



P193

USER'S MANUAL

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P193 USER'S MANUAL

At Antec, we continually refine and improve our products to ensure the highest quality. It's possible that your new case will differ slightly from the descriptions in this manual. 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.

The P193 does not come with a power supply unit (PSU). Make sure you choose a power supply that is compatible with your computer components and has a long enough power harness to reach your motherboard and peripheral devices. We recommend our CP Series, TruePower Series or Signature Series power supplies for the latest ATX specification compliance, broad compatibility, and energy-saving capability.

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 hurried or careless motions. Please use reasonable precaution.

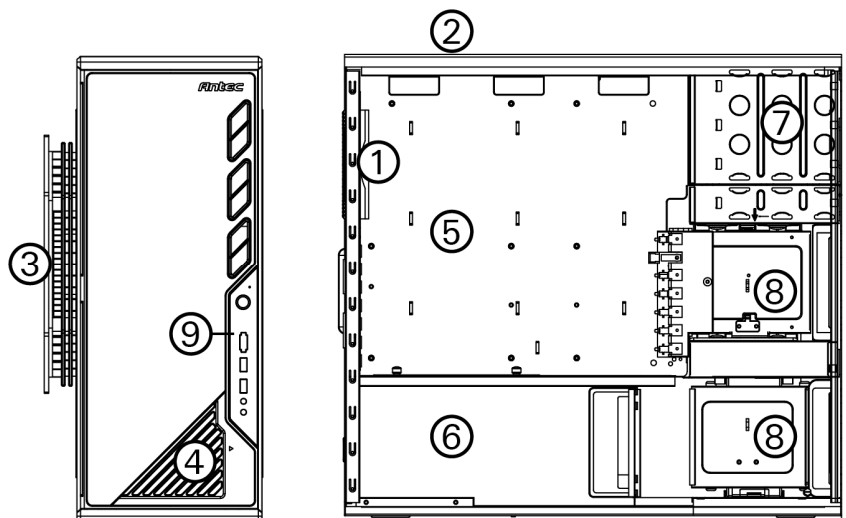
This manual is not designed to cover CPU, RAM, or expansion card installation. Please consult the motherboard manual for specific mounting instructions and troubleshooting. Before proceeding, check the manual for your CPU cooler to find out if there are steps you must take before installing the motherboard. While installing hardware, keep your case on a flat, stable surface.

1.1 CASE SPECIFICATIONS

Case Type	Advanced Mid Tower
Color	Gunmetal Gray
Dimensions	514mm (H) x 205mm (W) x 590mm (D) 20.25" (H) x 8.1" (W) x 23.25" (D) * Actual clearance for width is 9.5"/241mm due to the side panel fan
Weight	35.8 lbs / 16.25 kg
Cooling	- 1 x Rear 120mm TriCool™ exhaust fan - 2 x Top 140mm exhaust TriCool™ fan - 1 x Side 200mm Big Boy 200™ fan for dual video cards - 1 x Lower (optional) chamber 120mm TriCool™ fan - 1 x Front (optional) 120mm fan mount for HDD - 1 x Middle (optional) 120mm fan mount for video cards
Drive Bays	11 Drive Bays: - 4 x External 5.25" drive bays - 1 x External 3.5" drive bay - 6 x Internal 3.5" drive bays
Expansion Slots	7
Motherboard Size	Mini-ITX, microATX, Standard ATX, Extended ATX
Front I/O Panel	2 x USB 2.0 1 x eSATA AC'97 / HD Audio In and Out

1.2 DIAGRAM

1. Rear 120mm TriCool™ fan
2. Top 140mm TriCool™ fans
3. 200mm side Big Boy 200™ fan
4. Washable air filters
5. Motherboard mount
6. Power supply mount
7. 5.25" drive bays
8. 3.5" hard drive bays
9. Front I/O panel

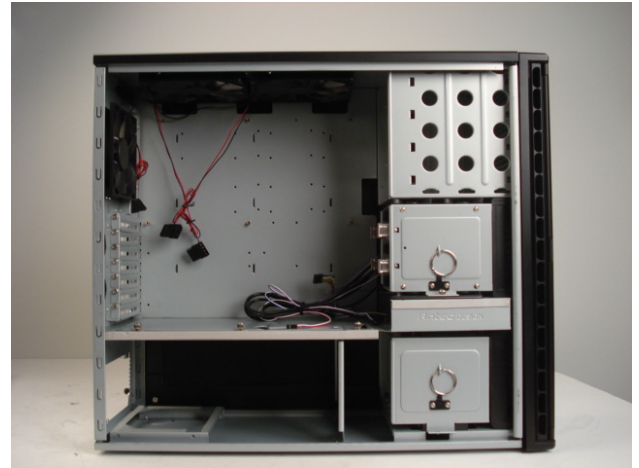


HARDWARE INSTALLATION GUIDE

2.1 SETTING UP

1. Place the case upright on a flat, stable surface with the rear of the case facing you.
2. Remove the thumbscrews from the right side panel. Grip the panel at the top and bottom and slide it toward you to open the case.
3. Remove the screws from the left side panel. Grip the panel at the top and bottom and slide it toward you to remove the left side panel.

Note: Do not use your fingernails to pry or lift the panels.



Inside the case you should see two separate chambers: the upper chamber for the motherboard, externally accessible drives and hard drives; and the lower chamber for the power supply and hard drives. You will also find some wiring with marked connectors (USB, PWR, etc.), the installed I/O panel, a box containing one set each of drive rails for a 5.25" drive and a floppy disk drive, and a tool box attached to the upper HDD cage containing more hardware (screws, brass standoffs, spare silicone grommets, etc.).

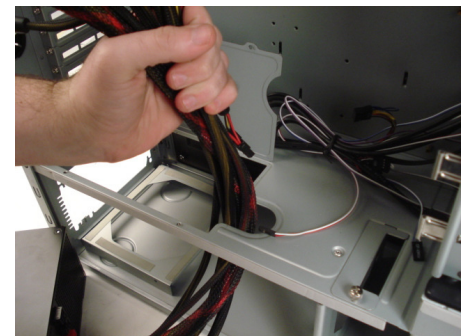
2.2 POWER SUPPLY INSTALLATION

Most power cables can be routed behind the motherboard through the cable management compartment. If some cables can't reach, run them through the passage that goes straight into the motherboard compartment.

1. Remove both side panels.
2. If you are installing an Antec CP series power supply, you will need to remove the PSU adapter plate.
3. Slide the power supply into the case. If not routing cables through the cable management compartment behind the motherboard, route cables through the covered opening. This will save a few inches of cable travel and help improve airflow in the power supply compartment.

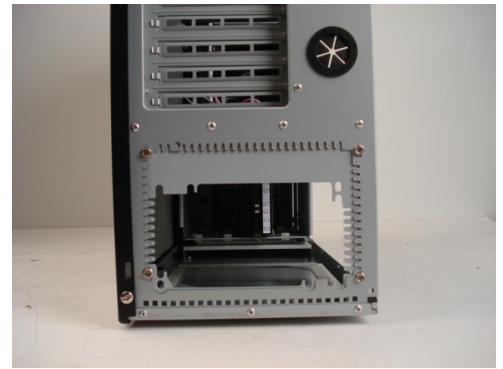
Note: Power supplies with fans on the bottom will need to be mounted so that the fan is facing the top of the case. There are mounting holes for power supplies to be installed upside up or upside down.

4. Secure the power supply by fastening it to the back of the case with the provided screws.



2.3 CP SERIES POWER SUPPLY MOUNT

Your Antec P193 enclosure comes with a power supply mounting adapter to mount either a standard-size power supply or the unique Antec CP Series high-performance power supply. This adapter is mounted to the chassis with standard Phillips-head screws. In order to install the CP Series power supply, remove the mounting plate first.



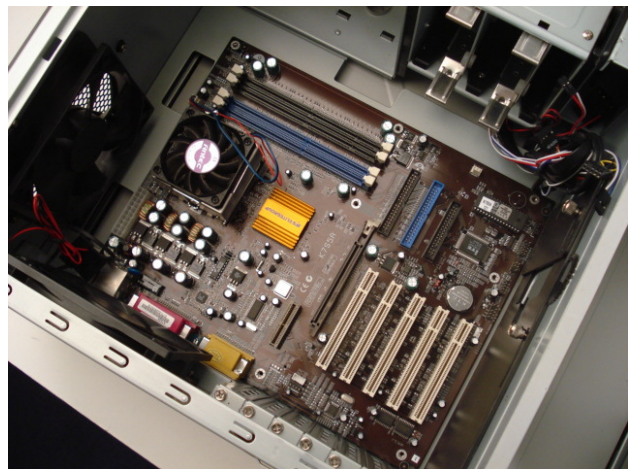
2.4 CABLE ORGANIZERS

There is a cable management compartment between the motherboard and right side panel. You can tuck or route excess cables in this compartment.

1. Remove both side panels.
2. Choose the cables you would like to pass through the holes behind the motherboard tray and pull them out of the power supply chamber toward the right side of the case.
3. Use the cable ties provided to hold them in place.
4. Feed the cables back through the insertion point nearest the destination of the cable. Connect the cable and then pull the slack back to the right side of the case.

2.5 MOTHERBOARD INSTALLATION

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 correct I/O panel for your motherboard. If the panel provided with the case isn't suitable, please contact your motherboard manufacturer for the correct I/O panel.
3. Align your motherboard with the standoff holes and remember which holes are lined up. Not all motherboards will match with all the provided holes; this is normal and won't affect its functionality.
4. Remove your motherboard by lifting it up.
5. Install standoffs as needed and put the motherboard back in.
6. Screw in your motherboard to the standoffs with the provided Phillips-head screws.



2.6 INTERNAL 3.5" DEVICE INSTALLATION

With the front bezel facing you, swing the front door open. It can swing 270° so the door is parallel with the side of the case. You can see there are four 5.25" and one 3.5" external drive bays. Inside the case there are two 3.5" drive cages, which can house up to six hard drives.

Note: We recommend using the lower HDD cage to maximize cooling and quiet computing.

Upper HDD Installation

1. Remove the thumbscrew holding the upper HDD cage.
2. Pull the HDD cage from its position by pulling the ring toward you.
3. There are two HDD trays inside the cage. Squeeze the metal clips on each side of the tray and slide the tray out.
4. Mount your hard drive into the drive tray with the special screws provided. Don't over-tighten the screws as this will reduce the vibration and noise dampening ability of the silicone grommets.

Note: Always mount the HDD with the thicker side of the silicone grommets facing up.

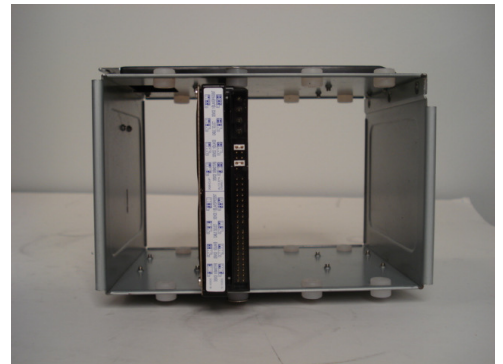
5. Slide and lock the tray back into the cage.
6. Slide the cage back into the case and fasten the thumbscrew.
7. Find the right Molex or SATA connector on the power supply and connect it to the hard drive.
8. Repeat the same procedure for the other drives.

Lower HDD Installation

1. Remove the thumbscrew holding the lower HDD cage.
2. Pull the HDD cage from its position by pulling the ring towards you.
3. You can mount up to four hard drives inside the cage. They are mounted vertically with the silicone grommets sitting at both sides.
4. Mount your hard drive into the drive cage with the special screws provided. Don't over-tighten the screws as this will reduce the vibration and noise dampening ability of the silicone grommets.

Note: Always mount the HDD with the thicker side of the silicone grommets facing up.

5. Slide the cage back into the case and fasten the thumbscrew.
6. Find a Molex or SATA connector on the power supply and connect it to the hard drive.



2.7 EXTERNAL 3.5" DEVICE INSTALLATION

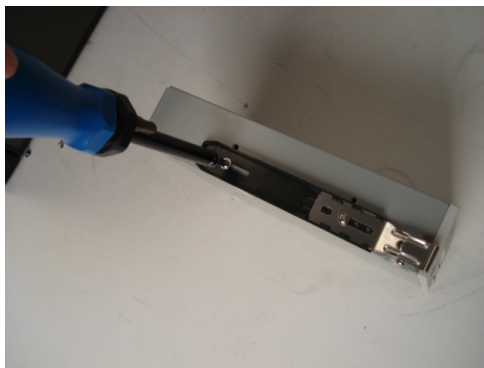
There is one external 3.5" drive bay.

1. Carefully remove the plastic drive bay cover and metal plate covering the drive bay.
2. Find a pair of 3.5" drive rails in the hardware kit box.
3. Mount the drive rails onto the sides of the 3.5" device. Make sure the metal portion is angled on the outside and facing forward.
4. Slide the device into the drive bay until it clicks into place.
5. Connect a small 4-pin connector from the power supply to the 4-pin connector on the floppy drive.

2.8 EXTERNAL 5.25" DEVICE INSTALLATION

There are four 5.25" drive bays and 8 drive rails.

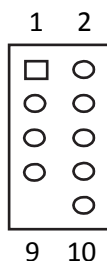
1. Carefully remove the plastic drive bay cover / filter and metal plate covering the drive bay.
2. Mount the drive rails onto the sides of the 5.25" device. Make sure the metal portion of the rail faces the front of the drive.
3. Slide the device into the drive bay until it clicks into place.
4. Mount the other devices accordingly.
5. Connect the appropriate Molex or SATA power connector from the PSU to the power connector on the device.



CONNECTING THE FRONT I/O PORTS

3.1 USB 2.0

Connect the front I/O panel USB cable to the USB header pin on your motherboard. Check the motherboard manual to ensure that it matches the table below:



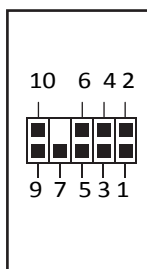
Pin	Signal Names	Pin	Signal Names
1	USB Power 1	2	USB Power 2
3	Negative Signal 1	4	Negative Signal 2
5	Positive Signal 1	6	Positive Signal 2
7	Ground 1	8	Ground 2
9	Key (No Connection)	1	Empty Pin

3.2 eSATA

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. This will allow high-speed external hard disk enclosures such as the Antec MX-1 to run at the same speeds as internally installed hard disks.

3.3 AC'97 / HD AUDIO PORTS

There is an Intel® standard 10-pin AC'97 connector and an Intel® 10-pin HDA (High Definition Audio) connector linked to the front panel of the case.



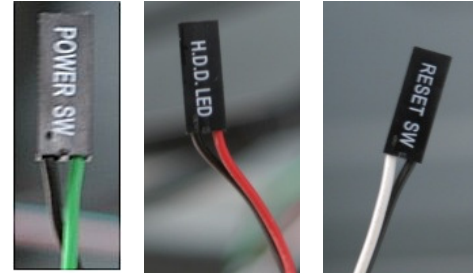
Pin	Signal Names (HDA)	Pin	Signal Names (AC'97)
1	MIC2 L	1	MIC In
2	AGND	2	GND
3	MIC2 R	3	MIC Power
4	AVCC	4	NC
5	FRO-R	5	Line Out (R)
6	MIC2_JD	6	Line Out (R)
7	F_IO_SEN	7	NC
8	Key (no pin)	8	Key (no pin)
9	FRO-L	9	Line Out (L)
10	LINE2_JD	10	Line Out (L)

You can connect either the AC'97 or the HDA connector, depending on the model of the motherboard. Locate the internal audio connectors from your motherboard or sound card and connect the corresponding audio cable. Consult your motherboard or sound card manual for the pin-out positions. Even if your system supports both audio standards, you may only use one connector.

3.4 SWITCH AND LED CONNECTORS

Connected to your front panel are LED and switch leads for power, reset, and HDD LED activity. Attach these to the corresponding connectors on your motherboard. Consult your motherboard manual for specific pin header locations. 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 information on connecting LEDs to your motherboard, see your motherboard manual.

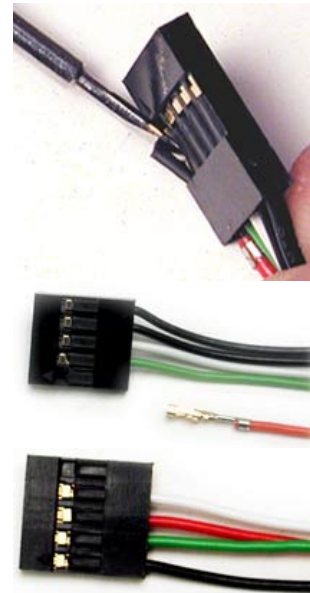
Note: Polarity (positive and negative) does not matter for switches.



3.5 REWIRING MOTHERBOARD HEADER CONNECTIONS

There may come a time when you need to reconfigure the pin-out of a motherboard header connector. Examples could be for your USB header, audio input header, or some other front panel connector such as the Power Button connector. Before performing any work, please refer to your motherboard manual or your motherboard manufacturer's website to be sure of the pin-out needed for your connector. We strongly recommend making a notated drawing before beginning work so that you can recover if your work gets disturbed.

1. Determine which wires you need to remove in order to rewire your plug to match the USB pin-outs on your motherboard (refer to your motherboard manual). Working on one connector at a time, use a very small flathead screwdriver or similar tool to lift up on the black tab located beside the gold posts (squares). This will allow you to easily slide out the pins from the USB plug.
2. Working carefully so as not to damage the wires, connectors, or pins, slowly remove the pin from the connector. Repeat these steps for each wire you need to change.
3. Working carefully so as not to damage the wires, connectors or pins, slowly reinsert the pin into the correct slot of the connector, then snap closed the black tab that was lifted in Step 1.



COOLING SYSTEM

4.1 TriCool™ FANS

Rear / Top TriCool™ Fans – There is one rear 120mm and two top 140mm TriCool™ fans pre-installed in the case. They have external, three-speed switches that let you choose between quiet, performance, or maximum cooling on each of the fans. The default speed setting is Low. The two fans are mounted so that the air is exhausting from the case. There are externally accessible switches for these fans located at the top rear of your case.

120mm TriCool™ Specifications:

Size: 120 x 25mm TriCool™ fan
Rated Voltage: 12V
Operating Voltage: 10.2V - 13.8V

Speed (RPM)	Input Current	Air Flow	Static Pressure	Acoustic Noise	Input Power
High 2000	0.24A (Max.)	2.2 m ³ / min (79 CFM)	2.5mm-H2O (0.10 inch-H2O)	30 dBA	2.9W
Medium 1600	0.20A	1.6 m ³ / min (56 CFM)	1.5mm-H2O (0.06 inch-H2O)	28 dBA	2.4W
Low 1200	0.13A	1.1 m ³ / min (39 CFM)	0.9mm-H2O (0.04 inch-H2O)	25 dBA	1.6W

140mm TriCool™ Specifications:

Size: 140 x 25mm
Rated Voltage: DC 12V
Operating Voltage: 10.2V ~ 13.8V

Speed (RPM)	Input Current	Air Flow	Static Pressure	Acoustic Noise	Input Power
High 1500	0.28A (Max.)	2.7 m ³ / min (94.6 CFM)	1.7mm-H2O (0.07 inch-H2O)	32 dBA	3.4W
Medium 1100	0.20A	1.9 m ³ / min (66.8 CFM)	0.9mm-H2O (0.04 inch-H2O)	21 dBA	2.4W
Low 700	0.15A	1.33 m ³ / min (47 CFM)	0.4mm-H2O (0.02 inch-H2O)	20 dBA	1.8W

Side Panel TriCool™ Fan – This Big Boy 200™ fan is placed in the side panel of the case, ensuring proper cooling of the hottest graphics cards and motherboard equipment.

Big Boy 200™ Specifications:

Size: 200 x 30mm
Rated Voltage: DC 12V
Operating Voltage: 10.2V ~ 13.8V

Speed (RPM)	Input Current	Air Flow	Static Pressure	Acoustic Noise	Input Power
High 800	0.3A (Max.)	3.8 m ³ / min (134 CFM)	0.7mm-H2O (0.03 inch-H2O)	29 dBA	3.6W
Medium 600	0.17A	3.1 m ³ / min (108 CFM)	0.4mm-H2O (0.02 inch-H2O)	27 dBA	2.0W
Low 400	0.08A	2.3 m ³ / min (83 CFM)	0.2mm-H2O (0.01 inch-H2O)	24 dBA	1.0W

Note: The minimum voltage to start a 120mm TriCool™ fan is 5V. We recommend that you set the fan speed switch to High if you choose to connect the fan(s) 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, which may start as low as 4.5V to 5V. Connecting a TriCool™ fan set on Medium or Low to a fan-control device may result in the fan not being able to start because the already lowered voltage from the fan control device will be further reduced by the TriCool™ circuitry below 5V.

4.2 OPTIONAL FANS

There are three optional 120mm fan mounts – two front fans and a middle fan (at the rear of the upper HDD cage). These three fans should be installed so that the air is blowing into the case from the front.

Front Fans – The front fans are designed to enhance the HDD cooling.

Middle Fan – The middle fan is designed to cool the VGA solution in your computer. In this case, the HDD cage acts as a duct, drawing cool air from the front of the case. You can choose to mount only the middle fan or you can mount both the front and the middle fan to enhance cooling. If you decide to mount any HDD into the upper cage you will not be able to use the middle fan.

1. Find the two fan wire brackets from the hardware kit box.
2. Install the wire brackets into the HDD cage.
3. Clip the fan into position.

Note: In order to build a quieter system we recommend NOT installing the optional fans if they are not necessary for the cooling of your components. If you choose to install them, we recommend using Antec 120mm TriCool™ fans and setting the speed to Low.

4.3 WASHABLE AIR FILTERS

There are two filters located behind the front grills and one behind the grill of the side Big Boy 200™. Occasionally, it will be necessary to wash the installed air filters, as not washing them may result in higher system temperatures and possible stability problems. We recommend checking the air filter at least once a month initially. The frequency will change depending on environmental conditions and system usage, as users whose systems run 24/7 will likely have to check more often than those who do not use their systems every day.

To remove the front filters:

1. Push one of the fan grills at the right middle edge to separate the grill from the chassis. The filter will still be attached by a hinge on the opposite side of the filter. Swing the filter out so that it is perpendicular to the case.
2. Using both hands, lift the filter up and angle the base of the filter toward you until both tabs detach from the hinge. Remove the filter.

To remove the side filter:

1. Examine the external fan assembly on the panel and locate the filter tab.
2. Pull on the tab to remove the filter.

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