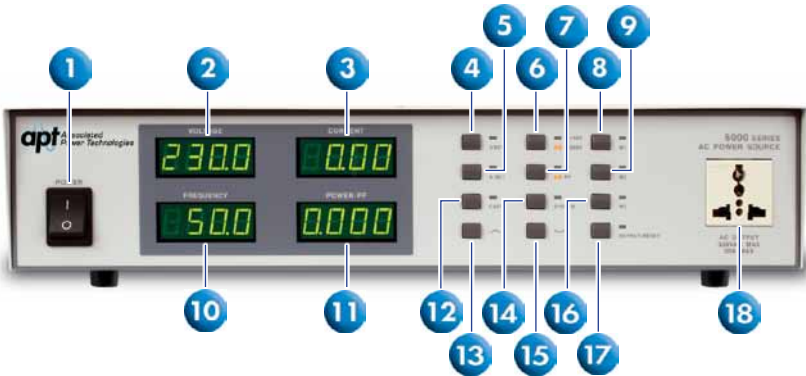
## SAFETYCHECKLIST

- KEEP** unqualified/unauthorized personnel away from test area
- ARRANGE** test stations in a safe and orderly manner
- NEVER** touch products or connections during a test
- STOP** the test first in the event of a problem
- BE SURE** to use the appropriate AWG for your input and output cabling
- TURN OFF** the output when making any connections to the load



**WARNING:** THIS GUIDE WAS CREATED FOR OPERATORS HAVING SOME FAMILIARITY WITH AC POWER SOURCES AND HIGH VOLTAGE/HIGH CURRENT TESTING APPLICATIONS. AN AC POWER SOURCE PRODUCES VOLTAGES AND CURRENTS THAT CAN CAUSE HARMFUL OR FATAL ELECTRIC SHOCK. TO PREVENT ACCIDENTAL INJURY OR DEATH, THESE SAFETY PROCEDURES MUST BE STRICTLY OBSERVED WHEN HANDLING AND USING AN AC POWER SOURCE.

# FRONT PANEL CONTROLS



- 1. POWER SWITCH:** Rocker style power switch with international ON ( I ) and OFF ( 0 ) markings.
- 2. VOLTAGE DISPLAY:** When the output is OFF the display shows the output voltage setting. When the output is ON the display shows the output voltage measurement.
- 3. CURRENT DISPLAY:** When the output is OFF the display shows the output current setting. When the output is ON the display shows the output current measurement.
- 4. V. SET KEY:** Voltage set key. Press to change the voltage output.
- 5. A. SET KEY:** Current set key. Press to change the current maximum limit.
- 6. RANGE KEY:** Used to select the output voltage range. When the 0-150 V indicator LED is illuminated, the output is set to the low range. When the 0-300 V indicator LED is illuminated, the output is set to the high range.
- 7. WATTMETER/POWER FACTOR KEY:** Used to select the wattage or power factor measurement on the Power P/PF display. When the P indicator LED is illuminated the wattage will be displayed. When the PF indicator LED is illuminated the power factor will be displayed.
- 8. M1 KEY:** Used to recall or store parameter settings in memory one. When the LED indicator illuminates, the memory is active.
- 9. M2 KEY:** Used to recall or store parameter settings in memory two. When the LED indicator illuminates, the memory is active.
- 10. FREQUENCY DISPLAY:** When the output is OFF the display shows the output frequency setting. When the output is ON the display shows the output frequency measurement.
- 11. POWER/PF DISPLAY:** Displays the value of the output wattage or power factor.

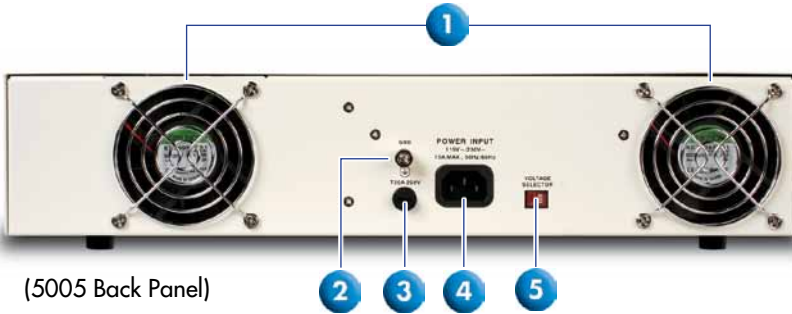
# FRONTPANELCONTROLS



(5040 Front Panel)

- 12. F. SET KEY:** Frequency set key. Press to change the frequency output.
- 13. UP ARROW KEY:** Used to change parameters.
- 14. SYSTEM KEY:** Used to change the system settings such as power up state, voltage high and low limits, frequency high and low limits, over current fold back, and locking.
- 15. DOWN ARROW KEY:** Used to change parameters.
- 16. M3 KEY:** Used to recall or store parameter settings in memory three. When the LED indicator illuminates, the memory is active.
- 17. OUTPUT/RESET KEY:** Used to turn ON/OFF output voltage, or used to reset the condition. When the LED indicator is ON voltage is being output. When the LED indicator is blinking the instrument is in a failure condition.
- 18. UNIVERSAL AC OUTPUT SOCKET:** 300 VAC max voltage & 20 A max current.
- 19. RESET SWITCH:** Used to reset the unit if 20 A max current is reached on the universal AC output socket. Only available on the 5040 model shown above.

# BACKPANELCONTROLS



(5005 Back Panel)

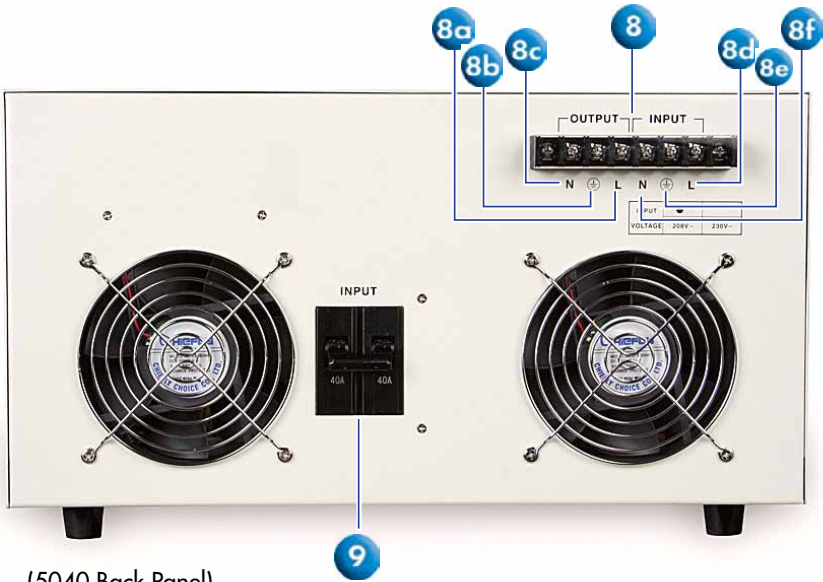
- 1. THERMAL FANS:** Used to cool the instrument.
- 2. GROUND LUG:** Additional ground connector in addition to power cord ground.
- 3. FUSE RECEPTACLE:** The fuse rating for the 5005 model is 10 A @ 250 V and the rating for models 5010 and 5020 is 20 A @ 250 V. To change the fuse, unplug the power (mains) cord and turn the fuse cap counter clockwise to remove fuse. The fuse compartment will be exposed. Please replace the fuse with one of the proper rating.
- 4. INPUT POWER RECEPTACLE:** Standard IEC 320 connector for connection to a standard NEMA style line power (mains) cord.
- 5. INPUT POWER SWITCH:** Line voltage input selection is set by the position of the switch 115/230 V.



(5010 & 5020 Back Panel)

- 6. UNIVERSAL AC OUTPUT SOCKET:** 300 VAC max voltage & 20 A max current. Only available on the 5020 model.
- 7. TERMINAL POWER BLOCK:** 208 VAC  $\pm$  10% max input voltage or 230 VAC  $\pm$  10% (option) for input voltage. Output voltage 300 VAC max & 18.4 A max current. Terminal power block is only available on the 5020 model.
  - 7a.** Neutral Input Terminal: Neutral (return) screw terminal. Line voltage may be applied at this terminal for balanced input voltage conditions.
  - 7b.** Ground Input Terminal: Earth ground (chassis) connection for line cord.
  - 7c.** Line Input Terminal: High voltage input screw terminal.

# BACKPANELCONTROLS



(5040 Back Panel)

- 8. TERMINAL POWER BLOCK:** 208 VAC  $\pm$  10% max input voltage or 230 VAC  $\pm$  10% (option) for input voltage. Output voltage 300 VAC max & 36.8 A max current. Terminal power block only available on the 5040 model.
  - 8a.** Line Output Terminal: High voltage output screw terminal.
  - 8b.** Ground Output Terminal: Earth ground (chassis) connection.
  - 8c.** Neutral Output Terminal: Neutral (return) screw terminal.
  - 8d.** Line Input Terminal: High voltage input screw terminal for line cord.
  - 8e.** Ground Input Terminal: Earth ground (chassis) screw terminal for line cord.
  - 8f.** Neutral Input Terminal: Neutral (return) screw terminal for line cord. Line voltage may be applied at this terminal for balanced input voltage conditions.
- 9. INPUT BREAKER:** Protection breaker for input current protection set at 40 amps. Only available on the 5040 model.

Press the System key to change the system parameters. The LED indicator illuminates when the System key is activated. The System key is only available if the output is off. Press the System key to cycle through the following: Power Up State, High Voltage Limit, Low Voltage Limit, High Frequency Limit, Low Frequency Limit, Over Current Fold Back, and Lock Out. Use the up or down arrow keys to change the parameter values.

### Setting the Power Up

Press the System key until the voltage display reads P-UP. Press the up or down arrow keys to toggle the parameters shown in Figures 1, 2, and 3. Press the System key again to accept the setting and move to the next parameter setting, High Voltage Limit.



(Figure 1. LAST)



(Figure 2. OFF)



(Figure 3. ON)

### Setting the Voltage HI Limit

Press the System key until the voltage display reads HI and the frequency display reads Volt as shown in Figure 4. Press the up or down arrow keys to select the High Limit Voltage (0.0 – 300.0 V). Press the System key again to accept the setting and move to the next parameter setting, Low Voltage Limit.



(Figure 4)

### Setting the Voltage LO Limit

Press the System key until the voltage display reads LO and the frequency display reads Volt as shown in Figure 5. Press the up or down arrow keys to select the Low Limit Voltage (0.0 – 300.0 V). Press the System key again to accept the setting and move to the next parameter setting, High Frequency Limit.



(Figure 5)

## Setting the Frequency HI Limit

Press the System key until the voltage display reads HI and the frequency display reads FrEq as shown in Figure 6. Press the up or down arrow keys to select the High Limit Frequency (40.0 – 450.0 Hz). Press the System key again to accept the setting and move to the next parameter setting, Low Frequency Limit.



(Figure 6)

## Setting the Frequency LO Limit

Press the System key until the voltage display reads LO and the frequency display reads FrEq as shown in Figure 7. Press the up or down arrow keys to select the Low Limit Frequency (40.0 – 450.0 Hz). Press the System key again to accept the setting and move to the next parameter setting, Over Current Fold Back.



(Figure 7)

## Setting the Over Current Fold Back

Over current fold back is a technology used in power sources that keeps output current constant by reducing the voltage in order to power loads that may have a high inrush current.

Press the System key until the voltage display reads Fold and the frequency display reads OC. Press the up or down arrow keys to select the Over Current Fold Back Setting OFF or On. The displays are shown below in Figure 8 and 9. Press the System key again to accept the setting and move to the next parameter setting, Lockout.



(Figure 8)



(Figure 9)

## Setting the Lockout

Press the System key until the voltage display reads LocH. Press the up or down arrow keys to select the lockout state of OFF or On. The displays are shown in Figure 10 and 11. Press the System key again to accept the setting and you will now exit the system parameter setup



(Figure 10)



(Figure 11)

## Setting the Output Voltage

Press the V. Set key and the voltage display will begin flashing indicating that the voltage is ready for setting. If you don't change the voltage setting within 15 seconds the display will stop flashing and you will have to press the V. Set key again. Press the up or down arrow keys in order to change the voltage and press the V. Set key again to accept the parameter.

## Current Limit

Press the A. Set key and the current display will begin flashing indicating that the current is ready for setting. If you don't change the current setting within 15 seconds the display will stop flashing and you will have to press the A. Set key again. Press the up or down arrow keys in order to change the current and press the A. Set key again to accept the parameter. The current that you are setting is the High Limit Current. Therefore, if the load draws more than the High Limit Current setting, the instrument will give you a failure (HI-A). If the system parameter setting for OC Fold back is ON and the Current High Limit is set, the output voltage will fold back to maintain the output current. If the high limit is OFF, the output will terminate once the current exceeds the current output of the instrument and a failure will be given (OCP).

## Setting the Frequency

Press the F. Set key and the frequency display will begin flashing indicating that the frequency is ready for setting. If you don't change the frequency setting within 15 seconds the display will stop flashing and you will have to press the F. Set key again. Press the up or down arrow keys in order to change the frequency and press the F. Set key again to accept the parameter.



For additional information about these and other key features of the 5000 Series, please consult the full Operation and Service Manual or call us toll free +1-877-322-7693 or +1-909-860-1646

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