Kingwin KPST-01

Kingwin Digital Power Supply Tester with LCD Screen

Model: KPST-01

Brand: Kingwin

1. Introduction

The Kingwin Digital Power Supply Tester (Model KPST-01) is a diagnostic tool designed to efficiently test the voltage output of various PC power supply units (PSUs). It features a clear LCD screen for real-time voltage readouts and is compatible with ATX, ITX, IDE, HDD, SATA, and BTX power supplies. This manual provides essential information for the safe and effective use of your power supply tester.

2. Safety Information

- Always ensure the power supply unit is disconnected from the main power outlet before connecting or disconnecting the tester.
- Do not attempt to open or modify the tester. There are no user-serviceable parts inside.
- Avoid exposing the tester to moisture or extreme temperatures.
- Connect only one main power connector (e.g., 24-pin ATX) at a time for initial testing. Other peripheral connectors can be tested individually or in combination after the main connector is verified.
- The tester is equipped with built-in safeguards against short circuits and overvoltage. However, always exercise caution when working with electrical components.

3. Package Contents

Verify that your package contains the following item:

- Kingwin Digital Power Supply Tester (Model KPST-01)

4. Product Overview

The Kingwin Digital Power Supply Tester features a durable aluminum enclosure and multiple interfaces for

comprehensive PSU testing.

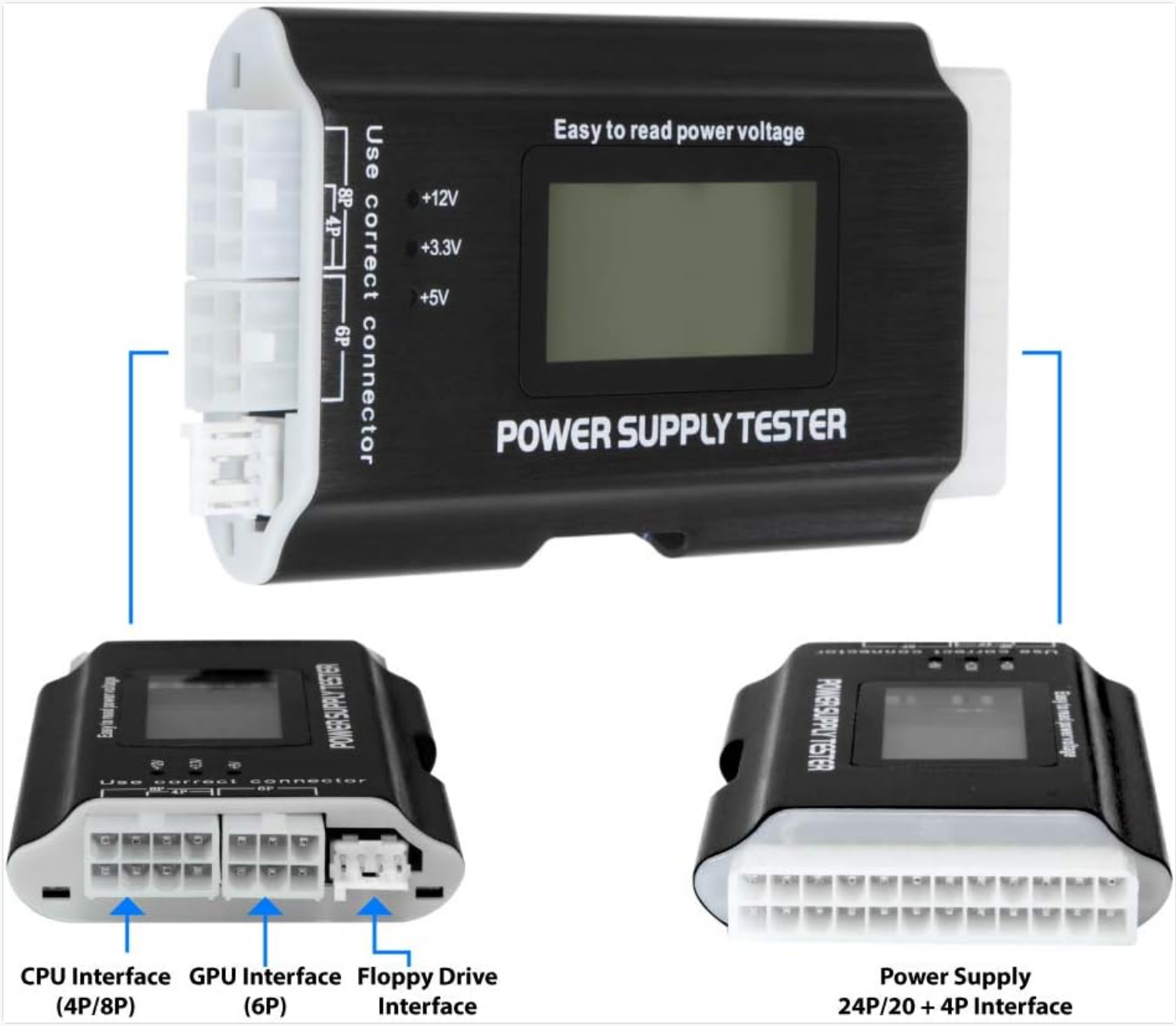


Figure 4.1: Diagram showing the various connector interfaces on the Kingwin Digital Power Supply Tester, including CPU (4P/8P), GPU (6P), Floppy Drive (6P), and Power Supply (24P/20 + 4P).



Figure 4.2: Close-up views of the Kingwin Digital Power Supply Tester showing the SATA and IDE (Molex 4P) interfaces.

The tester includes interfaces for:

- 24-pin ATX (main power)
- 4-pin / 8-pin CPU
- 6-pin GPU
- SATA
- 4-pin Molex (IDE)
- Floppy Drive (6-pin)

The integrated LCD screen displays real-time voltage values for +12V, -12V, +5V, +3.3V, and 5VSB rails, along with the Power Good (PG) signal.

5. Setup

The Kingwin Digital Power Supply Tester is designed for plug-and-play operation. No software installation or external power source is required for the tester itself. It draws power directly from the PSU being tested.

1. Ensure the power supply unit you intend to test is completely disconnected from any computer components and from the wall power outlet.
2. Connect the power supply unit to a wall outlet.

6. Operating Instructions

Follow these steps to test your power supply unit:

1. **Connect the Main ATX Connector:** Plug the 24-pin (or 20-pin) ATX connector from your power supply into the corresponding port on the tester. The tester will power on automatically.
2. **Observe LCD Display:** The LCD screen will immediately display the voltage readings for the +12V, -12V, +5V, +3.3V, and 5VSB rails, as well as the Power Good (PG) value.
3. **Connect Other Connectors (Optional):** For a comprehensive test, you can connect other power supply connectors (e.g., CPU 4/8-pin, GPU 6-pin, SATA, Molex) one by one into their respective ports on the tester. The LCD will update to show the voltages for the connected rails.
4. **Interpret Readings:** Refer to the 'Voltage Reference Table' in Section 7 to determine if the displayed voltages are within acceptable ranges.
5. **Alarm Function:** If any voltage falls outside the normal range or if the Power Good signal is abnormal, the tester will emit an audible alarm, and the corresponding digit on the LCD screen will blink.
6. **Disconnect:** Once testing is complete, disconnect all power supply connectors from the tester, then disconnect the power supply from the wall outlet.



Figure 6.1: Kingwin Digital Power Supply Tester connected to a power supply unit, displaying voltage readings.



Figure 6.2: Close-up of the LCD display showing voltage readouts.

7. Voltage Reference Table

The following table provides the normal voltage ranges for various power supply rails. If any abnormality occurs, the alarm will sound, and the corresponding digit will blink on the LCD screen.



*When any abnormality occurs, the alarm (beeps) will go off and relative digit will blink on the LCD screen.

	Normal Voltage Range		Display Voltage Range	
	Low(A)	High(B)	Min.(C)	Max.(D)
+5V	+4.75V	+5.25V	4.0V	6.0V
-12V	-11V	-13V	-10V	-14V
+12V1	+11V	+13V	+10V	+14V
+12V2	+11V	+13V	+10V	+14V
3.3V	+3.14V	+3.47V	+2.0V	+4.5V
5VSB	+4.75V	+5.25V	+4.0V	+6.0V
P.G.			0ms	990ms

Normal voltage range for each output: Reference field low (A) and High (B)
+/- 5%: +5V, +5VSB, +3.3V
+/- 10%: +12V1, +12V2, -12V

Figure 7.1: Normal and Display Voltage Ranges.

Normal Voltage Range

	Normal Voltage Range		**Display Voltage Range**	
	Low (A)	**High (B)**	**Min. (C)**	**Max. (D)**
+5V	+4.75V	+5.25V	4.0V	6.0V
-12V	-11V	-13V	-10V	-14V
+12V1	+11V	+13V	+10V	+14V
+12V2	+11V	+13V	+10V	+14V
+3.3V	+3.14V	+3.47V	+2.0V	+4.5V
5VSB	+4.75V	+5.25V	+4.0V	+6.0V

	Normal Voltage Range		Display Voltage Range	
	Low (A)	**High (B)**	**Min. (C)**	**Max. (D)**
P.G.	0ms	990ms	0ms	990ms

Note: Normal voltage range for each output is referenced by field Low (A) and High (B). Tolerances are +/- 5% for +5V, 5VSB, +3.3V, and +/- 10% for +12V1, +12V2, -12V.

8. Maintenance

To ensure the longevity and proper functioning of your Kingwin Digital Power Supply Tester:

- Keep the device clean by wiping it with a soft, dry cloth. Do not use liquid cleaners or solvents.
- Store the tester in a dry environment, away from direct sunlight and extreme temperatures.
- Avoid dropping the device or subjecting it to strong impacts.

9. Troubleshooting

No Display / Tester Does Not Power On

- Ensure the 24-pin ATX connector from the PSU is fully and correctly inserted into the tester.
- Verify that the power supply unit is connected to a live wall outlet and is switched on (if it has a physical switch).
- If the PSU is known to be faulty, it may not provide enough power to activate the tester. Try testing with a known good PSU.

Alarm Sounds / Blinking Digits on LCD

- An alarm and blinking digits indicate that one or more voltage rails are outside their acceptable operating range, or the Power Good signal is abnormal.
- Identify the blinking digit(s) on the LCD to pinpoint the problematic voltage rail.
- This typically signifies a faulty power supply unit that should be replaced to prevent damage to other computer components.

10. Specifications

- **Brand:** Kingwin
- **Model:** KPST-01
- **Power Source:** DC Power Supply (from PSU being tested)
- **Measurement Type:** Voltmeter
- **Compatible Devices:** Personal Computer Power Supplies (ATX, ITX, IDE, HDD, SATA, BTX)
- **Color:** Black
- **Item Dimensions (L x W x H):** 3 x 2 x 1 inches
- **Construction:** Aluminum Enclosure
- **Certifications:** CE, UL

11. Warranty and Support

Warranty

This Kingwin Digital Power Supply Tester (Model KPST-01) comes with a**1-year warranty** from the date of purchase. This warranty covers manufacturing defects and malfunctions under normal use. It does not cover damage caused by misuse, accidents, unauthorized modifications, or improper installation.

Customer Support

For technical assistance, warranty claims, or any questions regarding your Kingwin product, please refer to the contact information provided with your purchase or visit the official Kingwin website for support resources.

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Question

Example: How do I reset this device or fix this error?

Details

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