

Product Description

1.1 Computer Features and Models

The Compaq Armada 7800 Family of Personal Computers offers advanced modularity, an Intel Pentium II processor with 64-bit architecture, an industry-leading Accelerated Graphics Port (AGP) implementation, and extensive multimedia support. The computer provides desktop functionality and connectivity through the optional ArmadaStation and Armada MiniStation.



Figure 1-1. *Compaq Armada 7800 Personal Computer*

Models

The Armada 7800 models are shown in Table 1-1. The computer model designation is composed of a group of characters that define each model's features.

Table 1-1 Models and Model Naming Convention Compaq Armada 7800 Series of Personal Computers											
Key											
7	8	0	0	6	366	T	14.1	D	M	1	
A	B			C	D	E	F	G	H	I	
Key	Description					Options					
A	Line designator					7 = Performance					
B	Series designator					8 = Armada 7800					
C	Processor type					6 = Intel Mobile Pentium II processor with MMX technology					
D	Processor speed					366 = 366 MHz 333 = 333 MHz			300 = 300 MHz 266 = 266 MHz		
E	Panel type					T = 13.3" XGA TFT 1024 x 768			T14 = 14.1" XGA TFT 1024 x 768		
F	Hard drive capacity					14.1 = 14.1 GB 10.0 = 10.0 GB			8.1 = 8.1 GB 5.0 = 5.0 GB		
G	Drive type					D = CD-ROM		V = DVD-ROM		0 = none	
H	Modem					M = internal or PC Card modem				0 = audio only	
I	Operating system & software version					0 = No operating system 1 = Windows 95 2 = Windows 98				3 = Windows NT 4.0 4 = Windows NT 5.0	

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Model	Memor y	Config. Code	SKU#
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Armada 7800	6366	T	14100	V	M	1	64 MB	CHR1	386741-XX2
Armada 7800	6366	T	14100	V	0	1	64 MB	CHR2	386742-XX2
Armada 7800	6366	T	14100	V	M	3	64 MB	CDJ3	386743-XX2
Armada 7800	6366	T	14100	V	0	3	64 MB	CDJ4	386744-XX2
Armada 7800	6300	T	8100	V	0	1	64 MB	CB61	315000-XX2
Armada 7800	6300	T	8100	V	0	3	64 MB	CB62	315050-XX2
Armada 7800	6300	T	8100	V	M	1	64 MB	CB63	315130-XX2
Armada 7800	6300	T	5000	D	M	1	64 MB	CB64 CB69	204486-XX1 103140-001
Armada 7800	6300	T	5000	D	0	3	64 MB	CB65	204487-XX1
Armada 7800	6300	T	5000	D	0	1	64 MB	CB66	202876-XX1
Armada 7800	6300	T	5000	D	M	1	64 MB	CB67	401304-371
Armada 7800	6300	T	5000	D	M	3	64 MB	CB68	401632-XX1
Armada 7800	6266	T	8100	D	M	1	64 MB	CB41	340150-XX2
Armada 7800	6266	T	8100	D	0	1	64 MB	CB42	340350-XX2
Armada 7800	6266	T	8100	D	0	3	64 MB	CB43	340250-XX2
Armada 7800	6266	T	5000	D	M	1	64 MB	BS81	314900-XX2
Armada 7800	6266	T	5000	D	0	1	64 MB	BS82	314950-XX2
Armada 7800	6266	T	5000	D	0	3	64 MB	BS83	315150-XX2
Armada 7800	6266	T	5000	D	M	1	96 MB	BS84	315120-001
Armada 7800	6266	T	5000	D	M	1	160 MB	BS85	315120-002
Armada 7800	6266	T	5000	D	M	1	64 MB	BS86	315242-002
Configure to Order (CTO) model								BZ8Z	315424-999
Configure to Order (CTO) model								CDJZ	342627-999

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Features

The computer has the following standard features:

- Intel Mobile 366-, 333-, 300-, and 266-MHz Pentium II processor with 64-bit architecture, MMX technology, and 512-KB, level-2 cache memory
- Industry-leading portable computer AGP implementation, featuring:
 - 66-MHz dedicated graphics bus
 - frame made AGP
- 4-MB SGRAM (synchronous graphics)
- 64-MB of SDRAM (synchronous): 32-MB on system board, 32-MB in memory expansion compartment; expandable to 160 megabytes
- Upgradable flash ROM BIOS
- 14.1- and 13.3-inch XGA (1024 × 768) TFT color display, true color (24-bit) support
- Keyboard with built-in EasyPoint III pointing device and mouse buttons
- Lithium ion (Li-ion) battery pack
- Removable 14.1-, 10.0-, 8.1-, and 5.0-GB hard drives
- MultiBay that supports a second hard drive, a second battery pack, a diskette drive, a CD-ROM drive, or a DVD-ROM drive
- Two PC Card slots that accept 32- and 16-bit Type I, II, and III PC Cards, with zoomed video interface in the bottom slot
- IrDa-compliant infrared port¹ (4-Mbps standard) for wireless file transfer, printing, and file synchronization
- Built-in stereo speakers providing Compaq PremierSound, microphone, and jacks for stereo audio sound with electronic equalization and wave table synthesis
- Energy Star-compliant power saving features
- Ports and connectors for external equipment, including universal serial bus (USB), serial, parallel, external monitor, and PS/2-compatible pointing device or keyboard
- Security features
- Desktop functionality available with the optional Compaq ArmadaStation and Armada MiniStation
- Domestic and international modem and Ethernet connectivity
- Integrated AC Adapter
- Integrated 33.6-Kbps data/fax modem

¹ IrDa 4MB compliant. Infrared performance may vary depending on performance of infrared peripherals, distance between infrared devices, and applications used.

Intelligent Manageability

Intelligent Manageability consists of preinstalled software tools for the computer and Compaq servers that assist in tracking, troubleshooting, protecting, and maintaining the computer. It provides the following functions:

- **Asset Management**—provides detailed configuration and diagnostic information.
- **Fault Management**—prevents, predicts, and alerts of impending hardware problems.
- **Security Management**—protects against unauthorized access to data and components.
- **Integration Management**—uses industry-standard technologies such as DMI and SNMP to integrate with PC management software providers.
- **Configuration Management**—optimizes the computer by providing the latest drivers, utilities, and software, which are available on CD-ROM and the Compaq web site at <http://www.compaq.com>.

NOTE: For further help with Intelligent Manageability, refer to Intelligent Manageability Help. Click Start ⇒ Compaq Information Center ⇒ double-click Intelligent Manageability Help.

Asset Management

AssetControl retrieves component information when on the road or connected to the network.

AssetControl also enables the network administrator to remotely retrieve information from any Compaq computer connected to the network. The information can be used to assist in tracking and maintaining the computer and its components. It provides the following information:

- **Inventory information**—The network administrator can retrieve information about the computer over the network by using Compaq Insight Manager or any PC management tool provided by Compaq Solution Partners. AssetControl information retrieved from the computer includes:
 - ☐ Manufacturer, model, and serial number of Compaq computers, monitors, hard drives, battery packs, memory boards, processor speeds, and operating systems.
 - ☐ Asset tag
 - ☐ System board and ROM revision levels
 - ☐ BIOS settings
- **Diagnostic information**—Diagnostics for Windows includes the information on hard drives, ports, and video, sound, and other components. Compaq Diagnostics for Windows can be accessed by clicking Start ⇒ Programs ⇒ Compaq Utilities ⇒ Compaq Diagnostics.

All of the above information can be viewed, printed, or saved.

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Changing the Asset Tag Number

1. Turn on or restart the computer.
2. Press **F10** when the cursor appears in the upper right corner of the screen.
3. Select Computer Setup ⇒ Intelligent Manageability.
4. Follow the instructions on the screen.

Fault Management

The Fault Management features minimize downtime and data loss by monitoring system performance and generating the following alerts:

- **Hard drive alert**—provides warning up to 72 hours in advance of impending hard drive problems and can automatically start optional backup software.
- **System temperature alert**—reports overheating. As the system temperature rises, this feature first adjusts fan speed and other cooling components, then displays an alert, then shuts down the system.
- **Battery pack alert**—reports charging problems and battery pack failure.
- **Monitor alert**—diagnoses and displays external monitor operational problems.
- **Memory alert**—reports memory board configuration changes when a memory board is removed, added, or reconfigured. It also provides the previous and current configurations for comparison.

The alerts work with or without network connection. Of course, if the computer is not connected to the network, the network administrator cannot receive alerts from the computer.

Fault Management Alerts

Alerts can be enabled, disabled, and tested, and software can be set to back up information whenever a hard drive alert occurs.

- While the computer is connected to a network, alerts appear on the computer display and are simultaneously reported to the network console.

NOTE: A battery charging problem alert is reported only on the computer display.

- When the computer is not connected to a network, the user will receive a local alert.

To set alerts, double-click the Intelligent Manageability icon.

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Security Management Overview

Security Management features customize system security.

- Power-On and Setup Passwords—prevent unauthorized access to your information and computer configuration.
- DriveLock—prevents access to hard drives.
- Device disabling—prevents unauthorized data transfer through modems, serial ports, parallel ports, and infrared ports on the computer and an optional docking station.
- QuickLock/QuickBlank—locks the keyboard and clears the screen.
- Ownership Tag—displays ownership information during system restart.

Configuration Management

Configuration Management optimizes software upgrade and customer support procedures. Compaq provides support software to optimize the performance of the computer. This support software is accessible through a monthly subscription CD-ROM. Support software can also be downloaded from the Compaq web site at <http://www.compaq.com>. Support software includes:

- Locator browser—searches for the latest device drivers, utilities, ROM images, and other support software on a CD-ROM and at the Compaq web site at <http://www.compaq.com>.
- Decision Support—provides detailed information about drivers, utilities, and software available on the computer. The information includes descriptions, features, enhancements, dependencies, and necessary upgrades.
- InfoMessenger—provides notifications by email when support software for the computer becomes available.

1.2 Computer Components

The following table lists the components that ship with the computer and those that are available as options. All components are available as spare parts. For more information about ordering components, refer to Chapter 3, “Illustrated Parts Catalog.”

Table 1-2 Component Availability		
Component	Ships with Computer	Available as Option
Battery pack	■	■
Modem (not available in all locations)	■	
Modem cable (country specific)	■	■
Diskette drive	■	
MultiBay weight saver	■	
Slip case (shipped with computer only in Europe, Middle East, and Africa)	■	
EasyPoint III caps	■	
Telephone cable (country specific)	■	
Power cable	■	
3-prong to 2-prong converter (Japan only)	■	
Quick Restore CD-ROM	■	
Security kit	■	
ArmadaStation		■
Armada MiniStation E and EX		■
Memory expansion board		■
Battery charger		■
Automobile/aircraft adapter		■
Headset		■
Hard Drive MultiBay Adapter		■
24X CD-ROM drive	■	■
DVD-ROM drive	■	■
14.1-, 10.0-, 8.1-, or 5.0-GB hard drive	■	■

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The computer options are described in the following sections.

System Memory Options

The main memory subsystem supports a minimum standard 32 megabytes of Synchronous SDRAM, expandable to 160 megabytes. The minimum standard Synchronous SDRAM is integrated on the system board. The upgrade SDRAM is accomplished with memory expansion boards that are available in 16-, 32-, and 64-megabytes.

The memory expansion slot cover is secured to the computer by a Torx T-8 screw. A tamper-resistant security screw, included with the computer, can be used to provide added security. The security wrench, also included with the computer, must be used to remove the tamper-resistant security screw.

System memory can be upgraded as shown in Table 1-3.

Table 1-3 Memory Upgrade		
Base Memory on System Board	Memory Expansion Board	Total Memory
32 MB	16 MB (1 × 16 MB)	48 MB
32 MB	32 MB (2 × 16 MB or 1 × 32 MB)	64 MB
32 MB	48 MB (1 × 16 MB + 1 × 32 MB)	80 MB
32 MB	64 MB (2 × 32 MB or 1 × 64 MB)	96 MB
32 MB	80 MB (1 × 16 MB + 1 × 64 MB)	112 MB
32 MB	96 MB (1 × 32 MB + 1 × 64 MB)	128 MB
32 MB	128 MB (2 × 64 MB)	160 MB
The computer is shipped with 32-MB of memory on the system board and 32-MB in the memory expansion compartment.		

Battery Equipment Options

The following battery options are available:

- Automobile/Aircraft Adapter
- Lithium ion battery pack
- Battery Charger

Automobile/Aircraft Adapter

The Automobile/Aircraft Adapter allows the computer to operate from a 12-volt aircraft DC socket and from an automobile cigarette lighter receptacle.

Lithium Ion Battery Pack

The battery pack can be used in the computer dedicated battery bay, computer MultiBay, ArmadaStation MultiBays, and Armada MiniStation EX MultiBay and battery charging bay.

Battery Charger

The external Battery Charger has the following features:

- Two battery charging bays
- Charging of one battery in 1.5 hours
- Charging of two batteries in 3 hours

Mass Storage Devices

The following mass storage devices are available for the computer.

Table 1-4 Mass Storage Devices	
Device	Dimensions
Diskette drive	3.5-inch, 1.44-MB
Hard drive	14.1, 10.0, 8.1, or 5.0 GB (also available as an option)
CD-ROM drive	24- or 20-speed Max (also available as an option)
LS-120 external diskette drive	120-MB

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Diskette Drive

The computer uses a 3.5-inch diskette drive that fits into the computer, ArmadaStation, or Armada MiniStation EX MultiBays. The diskette drive is a three-mode type that is compatible with 1.44 Megabytes, 1.2 Megabytes, and 720 Kilobytes (formatted) AT drive types. The system supports a maximum of two diskette drives: one in the computer MultiBay and one in the ArmadaStation or Armada MiniStation EX MultiBay.

Hard Drive

The dedicated hard drive bay supports a removable 14.1-, 10.0-, 8.1-, or 5.0-GB hard drive. The MultiBay supports a second hard drive. Before a hard drive can be used in the MultiBay, it first must be inserted in the Hard Drive MultiBay Adapter.

CD-ROM Drive

A 24- or 20-speed Max CD-ROM drive comes as standard equipment with the computer, depending on the model. This CD-ROM drive is also available as an option. The drive supports 3.5-inch and 5.25-inch media in the following formats:

- ISO-9660, the most common CD-ROM format
- CD-ROM XA eXtended Architecture, a standard for storing multimedia information
- Photo CD (single and multisession), Kodak's format for storing photographic images on CD-ROM
- CD-i and CD-i Bridge
- CD-DA (digital audio)
- CD-ROM Mode 1 and Mode 2
- CD-I Mode 2 (Form 1 and Form 2)
- Video CD

1.3 Computer External Components

The external components on the display, front, and left side of the computer are shown in Figure 1-2 and described in Table 1-5.

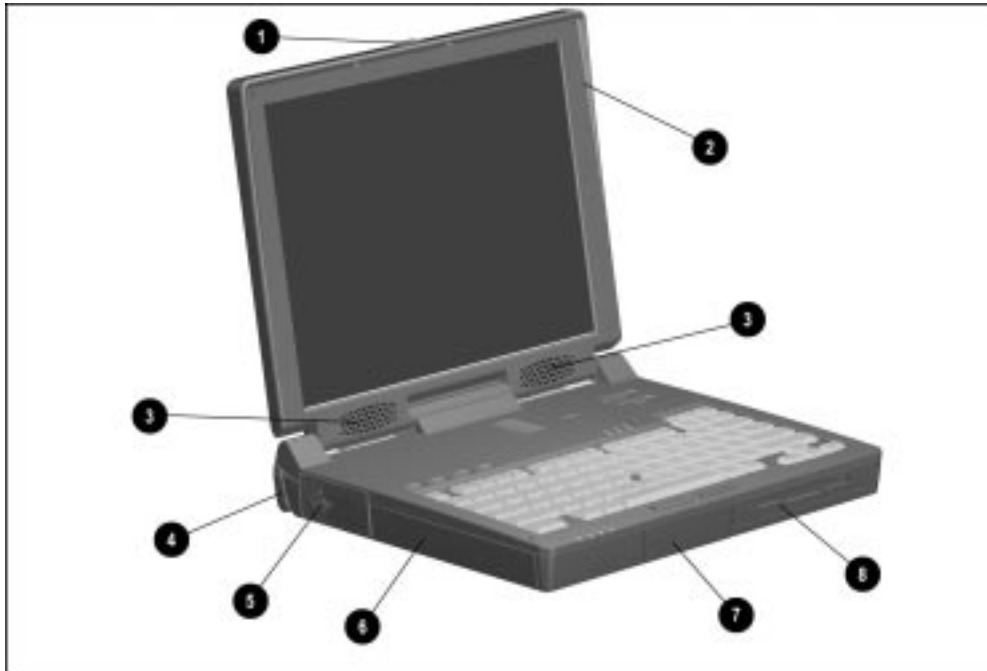


Figure 1-2. *Display, Front, and Left Side Components*

Table 1-5
Display, Front, and Left Side Components

Item	Component	Function
1	Display release latch	Opens the computer.
2	Mono Microphone	Allows for audio input; located on the inside and outside of the display, can be used whether the computer is open or closed.
3	Stereo speakers (2)	Produce high-quality stereo sound.
4	Tilt feet (2)	Tilt the computer for ease of use.
5	Fan	Provides airflow exhaust.
6	Battery bay	Accepts Lithium ion battery pack.
7	Hard drive bay	Accepts removable hard drive.
8	MultiBay	Accepts MultiBay devices: CD-ROM drive, diskette drive, hard drive (in Hard Drive MultiBay Adapter), LS-120 MultiBay Drive, battery pack.

The external components on the right side of the computer are shown in Figure 1-3 and are described in Table 1-6.



Figure 1-3. Right Side Components

Table 1-6
Right Side Components

Item	Component	Function
1	Security slot	Secures the computer to a fixed object to prevent theft.
2	PC Card eject levers (2)	Eject PC Cards from the slots.
3	PC Card slots	Accepts 16- and 32-bit CardBus PC Cards.
4	25-pin modem connector	Connects a country-specific 25-pin telephone cable (all countries except North America, Latin America, Japan, China, and Hong Kong). Also connects a cellular phone to the computer (U.S. only).

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The external components on the rear panel of the computer are shown in Figure 1-4 and are described in Table 1-7.

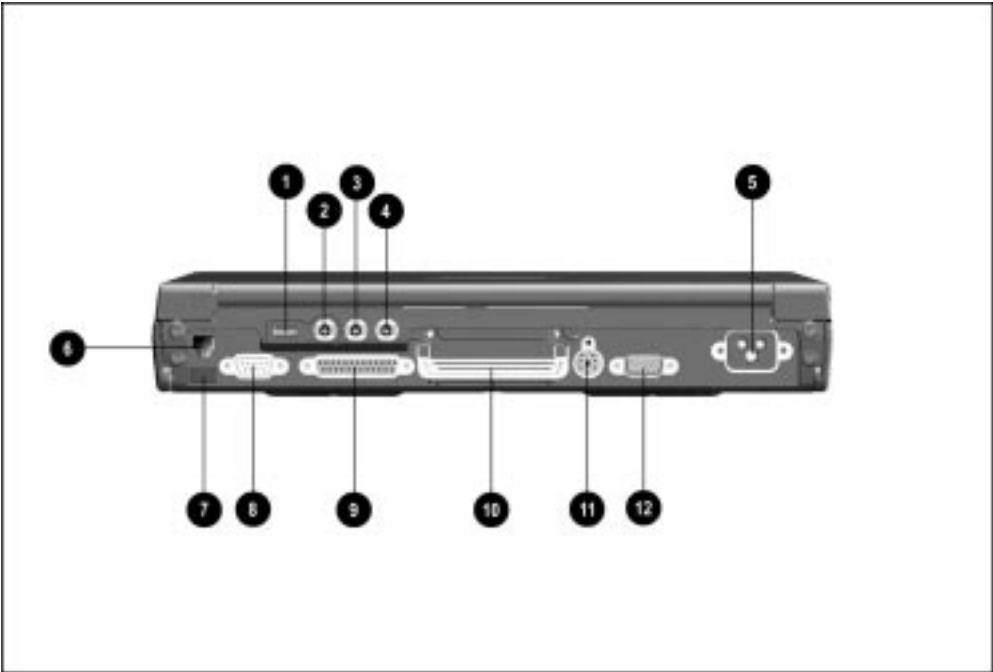


Figure 1-4. Rear Panel Components

Table 1-7 Rear Panel Components		
Item	Component	Function
1	Universal serial bus (USB) connector	<p>Connects USB devices, such as cameras for video conferencing, or hubs which connect multiple USB devices.</p> <p>The USB connector is a powered hub. When running Windows 95 or higher or Windows NT or higher, any combination of up to five powered or unpowered hubs can be connected in any sequence, as long as two unpowered hubs are not connected next to each other.</p> <p>When running a lower version of Windows or Windows NT, or if using a different operating system, up to two hubs can be connected.</p>

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Table 1-7 *Continued*

2	Mono microphone jack	Connects mono microphone, disabling the built-in microphone.
3	Stereo speaker/headphone jack	Connects external stereo speakers, headphones, or headset. This jack is driven by an amplifier and has volume control. The internal computer speakers are turned off when external speakers or headphones are plugged into this jack.
4	Stereo line-in jack	Connects external device such as a CD player, tuner, or tape deck.
5	Power cord connector	Connects external (AC) power.
6	RJ-11 modem jack	Connects a standard telephone cable for a modem in North America, Latin America, Japan, China, and Hong Kong only.
7	Infrared port	Provides wireless communication between the computer and another infrared-equipped device using an infrared beam.
8	Serial connector	Connects optional serial devices such as a mouse.
9	Parallel connector	Connects optional parallel devices such as a printer.
10	Docking connector	Connects optional ArmadaStation or Armada MiniStation E or EX.
11	Keyboard/mouse connector	Connects an optional full-sized keyboard or a mouse. Both external mouse and computer pointing device are active. An optional splitter/adaptor allows both an external keyboard and mouse to be used at the same time.
12	External monitor connector	Connects an optional external monitor. Also connects a television adapter.

Computer keyboard components are shown in Figure 1-5 and described in Table 1-8.



Figure 1-5. Computer Components: Keyboard

Table 1-8 Keyboard Components		
Item	Component	Function
1	Display switch	Turns off the display if it is closed while the computer is turned on. The computer beeps unless audio has been disabled.
2	Vents	Allows airflow to cool the computer.
3	Suspend button	Toggles on to initiate or off to exit Suspend.
4	Volume control	Adjusts volume of stereo speakers.
5	Power switch	Turns computer on or off.
6	Scroll lock key	Turns on the scroll function.
7	Page up and page down keys	Moves image to previous or following screen.
8	Num Lk key	Turns on the numeric lock function.
9	Embedded numeric keypad	Converts keys to numeric keypad.
10	Cursor-control keys	Moves the cursor around the screen.
11	Fn key	Used with hotkeys to perform preset hotkey functions.
12	Caps lock key	Turns on the caps lock function.
13	F1 through F12 function keys	Perform preset functions.
14	Programmable keys	Assign and launch frequently used documents or applications and emulate Windows and Application Logo Keys.

Additional computer keyboard components are shown in Figure 1-6 and described in Table 1-9.

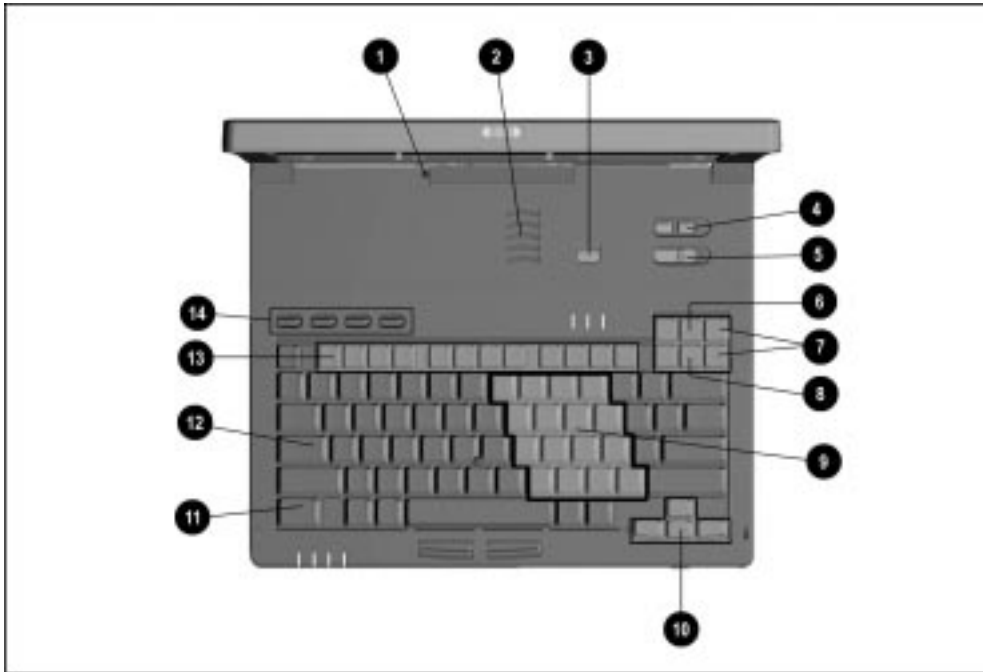


Figure 1-6. Keyboard Components (continued)

Table 1-9
Keyboard Components (continued)

Item	Component	Function
1	Power/suspend light (green)	Turns on when computer is turned on; blinks in Suspend; turns off when computer is in Hibernation or turned off.
2	Battery power light (orange)	Turns on when a battery pack in the battery bay is charging or waiting to charge. Turns off when battery pack is fully charged. Blinks 6 times if low-battery condition is reached. Blinks continuously if critical low-battery condition is reached. If AC power is not connected within 20 seconds, Hibernation is initiated (unless Hibernation has been disabled).
3	Hard drive light (green)	Turns on when the hard drive is being accessed.
4	MultiBay drive light (green)	Turns on when the MultiBay device is being accessed or when a battery pack in the MultiBay is charging or waiting to be charged.
5	Left and right mouse buttons	Function like left and right mouse buttons on an external mouse.
6	EasyPoint III pointing device	Moves the cursor across the screen.
7	Caps lock light	Turns on when the Caps Lock function is on.

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8	Scroll lock light	Turns on when Scroll function is on.
9	Numeric lock light	Turns on when the Numeric Lock function is on.

The external components on the bottom of the computer are shown in Figure 1-7 and are described in Table 1-10.

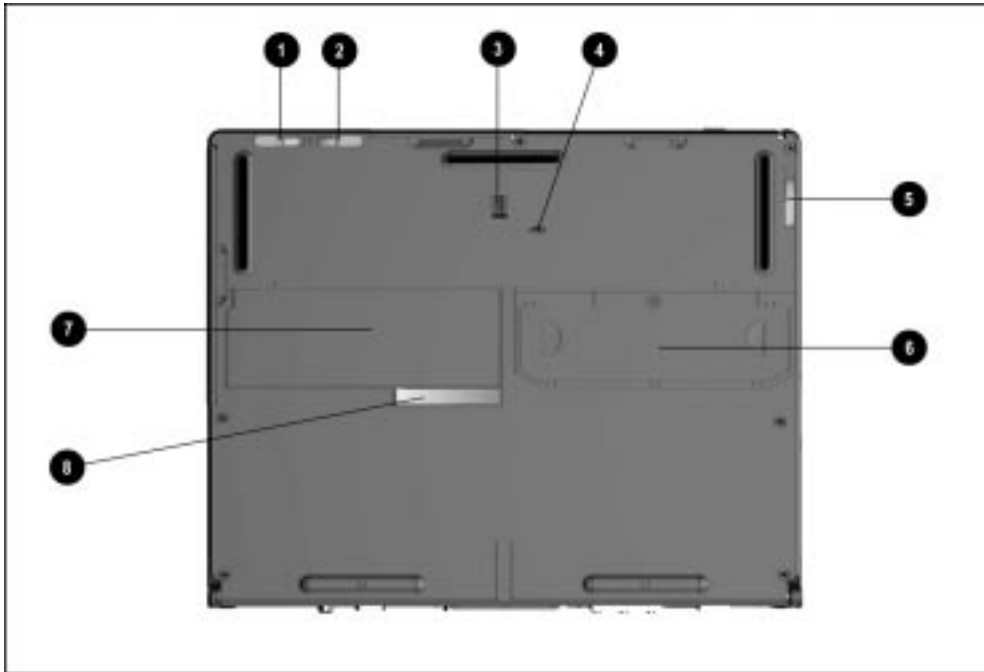


Figure 1-7. Bottom Components

**Table 1-10
Bottom Components**

Item	Component	Function
1	Battery release latch	Releases the battery from the battery bay.
2	Hard drive release latch	Releases the hard drive from the hard drive bay.
3	Docking restraint latch recess	Secures the computer to the ArmadaStation.
4	Hard drive/MultiBay security screw slot	Allows hard drives and MultiBay devices to be secured inside the computer using the single and dual bay security screws.
5	MultiBay release latch	Releases devices from the MultiBay.
6	Memory expansion slot cover	Covers the memory expansion compartment.
7	Labels area	Contains labels that describe the computer model and provide agency and modem information.
8	Serial number	Numerical identification for the computer.

1.4 Design Overview

This section presents a design overview of key parts and features of the computer. For assembly/disassembly instructions for the parts described in this section, refer to Chapter 5.

System Board

The system board provides the following device connections:

- Memory expansion board
- Diskette drive
- Hard drive
- CD-ROM drive
- Display
- Keyboard/EasyPoint III pointing device
- Audio
- Pentium II processor
- Fan
- PC Cards
- Modem

The computer is equipped with a 3.1-volt, Intel Mobile Pentium II 366-, 333-, 300-, or 266-MHz processor. For ventilation, an electrical fan is installed. The fan operates on from 5 to 12 volts and is controlled by a temperature sensor. The fan is designed to turn on automatically when high temperature conditions exist. These conditions are affected by high external temperatures, system power consumption, power management/battery conservation configurations, battery fast charging, and software applications. Exhaust air is displaced through the ventilation grill located on the left side of the computer.



CAUTION: To properly ventilate the computer, allow at least a 3-inch (7.6 cm) clearance on the left and right sides of the computer.
