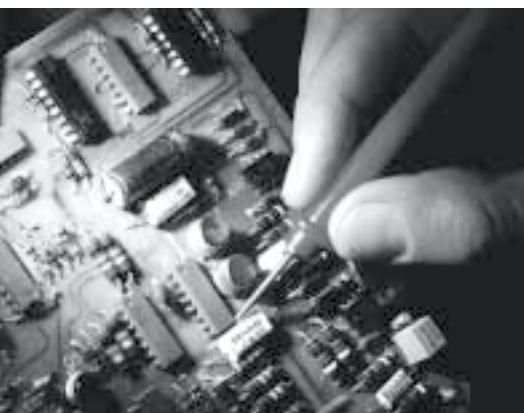


# *Compaq Armada E500, Armada E500S, and Armada V300 Series of Personal Computers*

Maintenance and Service Guide



**COMPAQ**

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: [www.heydownloads.com](http://www.heydownloads.com) by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

**Table 1-2** *continued*

1	2	3	4	5-6	7-9	10	11	12	13-14	15	16	17-19	20-21	22	23	24	SKU#	Config. Code
A	E	5		P3	700	T	3	X	5	D	M	64	98				212281-XX1 <sup>1</sup>	JFF3
A	E	5		P3	700	T	3	X	5	D	M	64	98				212281-XX3 <sup>1</sup>	JFF5
A	E	5		P3	700	T	3	X	5	D	M	64	N2				212281-XX8 <sup>1</sup>	JFF4
A	E	5		P3	700	T	3	X	5	D	M	64	N2				212281-XX9 <sup>1</sup>	JFF6
A	E	5		P3	700	T	3	X	5	D	C	64	98				212282-XX1 <sup>1</sup>	JFF7
A	E	5		P3	700	T	3	X	5	D	C	64	98				212282-XX3 <sup>1</sup>	JFF9
A	E	5		P3	700	T	3	X	5	D	C	64	N2				212282-XX8 <sup>1</sup>	JFF8
A	E	5		P3	700	T	3	X	5	D	C	64	N2				212282-XX9 <sup>1</sup>	JFFA
A	E	5		P3	700	T	3	X	5	D	0	64	98				212327-XX1 <sup>1</sup>	JFF1
A	E	5		P3	700	T	3	X	5	D	0	64	N2				212327-XX8 <sup>1</sup>	JFF2
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	0	64	58				161608-XX1 <sup>1</sup>	DPB1
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	0	64	N4				161608-XX6 <sup>1</sup>	DPB3
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	0	64	N2				161608-XX8 <sup>1</sup>	FFD5
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	M	64	58				161609-XX1 <sup>1</sup>	DPB4
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	M	64	58	N			161609-XX3 <sup>1</sup>	DPB5
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	M	64	N4				161609-XX6 <sup>1</sup>	DPB6
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	M	64	N4	N			161609-XX7 <sup>1</sup>	DPB7
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	M	64	N2				161609-XX8 <sup>1</sup>	FFD6
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	M	64	N2	N			161609-XX9 <sup>1</sup>	FFD7
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	C	64	58				164764-XX1 <sup>1</sup>	DPB8
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	C	64	N4				164764-XX6 <sup>1</sup>	DPB9
A	E	5		P3	650	T	4	X	12	V <sup>4</sup>	C	64	N2				164764-XX8 <sup>1</sup>	FFD8
A	E	5		P3	600	T	4	X	12	D	0	64	58				161606-XX1 <sup>1</sup>	DN91
A	E	5		P3	600	T	4	X	12	D	0	64	N4				161606-XX6 <sup>1</sup>	DN93
A	E	5		P3	600	T	4	X	12	D	0	64	N2				161606-XX8 <sup>1</sup>	FFD1
A	E	5		P3	600	T	4	X	12	D	M	64	58				161607-XX1 <sup>1</sup>	DN94
A	E	5		P3	600	T	4	X	12	D	M	64	58	N			161607-XX3 <sup>1</sup>	DN95
A	E	5		P3	600	T	4	X	12	D	M	64	N4				161607-XX6 <sup>1</sup>	DN96
A	E	5		P3	600	T	4	X	12	D	M	64	58	N			161607-XX7 <sup>1</sup>	DN97
A	E	5		P3	600	T	4	X	12	D	M	64	N2				161607-XX8 <sup>1</sup>	FFD2
A	E	5		P3	600	T	4	X	12	D	M	64	N2	N			161607-XX9 <sup>1</sup>	FFD3
A	E	5		P3	600	T	4	X	12	D	C	64	58				164763-XX1 <sup>1</sup>	DN98
A	E	5		P3	600	T	4	X	12	D	C	64	N4				164763-XX6 <sup>1</sup>	DN99
A	E	5		P3	600	T	4	X	12	D	C	64	N2				164763-XX8 <sup>1</sup>	FFD4

<sup>1</sup> 9-cell Lithium Ion main battery pack

<sup>3</sup> 8X DVD-ROM drive

<sup>2</sup> 6-cell Lithium ion main battery pack

<sup>4</sup> 4X DVD-ROM drive

*Continued*

## 1.2 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. Intelligent Manageability provides the following functions:

- **Asset Management**—provides detailed configuration and diagnostic information.
- **Fault Management**—prevents, predicts, and alerts of impending hardware problems.
- **Security Management**—prevents unauthorized access to data and components.
- **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:

[www.compaq.com/support/portables](http://www.compaq.com/support/portables)

**NOTE:** For further help with Intelligent Manageability, select Start → Compaq Information Center → Intelligent Manageability.

### Accessing the Web Agent

The computer may have a preinstalled Web Agent that allows you to view computer configuration information using Web technology. To access this feature, select Start → Compaq Information Center → Insight Web Management.

If the computer does not have a preinstalled Web Agent, it can be downloaded from the Compaq Web site at:

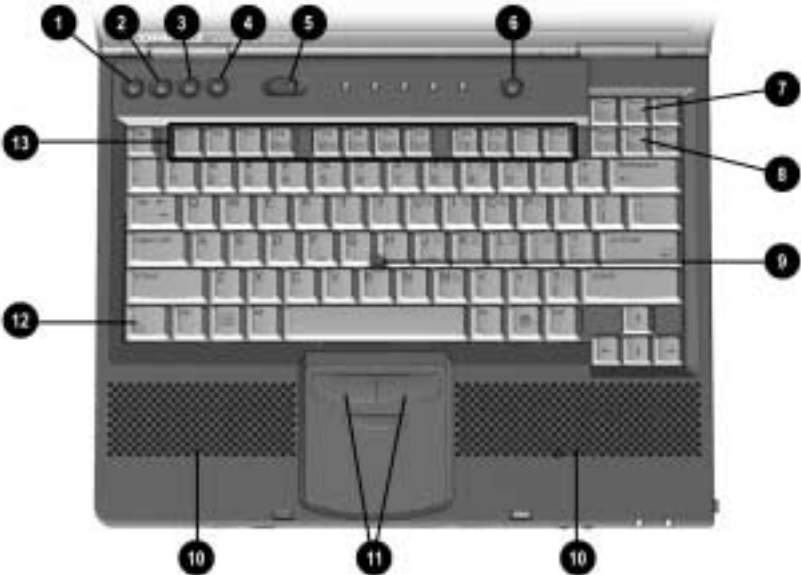
[www.compaq.com](http://www.compaq.com)

### Asset Management

Asset Management enables component information to be retrieved when you are on the road or connected to the network.

Asset Management 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. Asset Management provides the following information:

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



**Figure 1-5.** Keyboard Components

If you receive one of the error messages listed below, follow the recommended action.

**Table 2-1**  
**Warning Messages**

<b>Message</b>	<b>Description</b>	<b>Recommended Action</b>
CMOS checksum invalid, run SCU	CMOS RAM information has been corrupted.	Run Computer Setup (Section 2.5) to reinitialize CMOS-RAM.
CMOS failure, run SCU	CMOS RAM has lost power.	Run Computer Setup (Section 2.5) to reinitialize CMOS-RAM.
Diskette controller error	The diskette drive controller failed to respond to the recalibrate command.	If there is no diskette drive in the system, run Computer Setup (Section 2.5) to properly configure the CMOS-RAM to show no diskette drive present. If the problem persists, or if a diskette drive is present, complete these steps until the problems are solved: <ol style="list-style-type: none"><li>1. Check diskette drive connections.</li><li>2. Replace diskette drive.</li><li>3. Replace system board.</li></ol>
Diskette track 0 failed	The diskette drive cannot read track 0 of the diskette in the drive.	Try another diskette. If the problem persists, you may need to replace the diskette drive.
Hard disk controller error	The hard drive controller failed to respond to the reset command.	Check the drive parameters. Turn off the system and check all related connections.
Keyboard controller failure	The keyboard failed the self-test command.	Replace the system board.

*Continued*

## Factory Default Settings

**Table 2-4  
Initialization**

Enable POST Memory Test	Checked (enabled)
Keyboard Num Lock	Unchecked (off)
Hard drive boot sequence	
1	Hard drive in the computer MultiBay
2	Hard drive in the computer hard drive bay
Boot display	Auto
Language	Language of country

**Table 2-5  
Ports**

Serial port	3F8, IRQ4
Infrared port	2F8, IRQ9
Parallel port	378, IRQ7
Ethernet port	300, IRQ11

---

**Table 2-13**  
**Solving Infrared Problems**

---

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
Cannot communicate with another computer	The appropriate software is not running on both computers.	Install the appropriate software on the second device, start the second device, and start the program on both computers.
	The other computer does not have an IrDA-compliant infrared port. Your Compaq computer uses the IrDA communications protocol.	Communication between infrared devices must use the same communications protocol. Check the manufacturer's instructions for connecting with infrared devices or try connecting with a device you know to be IrDA-compliant.
	The pathway between the infrared ports is obstructed, one port is more than 30 degrees (plus or minus 15 degrees off the center line) from the other, or the ports are more than one meter apart.	Remove the obstruction, align the infrared ports to within 30 degrees, and position computers within 1.5 feet (about 0.5 meter) of each other.
	There is an interrupt request (IRQ) conflict.	Check for IRQ conflicts in the Device Manager. If two devices have the same IRQ address, reassign one of the devices.
	There is a baud rate conflict.	Select the same baud rate for both computers.
	There is a conflict with the # bits.	Select the same # bits setting for both computers.
	There is a stop byte conflict.	Select the same stop byte for both computers.
	There is a parity conflict.	Select the same parity setting for both computers.

*Continued*

---

**Table 2-17**  
**Solving Power Problems**

---

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
Computer will not turn on.	Battery is discharged and computer is not connected to a power source.	<ul style="list-style-type: none"><li>■ Charge the battery pack.</li><li>■ Replace the battery pack.</li><li>■ Connect the computer to an external power source.</li></ul>
	Battery is discharged and cables to the external power source are unplugged.	Ensure that cables connecting the computer and the external power source are plugged in properly.
Computer turned off while it was left unattended.	Computer initiated power-down because of a critical low battery condition.	<ul style="list-style-type: none"><li>■ Charge the battery pack.</li><li>■ Replace the battery pack.</li><li>■ Connect the computer to an external power source.</li></ul>
	The computer initiated Hibernation after a user-defined timeout expired.	Turn on the computer.

---

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: [www.heydownloads.com](http://www.heydownloads.com) by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

**Table 3-1** *continued*

<b>Item</b>	<b>Description</b>	<b>Spare Part Number</b>
7	System board	
	<b>Armada E500 and E500S only</b> (all with 64 MB SDRAM)	
	Intel Pentium III 850-MHz processor; used only with config. codes beginning with JFC.	217374-001
	Intel Pentium III 800-MHz processor; used only with config. codes beginning with JFB.	217373-001
	Intel Pentium III 700-MHz processor; used only with config. codes beginning with: DX      FMX      FMZ      FWZ      JFF FFH	190804-001
	Intel Pentium III 650-MHz processor; used only with config. codes beginning with: DPB      FFD5      FFD6      FFD7      FFD8	177751-001
	Intel Pentium III 600-MHz processor; used only with config. codes beginning with: DN9      FL51      FL56      FL60      FVY1 FFD1      FL52      FL57      FL61      FVY2 FFD2      FL53      FL58      FL62      FVY3 FFD3      FL54      FL59      FL63      FVY4 FFD4      FL55	177750-001
	Intel Pentium III 500-MHz processor; used only with config. codes beginning with: DN83      DNM      DNN      DVM      FLC	165102-001
	Intel Pentium III 450-MHz processor; used only with config. codes beginning with: CZQ      DN84      DN85	165101-001
	Intel Pentium II 400-MHz processor; used only with config. codes beginning with: DC      DN81      DN82	159528-001
	Intel Pentium II 366-MHz processor; used only with config. codes beginning with DJC.	159527-001
	Intel Celeron 600-MHz processor; used only with config. codes beginning with JFD and JFH.	200398-001
	Intel Celeron 550-MHz processor; used only with config. codes beginning with: FVX      FVZ      FWB	200397-001

*Continued*

- After removing a hard drive, CD-ROM drive, or a diskette drive, place it into a static-proof bag.
- Do not use excessive force when inserting a drive into a drive bay.
- After inserting a hard drive into the hard drive bay, always reinsert either the original hard drive security plate or the tamper-resistant security plate to prevent the hard drive from accidentally disconnecting.
- Avoid exposing a hard drive to products that have magnetic fields such as monitors or speakers.
- Avoid exposing a drive to temperature extremes or to liquids.
- If a drive must be mailed, do the following: place the drive into a bubble pack mailer or other suitable form of protective packaging; label the package “Fragile: Handle With Care.”

## **4.4 Preventing Electrostatic Damage**

Many electronic components are sensitive to electrostatic discharge (ESD). Circuitry design and structure determine the degree of sensitivity. Networks built into many integrated circuits provide some protection, but in many cases the discharge contains enough power to alter device parameters or melt silicon junctions.

A sudden discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Often the spark is neither felt nor heard, but damage occurs. An electronic device exposed to electrostatic discharge may not be affected at all and can work perfectly throughout a normal cycle. It may function normally for a while, then degrade in the internal layers, reducing its life expectancy.

8. Disconnect the touch button cable from the touch button (Figure 5-6).

**NOTE:** The touch button cable is included in the Miscellaneous Plastics Kit.

---

### Touch Button Cable Spare Part Number Information

---

Miscellaneous Plastics Kit, includes:	159536-001
Switch cover (2)	RJ-11 modem cover
Hinge cover	RJ-45 LAN cover
Real time clock (RTC) battery	Computer feet
<b>Touch button cable</b>	Display screw covers
Front shield	TV out connector cover
Diskette drive bezel	PC Card space saver
Hard drive cover	Diskette drive space saver
Mini PCI slot cover	CD-ROM drive space saver
	Infrared lens

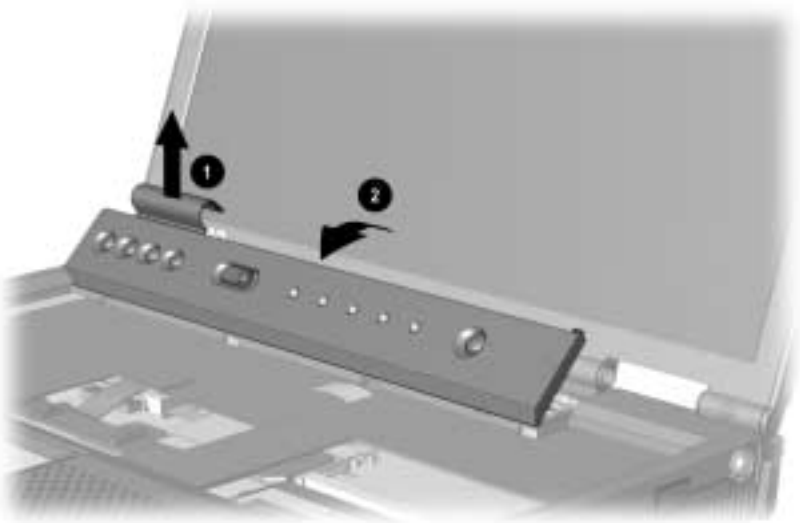
---



**Figure 5-6.** Disconnecting the Touch Button Cable

Reverse the removal procedure described above to replace the touch button.

6. Push the back of the switch cover up ❶ (Figure 5-13).
7. Position the computer so the front faces forward.
8. Swing the switch cover up and forward ❷.
9. Remove the switch cover.



**Figure 5-13.** *Removing the Switch Cover*

## 5.13 Front Shield

The front shield is spared in the Miscellaneous Plastics Kit.

---

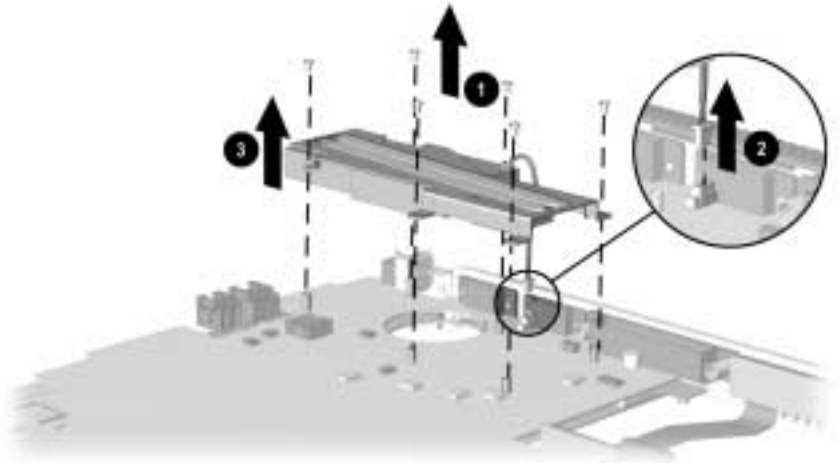
<b>Front Shield Spare Part Number Information</b>	
Miscellaneous Plastics Kit, includes:	159536-001
Switch cover (2)	RJ-11 modem cover
Hinge cover	RJ-45 LAN cover
Real time clock (RTC) battery	Computer feet
Touch button cable	Display screw covers
<b>Front shield</b>	TV out connector cover
Diskette drive bezel	PC Card space saver
Hard drive cover	Diskette drive space saver
Mini PCI slot cover	CD-ROM drive space saver
	Infrared lens

---

### Removing the Front Shield

1. Prepare the computer for disassembly (Section 5.3) and, in the order below, remove the following components:
  - Touch button (Section 5.6)
  - Keyboard (Section 5.7)
  - Display assembly (Section 5.9)
  - LED board (Section 5.11)
  - Top cover (Section 5.12)
2. Position the computer so the rear panel faces forward.

3. Remove the six screws that secure the fan and heat sink to the system board ❶ (Figure 5-27).
4. Disconnect the fan cable from the system board ❷.
5. Remove the fan and heat sink from the system board ❸.



**Figure 5-27.** Removing the Fan and Heat Sink

**Table 6-12** *Continued*

	<b>1.68 MB DMF</b>	<b>1.44 MB</b>	<b>1.2 MB</b>	<b>1.2 MB</b>	<b>720 KB</b>
Magnetic tracks surface	80	80	77	80	80
Optical servo tracks/surface	N/A	N/A	N/A	N/A	N/A
Sectors/track	21	18	8	15	9
Sector interleave	2:1	1:1	1:1	1:1	1:1
Spare sectors	0	0	0	0	0
Zones (each side)	1	1	1	1	1
Average random seek	70 ms	70 ms	70 ms	70 ms	70 ms
Track-to-track seek	25 ms	25 ms	25 ms	25 ms	25 ms
Max single seek	170 ms	170 ms	170 ms	170 ms	170 ms
Average latency	41.67 ms	41.67 ms	41.67 ms	41.67 ms	41.67 ms
Motor RPM	720± 0.5%	720± 0.5%	720± 0.5%	720± 0.5%	720± 0.5%
Motor start time	800 ms	800 ms	800 ms	800 ms	800 ms
Track density	135 TPI	135 TPI	135 TPI	135 TPI	135 TPI
Track width	125 µm	125 µm	125 µm	125 µm	125 µm
Encoding method	MFM	MFM	MFM	MFM	MFM
Max flux density	17,334 FCI	17,334 FCI	17,334 FCI	17,334 FCI	17,334 FCI
Recording density	17,334 BPI	17,334 BPI	17,334 BPI	17,334 BPI	17,334 BPI
Nominal transfer rate	150 KB/sec	150 KB/sec	125 KB/sec	125 KB/sec	75 KB/sec
Nominal sustained transfer rate across interface	65 KB/sec read 32 KB/sec write	55 KB/sec read 28 KB/sec write	49 KB/sec read 25 KB/sec write	46 KB/sec read 23 KB/sec write	28 KB/sec read 14 KB/sec write
Buffer transfer rate	4.0 MB/sec	4.0 MB/sec	4.0 MB/sec	4.0 MB/sec	4.0 MB/sec

**Table A-7** *continued*

<b>Pin</b>	<b>Signal</b>	<b>Pin</b>	<b>Signal</b>
57	INIT LD6	91	PS2 VCC
58	SLCTIN LD7	92	SERIRQ
59	GND	93	PS2 CLK
60	PDATA0 LD8	94	EXPREQ
61	PDATA1 LD9	95	AD[29]
62	PDATA2 LD10	96	AD[31]
63	PDATA3 LD11	97	AD[30]
64	GND	98	AD[28]
65	PDATA4 LD12	99	AD[26]
66	PDATA5 LD13	100	GND
67	PDATA6 LD14	101	AD[24]
68	PDATA7 LD15	102	AD[22]
69	GND	103	AD[20]
70	ERROR LCLK	104	AD[18]
71	RXD1 LVREQ	105	AD[16]
72	TXD1 LCREQ	106	GND
73	RTS1 LEN	107	AD[15]
74	GND	108	AD[13]
75	CTS1 LIIC CLK	109	AD[11]
76	DTR1 LIIC DAT	110	AD[09]
77	DSR1 EX	111	GND
78	DCD1 EX	112	AD[06]
79	12C DATA	113	AD[04]
80	GND	114	AD[02]
81	12C CLK	115	AD[00]
82	GND	116	GND
83	HDSEL	117	FRAME
84	GND	118	TRDY
85	WPROT	119	STOP
86	EBOXS2 /GND	120	PAR
87	ERDY	121	CBE0
88	EBOXL /GND	122	CBE1
89	FLUSHREQ	123	GND
90	MEMACK	124	KB CLK

*Continued*

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: [www.heydownloads.com](http://www.heydownloads.com) by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL