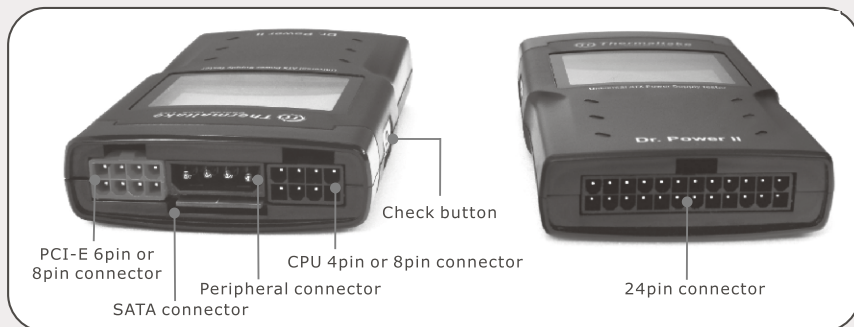


Connector Introduction



Functions of the Dr. Power II

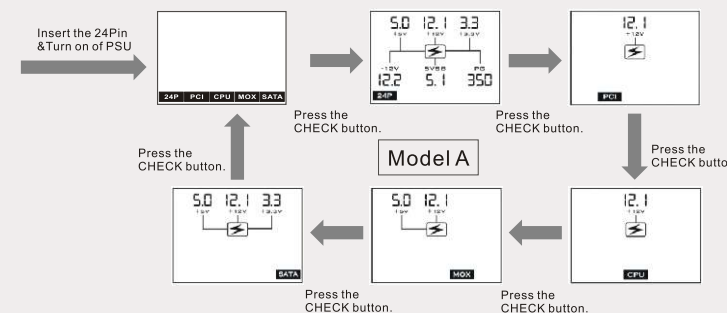
- ★ It provides an LCD panel, which can display the voltage outputs of the Power Supply Unit (PSU) of the ATX in real time.
- ★ It displays voltage up to 0.1V (12V/ 5V/ 3.3V/ 5VSB/ -12V).
- ★ It displays the PG value of the ATX and generates an audio alarm when the PG is too high/low.
- ★ Support functions such as output connector diagnosis, low voltage alarm, over-voltage alarm, and no-voltage alarm (when the buzzer is set to +5VSB).
- ★ It provides a manual/automatic detection control switch.
- ★ When the detected voltage is lower than the preset Min. value, it displays "F" on the LCD panel, makes a beep sound, and changes the LCD backlight from blue (normal) to red (abnormal).
- ★ When the detected voltage is higher than the preset Max. value, it displays "F" on the LCD panel, makes a beep sound, and changes the LCD backlight from blue (normal) to red (abnormal).
- ★ When the detected PG value is lower than 100 ms or higher than 500 ms, it displays "F" on the LCD panel, makes a beep sound, and changes the LCD panel, makes a beep sound, and changes the LCD backlight from blue (normal) to red (abnormal).
- ★ It checks the output voltage of all connectors in sequence. It displays the icon of a connector when the connector is inserted into the system to remind the user.
- ★ When the test fails, it displays "F" on the LCD panel for the power output, and changes the LCD backlight from blue (normal) to red (abnormal); the buzzer makes a beeping sound.
- ★ Support LCD backlight. When the backlight is blue, it indicates that the PSU is normal; when the backlight is red or there is no backlight (such as when the PSU has no power output), it indicates that the PSU is faulty.
- ★ Support for the AUTO SHUTDOWN function. When Dr. Power II is in the middle of a test and no operation is performed, it will automatically shut itself and the PSU down.

Test procedure

CAUTION: PLEASE DISCONNECT ALL POWER SUPPLY CONNECTORS FROM THE COMPUTER BEFORE STARTING DR. POWER II TESTER: Motherboard, graphic card, optical disk drive, hard drive, fan and another other connected devices.

1. Insert the connectors of the PSU into the Dr. Power II.
2. Flip the power switch to the "—" position.
3. The LCD displays the icons of the PSU connectors that are inserted into the Dr. Power II, and the LCD backlight is blue.

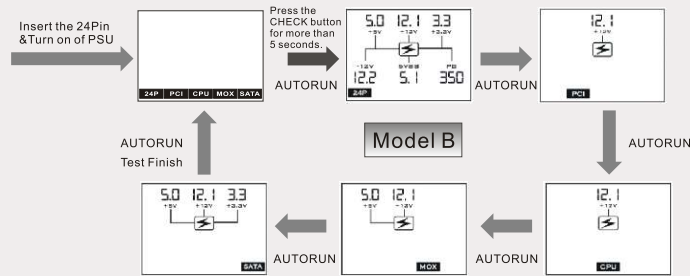
4. Press the CHECK button for less than 5 seconds. Mode A will start. The LCD displays the icon of the 24-pin connector and the corresponding voltage output. If no fault occurs, the LCD backlight is blue.
5. Press the CHECK button for a second time, the system proceeds with the next test point PCI. The LCD displays the PCI icon and the corresponding voltage output. If no fault occurs, the LCD backlight is blue.
6. Press the CHECK button for a third time, the system proceeds with the next test point CPU. The LCD displays the CPU icon and the corresponding voltage output. If no fault occurs, the LCD backlight is blue.
7. Press the CHECK button for a fourth time, the system proceeds with the next test point MOX. The LCD displays the MOX icon and the corresponding voltage output. If no fault occurs, the LCD backlight is blue.
8. Press the CHECK button for a fifth time, the system proceeds with the next test point SATA. The LCD displays the SATA icon and the corresponding voltage output. If no fault occurs, the LCD backlight is blue.
9. Press the CHECK button for a sixth time, the system returns to the original state where it only displays the icons of PSU connectors that are inserted into the Dr. Power II.
10. If any fault occurs during the test, the LCD backlight turns red and the buzzer makes a "beep" sound.



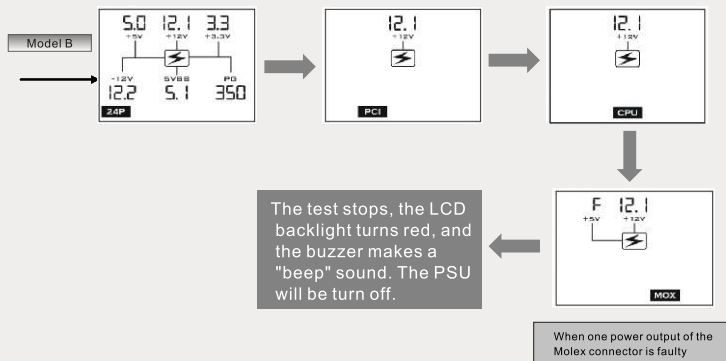
1. Insert the connectors of the PSU into the Dr. Power II.
2. Flip the power switch to the "—" position.
3. The LCD displays the icons of the PSU connectors that are inserted into the Dr. Power II, and the LCD backlight is blue.
4. Press the CHECK button for more than 5 seconds. Mode B will start. The system automatically displays the icon of the 24-pin connector and the corresponding voltage output. If no fault occurs, the LCD backlight is blue. The system stays in this state for 5 seconds and then proceeds with the PCI connector automatically.
5. The system displays the icon of the PCI connector and tests its voltage output. If no fault occurs, the LCD backlight is blue. The system stays in this state for 5 seconds and then proceeds with the CPU connector automatically.
6. The system displays the icon of the CPU connector and tests its voltage output. If no fault occurs, the LCD backlight is blue. The system stays in this state for 5 seconds and then proceeds with the MOX connector automatically.
7. The system displays the icon of the MOX connector and tests its voltage output. If no fault occurs, the LCD backlight is blue. The system stays in this state for 5 seconds and then proceeds with the SATA connector automatically.



- The system displays the icon of the SATA connector and tests its voltage output. If no fault occurs, the LCD backlight is blue. The system stays in this state for 5 seconds and then returns to the original state where it only displays the icons of PSU connectors that are inserted into the Dr. Power II.
- If any fault occurs during the test, the LCD backlight turns red and the buzzer makes a "beep" sound. The system will stop at the place where the test fails and you cannot perform any operations.



- In Mode B, when the test fails, the system stops at the icon where the fault occurs, displays the letter "F" on the LCD panel, changes the backlight to red, and makes a "beep" sound.
- In the event that the PSU cannot be powered on, you cannot start the Dr.Power II function normally.
- When the test fails, you need to remove the 24-pin connector or shut down the power supply to perform any further operations.



Notes:

- The 24-pin connector must always be connected during the entire test process.
- The sequence of testing connectors is 24-pin -> PCI-E -> CPU -> Molex 4-pin -> SATA. For example, if only 24-pin, PCI-E and SATA connectors are inserted, the test sequence is 24-pin->PCI-E->SATA.
- When the test fails, the backlight changes from blue to red, the system displays the letter "F" for the corresponding voltage output, and the buzzer makes a "beep" sound.
- The unit of PG is ms(millisecond). When the test for PG fails, the backlight turns red, the system displays the letter "F" under the PG icon, and the buzzer makes a "beep" sound.

- If the system does not respond after you press the CHECK button, you can infer that the PSU is faulty. In this case, the LCD does not display any characters, there is no backlight, nor does the buzzer make a beep sound.
- Make sure that the CPU, PCI-E and SATA connectors are inserted into the correct ports. Otherwise, the product may be damaged due to a voltage polarity inversion.
- During the test, the product may get warm since the internal resistance of the product is used as a load. The product will cool off when the test is over.
- Warning:** After Dr. Power II has initiated the diagnostic testing, DO NOT disconnect any of the peripheral / power / PCI-E / SATA connectors or turn off the power supply, doing so may cause permanent damage to the power supply tester itself. In some cases, it may also cause the Dr. Power II to return a false-positive signal. Only turn off the power supply and disconnect the connectors after the Dr. Power II has completed all the tests.
- For more product information and technical support, please go to: www.thermaltakeusa.com.

FAQ:

- Q1. Must the 24-pin connector of the PSU be connected? Can I test the voltage of other connectors independently?
 A1: Dr. Power II is powered by the PSU, so the 24-pin connector MUST be connected. You can insert other connectors as required.
- Q2. Why does the Dr. Power II have no response after I press the CHECK button?
 A2: 1. Check that the 24-pin connector is inserted.
 2. Check that the PSU is connected to the mains supply.
 3. Check that the I/O switch of the PSU is placed in the "I" position.
 4. If the fault is not caused by the preceding three reasons, you can infer that the PSU is faulty.
- Q3. How can I scan the voltage outputs of connectors automatically?
 A3: After the connectors are correctly inserted into the Dr. Power II, press the CHECK button on the left side for more than 5 seconds. Then the Dr. Power II automatically scans the power outputs of the connectors of the PSU.
- Q4. When the test fails, the Dr. Power generates an audio alarm. How can I shut down the sound?
 A4: You can directly remove the PSU or unplug the 24-pin connector.

Specification:

Voltage	Intel standard		Measure Range	
	Min.	Max.	Min.	Max.
+5V	4.75V	5.25V	4.6V	5.5V
+3.3V	3.1V	3.5V	3V	3.6V
+12V	11.4V	12.6V	11V	13V
-12V	10.8V	13.2V	10.5V	13.4V
+5Vsb	4.75V	5.25V	4.6V	5.5V
P.G.	100ms ≤ T ≤ 500ms			

Please visit www.thermaltake.com for information about our warranty policy.

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Specifications subject to change without notice.

