



 **New Solution Series**

# NSK 1480

## User's Manual

Manuel de l'utilisateur

Anwenderhandbuch

Manuale per l'operatore

Manual del usuario

取扱説明書

At Antec, we continually refine and improve our products to ensure the highest quality. As such, your new case may differ slightly from the description in this manual. This isn't a problem; it's simply an improvement. As of the date of publication, all features, descriptions, and illustrations in this manual are correct.

### **Disclaimer**

This manual is intended only as a guide for Antec's Computer Enclosures. For more comprehensive instructions on installing the motherboard and peripherals, please refer to the user's manuals that come with those components.

## **New Solution Series User's Manual**

### **NSK 1480**

#### **Quiet Desktop Slim Case**

##### **The Power Supply**

The NSK 1480 comes with a 350-Watt power supply (PSU) that features universal input and active PFC. This includes dual 12V output rails that deliver safer and more reliable output to the system's components. This PSU has achieved 80 PLUS® Certification, the latest independent standard in power supply efficiency. It reduces power consumption by up to 25%, saving you money on your electricity bill. In addition it has a variety of industrial-grade protective circuitry: OPP (over power protection), OVP (over voltage protection), UVP (under voltage protection), and SCP (short circuit protection).

##### **The Rubber Pads/Stands**

There are four rubber pads inside the tool bag. If you want to place the case horizontally on a desktop, stick the rubber pads to the bottom of the case. There are also two stands so the case can stand up vertically. Place the case onto the stands with the optical drive bay at its top position. Make sure the stands do not block the two air intakes on the bottom.

##### **Setting Up**

1. Place the case upright on a flat, stable surface.
2. Remove the thumbscrews from the back of the top panel. Slide the panel towards the rear to remove it from the case.
3. Inside the case you should see the power supply, some wiring with marked connectors (USB, PWR etc.), and installed I/O panel and a power cord.

##### **The Dual Chamber structure**

Upon opening the top panel, you will find that the case is divided into two separate chambers—the motherboard chamber and the HDD chamber. The power supply is designed to directly suck fresh air from outside the case. This unique feature combined with the dual chamber structure isolates heat and noise from each section, resulting in much quieter and cooler operation than a traditional desktop case. Although care has been taken to prevent sharp edges in your Antec case, we strongly recommend taking the appropriate time and care when working with it. Avoid excessive force and hurried or careless motions. Please take reasonable precautions.

## Installing the Motherboard

This manual is not designed to cover CPU, RAM, or expansion card installation. Please consult the motherboard manual for specific mounting instructions and troubleshooting.

The motherboard is located inside the main chamber with two 80 mm TriCool™ fans preinstalled right next to the CPU.

1. Lay the case down, with the open side facing up. The drive cages and power supply should be visible.
2. Make sure you have the appropriate I/O panel for the motherboard. If the panel provided is not suitable for the motherboard, please contact the motherboard manufacturer for the correct I/O panel.
3. Remove the cross bar on the motherboard chamber.
4. Line up the motherboard with the mounting holes. There are three special brass standoffs pre-installed on the motherboard tray. Two of them are threaded and one is an unthreaded post. Make note of any that don't line up with a corresponding hole in the motherboard. Not all motherboards will match with all of the provided screw holes, and this is not necessary for proper functionality.
5. Remove the motherboard by lifting it up.
6. Remove any of the pre-installed standoffs that aren't needed.
7. Place the motherboard back on the standoffs. Attach the motherboard to the threaded brass standoffs with the special nuts that comes with your tool bag.  
**Note:** You do not need to fasten the unthreaded brass standoff.
8. Fasten the rest of the standoffs with the provided Philips-head screws. The motherboard is now installed.

## Connecting the Power and LED

If the motherboard has a 20-pin power receptacle, detach the 4-pin attachment on the 24-pin power connector. Before you connect the power supply to any of the devices, please consult the appropriate user manuals for the motherboard and other peripherals.

1. Connect the 24-pin Main Power Connector and the 4-pin connector to the motherboard as needed. If the motherboard uses a 20-pin connector; detach the 4-pin attachment on the 24-pin power connector (see pictures 1 and 2).

**Note:** the detachable 4-pin section cannot be used in place of a 4-pin +12V connector.

2. Connect the Reset switch (labeled RESET SW) to the motherboard at the RST connector. Polarity (positive and negative) does not matter for switches.
3. The Power Switch (labeled POWER SW) connects to the PWR connector on the motherboard.
4. The Power LED (labeled POWER LED) connector is located behind the Reset connector. For LEDs, colored wires are positive (+). White or black wires are negative (-). If the LED does not light up when the system is powered on, try reversing the connection. For more info on connecting LEDs to your motherboard, see your motherboard manual.
5. The Hard Drive LED (labeled HDD LED) connects to the hard drive activity header.

Picture 1



For 24-pin motherboards

Picture 2



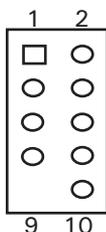
For 20-pin motherboards

## Connecting the USB Ports

You will find a single 10-pin connector on a cable attached to the front USB ports. This Intel standard connector is keyed so that it can't be accidentally reversed as long as it is connected to a proper Intel standard motherboard header. Connect the 10-pin connector to the motherboard headers so that the blocked pin fits over the missing header pin.

**Note:** Please check the motherboard manual for the USB header pin layout and make sure it matches the table below. If it does not match this Intel® standard, please visit Antec's web store at <http://www.antec.com/StoreFront.bok> and search for part number 30095 to order a USB Internal Adapter Cable. This adapter will allow you to connect the front USB to your motherboard on a pin-by-pin basis.

### Motherboard Pin Layout

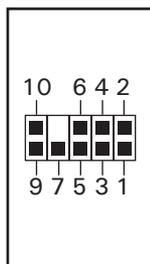


Pin	Signal Names	Pin	Signal Names
1	USB Power 1	2	USB Power 2
3	Negative Signal 1	4	Negative Signal 2
5	Positive Signal 1	6	Positive Signal 2
7	Ground 1	8	Ground 2
9	Key (No Connection)	10	Empty Pin

## Connecting the Audio Ports (AC' 97 and HDA)

There is an Intel standard 10-pin AC' 97 connector and an Intel 10-pin HDA (High Definition Audio) connector. You can connect either the AC' 97 or the HDA connector to your motherboard depending on the spec of the motherboard. If your motherboard supports Intel's standard onboard AC' 97 audio connector, you can plug the AC' 97 connector directly into the board. If your motherboard supports Intel's High Definition Audio, you can plug HDA onto the board. See instruction below:

### Pin Assignment for Audio Ports (HDA and AC'97)



Pin	Signal Names (HDA)	Pin	Signal Names (AC'97)
1	MIC2 L	1	MIC In
2	AGND	2	GND
3	MIC2 R	3	MIC Power
4	AVCC	4	NC
5	FRO-R	5	Line Out (R)
6	MIC2_JD	6	Line Out (R)
7	F_IO_SEN	7	NC
8	Key (no pin)	8	Key (no pin)
9	FRO-L	9	Line Out (L)
10	LINE2_JD	10	Line Out (L)

Locate the internal audio connectors from your motherboard or sound card. Consult your motherboard or sound card manual for the pin-out positions.

### **Connecting the eSATA Port**

You will find a SATA connector on a cable attached to the front ports. This internal SATA connector is designed to connect to a standard SATA connector on your motherboard.

### **Hard disk Drive Installation**

There are two hard disk drive brackets with soft silicone grommets inside the HDD chamber. Each comes with a handle and is fasten by a thumbscrew onto the side of the chamber. One is atop of the other.

1. Remove the thumbscrew holding the HDD bracket. Lift the bracket from the chamber by the handle.
2. Mount your hard drive into the bracket through the bottom silicone grommets with the special screws provided. Don't over-tighten. Over-tightening the screws will harm the vibration and noise reducing ability of the rubber grommets.
3. Find a 4-pin Molex or a SATA power connector on the power supply and connect it to the corresponding power connector on the hard disk drive.
4. Connect the data cable to the hard disk drive.
5. Place the HDD/bracket assembly back into the chamber.
6. Fasten the bracket using the screw provided.

### **5.25" Device Installation**

NSK 1480 incorporates a rapid-release Flip Up Drive Cage for easy drive installation. The cage can hold one 5.25" device.

To install an external 5.25" device:

1. Remove the flip-up drive cage.
2. Remove the corresponding drive bay cover to which you intend to install the device.
3. Insert the 5.25" device into the cage. Make sure to use the front set of screw holes on the cage to mount the device. Fasten the drive with the screws included.
4. Find a 4-pin Molex or a SATA connector on the power supply and connect it to the corresponding power connector on the device.

## **Cooling System**

### **The 80 mm TriCool™ fans**

The NSK 1480 comes with three 80mm TriCool fans preinstalled.

### **The 80 mm TriCool Exhaust Fans:**

There are two fans right next to the CPU so that the air is blowing out of the case. Please leave at least 1" (2.5cm) between the right side of the case and anything that would block the exhaust from these fans. Failure to do so may cause the chamber or CPU to overheat.

### **The 80 mm TriCool Intake Fan:**

There is one fan in the HDD chamber to bring fresh air into the chamber to cool the hard disk drives.

These fans have a three-speed switch that lets you choose between quiet, performance, or maximum cooling. (See specifications below.) Connect a large 4-pin connector from the power supply to the male 4-pin connector on the fan.  
**Note:** The default setting of the fans is Low. We recommend this speed to maximize quiet computing.

**Note regarding using fan speed controllers with TriCool fans:**

The minimum voltage to start the fan is 5V. We recommend setting the fan speed to High if the fan will be connected to a fan control device or to the Fan-Only connector found on some Antec power supplies. A fan-control device regulates the fan speed by varying the voltage to it. The voltage may start as low as 4.5V to 5V. Connecting a TriCool™ set on Medium or Low to a fan-control device may result in the fan not being able to start. The already lowered voltage from the fan control device will be further reduced by the TriCool circuitry below 5V.

**Specifications:**

Size: 80 x 80 x 25.4mm  
 Rated Voltage: 12V  
 Operating Voltage: 10.2V ~ 13.8V

Speed	Input Current	Air Flow	Static Pressure	Acoustical Noise	Input Power
High 2000 RPM	0.24A (Max.)	2.24 m <sup>3</sup> / min (79 CFM)	2.54 mm-H <sub>2</sub> O (0.10 inch-H <sub>2</sub> O)	30 dBA	2.9 W
Medium 1600 RPM	0.2A	1.59 m <sup>3</sup> / min (56 CFM)	1.53 mm-H <sub>2</sub> O (0.06 inch-H <sub>2</sub> O)	28 dBA	2.4 W
Low 1200 RPM	0.13A	1.1 m <sup>3</sup> / min (39 CFM)	0.92 mm-H <sub>2</sub> O (0.04 inch-H <sub>2</sub> O)	25 dBA	1.6 W

**The Upper Air Intake**

There are vents on the top panel above the PCI expansion slots and CPU area. Fresh air will flow through them into the motherboard chamber to cool the VGA card and the CPU.

**Note:** Do not place anything on top of the NSK1480 that will block the top air vents

**The Rear Air Intake**

There are vents right above the rear I/O panel and on the PCI expansion slot covers to bring in fresh air to help cool the CPU and VGA card.

**CPU Air Guide**

The CPU Air Guide and rear air intake work together to provide fresh air to the CPU cooler to enhance the CPU cooling. The CPU Air Guide consists of several sections that can be adjusted to best suit each individual motherboard CPU position.

**The Power Supply Air Intake**

There are vents on the left side of the case to bring fresh air into the power supply.  
**Note:** Please leave at least 1" (2.5cm) between the left side of the case and anything that could block airflow to the power supply. This is required so that the power supply will have sufficient cooling.

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