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<td>I/O Port Eyelets (two matched sets)</td>
<td>61</td>
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<td>21</td>
<td>I/O Port Eyelets (only one matched set)</td>
<td>61</td>
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<td>I/O Port Eyelets (no eyelet in position one)</td>
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Introduction

This document provides reference information for the HP OmniBook 300, HP OmniBook 425, HP OmniBook 430, and HP OmniBook 530. It is intended to be used by HP-qualified service personnel to help with the installation, servicing, and repair of these HP OmniBook PCs.

It is a self-paced guide designed to train you to install, configure, and repair the OmniBook Notebook PC. You can follow it without having any equipment available.

The following table lists additional sources where supplementary information can be obtained:

<table>
<thead>
<tr>
<th>Resource</th>
<th>Number/Address</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP External Web</td>
<td><a href="http://hpcc998.external.hp.com/mcd/">http://hpcc998.external.hp.com/mcd/</a></td>
<td>No usage restriction</td>
</tr>
<tr>
<td>HP-MCD Internal Web</td>
<td><a href="http://webmcd.cv.hp.com">http://webmcd.cv.hp.com</a></td>
<td>Restricted to HP internet access only</td>
</tr>
<tr>
<td>HP MCD Service Engineer</td>
<td><a href="mailto:svc-eng_mcd@om.cv.hp.com">svc-eng_mcd@om.cv.hp.com</a></td>
<td>Email address for service related questions and issues</td>
</tr>
</tbody>
</table>
Part 1

Product Overview

- Product Features
- Product Comparisons
- Product at a Glance
Product Features

OmniBook 300, 425, and 430

Figure 1 - OmniBook 300, 425, and 430 Features

1. Latch 11. AC adapter socket
2. Display 12. Serial port connector
5. Card-eject levers 15. System slots (C and D)
6. On/Off key 16. Memory-expansion slot
7. Mouse 17. Modem port
8. Mouse-eject button 18. Battery compartment
10. Speaker 20. Reset button
OmniBook 530

Figure 2 - OmniBook 530 Features

1. Latch 12. Serial port connector
2. Display 13. Parallel port connector
3. Keyboard 14. VGA output connector
6. On/Off key 17. Modem port
7. Mouse 18. Battery compartment
9. Display contrast buttons 20. Infrared port
10. Speaker 21. Reset button
11. AC adapter socket
## Product Comparisons

<table>
<thead>
<tr>
<th></th>
<th>OmniBook 300 Details</th>
<th>OmniBook 425 Details</th>
<th>OmniBook 430 Details</th>
<th>OmniBook 530 Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size Closed</strong></td>
<td>16.3 x 28.2 x 3.6 cm (6.4 x 11.1 x 1.4 in)</td>
<td>16.3 x 28.2 x 3.6 cm (6.4 x 11.1 x 1.4 in)</td>
<td>16.3 x 28.2 x 3.6 cm (6.4 x 11.1 x 1.4 in)</td>
<td>16.3 x 28.2 x 3.6 cm (6.4 x 11.1 x 1.4 in)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1.31 kg (2.88 lb) w/flash, 1.36 kg (2.99 lb) w/hdd</td>
<td>1.31 kg (2.88 lb) w/flash, 1.36 kg (2.99 lb) w/hdd</td>
<td>1.36 kg (2.99 lb)</td>
<td>1.36 kg (2.99 lb)</td>
</tr>
<tr>
<td><strong>Processor</strong></td>
<td>386SXLV</td>
<td>486SLC/e</td>
<td>486SLC/e</td>
<td>Intel® 486SX</td>
</tr>
<tr>
<td><strong>Clock Speed</strong></td>
<td>20 MHz</td>
<td>25 MHz</td>
<td>25 MHz</td>
<td>33 MHz</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>640 x 480 VGA, 16 shades of gray</td>
<td>640 x 480 VGA, 16 shades of gray</td>
<td>640 x 480 VGA, 16 shades of gray</td>
<td>640 x 480 VGA, 16 shades of gray</td>
</tr>
<tr>
<td><strong>VGA-out Support</strong></td>
<td>none</td>
<td>none</td>
<td>640 x 480, 16 or 256 colors</td>
<td>800 x 600, 16 colors</td>
</tr>
<tr>
<td><strong>Battery</strong></td>
<td>4.8 Vdc nickel-metal-hydride rechargeable, 1.5 V alkaline AA (flash version only)</td>
<td>4.8 Vdc nickel-metal-hydride rechargeable, 1.5 V alkaline AA (flash version only)</td>
<td>4.8 Vdc nickel-metal-hydride rechargeable, 1.5 V lithium AA</td>
<td>4.8 Vdc nickel-metal-hydride rechargeable, 1.5 V lithium AA</td>
</tr>
<tr>
<td><strong>Battery Life</strong></td>
<td>5 hours w/hdd, 9 hours w/flash</td>
<td>4.5 hours w/hdd, 8 hours w/flash</td>
<td>4.5 hours w/hdd, 4 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td><strong>AC Adapter</strong></td>
<td>100 to 240 Vac (50 to 60 Hz) input, 12 Vdc output</td>
<td>100 to 240 Vac (50 to 60 Hz) input, 12 Vdc output</td>
<td>100 to 240 Vac (50 to 60 Hz) input, 12 Vdc output</td>
<td>100 to 240 Vac (50 to 60 Hz) input, 12 Vdc output</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>0 to 55 C (32 to 131 F)</td>
<td>0 to 55 C (32 to 131 F)</td>
<td>0 to 55 C (32 to 131 F)</td>
<td>0 to 55 C (32 to 131 F)</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>90% relative humidity at 40 C (104 F) maximum</td>
<td>90% relative humidity at 40 C (104 F) maximum</td>
<td>90% relative humidity at 40 C (104 F) maximum</td>
<td>90% relative humidity at 40 C (104 F) maximum</td>
</tr>
<tr>
<td><strong>Mass Storage</strong></td>
<td>40-MB hard disk, 10-MB flash disk</td>
<td>40-MB hard disk, 10-MB flash disk</td>
<td>105-MB hard disk, 40-MB hard disk</td>
<td>4 MB RAM</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>2 MB RAM</td>
<td>2 MB RAM</td>
<td>2 MB RAM on 40-MB version, 4 MB RAM on 105-MB version</td>
<td>4 MB RAM</td>
</tr>
<tr>
<td><strong>Memory Expansion</strong></td>
<td>2-MB, 4-MB, 8-MB</td>
<td>2-MB, 4-MB, 8-MB</td>
<td>2-MB, 4-MB, 8-MB</td>
<td>2-MB, 4-MB, 8-MB</td>
</tr>
<tr>
<td><strong>Expandability</strong></td>
<td>PCMCIA, Type II, Version 2.0 card slots, Two slots available with</td>
<td>PCMCIA, Type II, Version 2.0 card slots, Two slots available with</td>
<td>PCMCIA, Type II, Version 2.0 card slots, Two slots available with</td>
<td>Two PCMCIA Type II slots (one Type III slot) Optional floppy disk</td>
</tr>
<tr>
<td>Pre-installed Software</td>
<td>OmniBook 300</td>
<td>OmniBook 425</td>
<td>OmniBook 430</td>
<td>OmniBook 530</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td>the flash disk version</td>
<td>the flash disk version</td>
<td>the hard disk version</td>
<td>drive</td>
</tr>
<tr>
<td></td>
<td>One slot available with the hard disk version</td>
<td>One slot available with the hard disk version</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS® Windows 3.1*</td>
<td>MS® Windows 3.1*</td>
<td>MS® Windows 3.1</td>
<td>MS® Windows 3.1</td>
</tr>
<tr>
<td></td>
<td>MS DOS® 5.0*</td>
<td>MS DOS® 5.0*</td>
<td>MS DOS® 6.2</td>
<td>MS DOS® 6.2</td>
</tr>
<tr>
<td></td>
<td>MS Word 2.0*</td>
<td>MS Word 2.0*</td>
<td>LapLink Remote Access™</td>
<td>LapLink Remote Access™</td>
</tr>
<tr>
<td></td>
<td>MS Excel 4.0*</td>
<td>MS Excel 4.0*</td>
<td>Phone Book</td>
<td>Phone Book</td>
</tr>
<tr>
<td></td>
<td>LapLink Remote Access™</td>
<td>LapLink Remote Access™</td>
<td>Appointment Book</td>
<td>Appointment Book</td>
</tr>
<tr>
<td></td>
<td>Phone Book</td>
<td>Phone Book</td>
<td>HP Financial Calculator</td>
<td>HP Financial Calculator</td>
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<tr>
<td></td>
<td>Appointment Book</td>
<td>Appointment Book</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>HP Financial Calculator</td>
<td>HP Financial Calculator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*(Note: All components not included can be installed from a retail copy. License for full Microsoft Word, Microsoft Excel, MS-DOS, and Microsoft Windows is included with purchase.)*
### Description | Part Number | OB300 | OB425 | OB430 | OB530
---|---|---|---|---|---
1 Standoff | 0380-4060 | ✓ | ✓ | ✓ | ✓
2 Screw M2x4.6mm (T6) | 0515-2396 | ✓ | ✓ | ✓ | ✓
3 Mouse | 5061-4390 | ✓ | ✓ | ✓ | ✓
4 Arm Eject Mouse Spring | F1030-00016 | ✓ | ✓ | ✓ | ✓
5 Pivot Door Spring | F1030-00026 | ✓ | ✓ | ✓ | ✓
6 Spring Card Eject | F1030-00029 | ✓ | ✓ | ✓ | ✓
7 Mouse Latch Spring | F1030-00030 | ✓ | ✓ | ✓ | ✓
8 Mylar Mouse Shield | F1030-20001 | ✓ | ✓ | ✓ | ✓
9 Door Battery
   - Door Battery (10 pack) | F1030-60912 | ✓ | ✓ | ✓ | ✓
   - Door Battery (silver) | F1052-40012 | ✓ | ✓ | ✓ | ✓
10 Pivot Door
   - Pivot Door (PCMCIA) A | F1030-40013 | ✓ | ✓ | ✓ | ✓
   - Pivot Door (PCMCIA) B | F1030-40014 | ✓ | ✓ | ✓ | ✓
   - Pivot Door (PCMCIA) Left | F1052-40007 | ✓ | ✓ | ✓ | ✓
11 Door Modem Blank | F1030-40016 | ✓ | ✓ | ✓ | ✓
12 Door RAM | F1030-40017 | ✓ | ✓ | ✓ | ✓
13 Rubber Foot | F1030-40018 | ✓ | ✓ | ✓ | ✓
14 Hinge Cap | F1030-40019 | ✓ | ✓ | ✓ | ✓
15 Mouse Button Latch | F1030-40021 | ✓ | ✓ | ✓ | ✓
16 Battery Door Latch | F1030-40025 | ✓ | ✓ | ✓ | ✓
17 Security Latch | F1030-40033 | ✓ | ✓ | ✓ | ✓
18 Eject Button A | F1030-40044 | ✓ | ✓ | ✓ | ✓
19 Eject Button B | F1030-40045 | ✓ | ✓ | ✓ | ✓
20 Eject Arm Left | F1030-40046 | ✓ | ✓ | ✓ | ✓
21 Eject Arm Right | F1030-40047 | ✓ | ✓ | ✓ | ✓
22 Paw Carrier Svc Assy | F1030-60901 | ✓ | ✓ | ✓ | ✓
23 Arm Eject Mouse | F1030-60950 | ✓ | ✓ | ✓ | ✓
24 Door I/O | F1030-60908 | ✓ | ✓ | ✓ | ✓
25 Pivot Bracket | F1030-60909 | ✓ | ✓ | ✓ | ✓
26 Bottom Case
   - Bottom Case | F1030-60910 | ✓ | ✓ | ✓ | ✓
   - Bottom Case (silver) | F1052-60908 | ✓ | ✓ | ✓ | ✓
27 Top Case
   - Top Case | F1030-60911 | ✓ | ✓ | ✓ | ✓
   - Top Case (silver) | F1052-60907 | ✓ | ✓ | ✓ | ✓
28 LCD Display Assy (new) | F1030-60904 | ✓ | ✓ | ✓ | ✓
29 Keyboard
   - Keyboard USA | F1030-80013 | ✓ | ✓ | ✓ | ✓
   - Keyboard German | F1030-80031 | ✓ | ✓ | ✓ | ✓
   - Keyboard Spanish | F1030-80032 | ✓ | ✓ | ✓ | ✓
   - Keyboard French | F1030-80033 | ✓ | ✓ | ✓ | ✓
   - Keyboard International English | F1030-80057 | ✓ | ✓ | ✓ | ✓
30 Logic PCA
   - Logic PCA (new) | F1030-60907 | ✓ | ✓ | ✓ | ✓
   - Logic PCA (new) | F1030-60907 | ✓ | ✓ | ✓ | ✓
   - Logic PCA (new) | F1052-60906 | ✓ | ✓ | ✓ | ✓
   - Logic PCA (exchange) | F1052-60908 | ✓ | ✓ | ✓ | ✓
31 System ROM
   - System ROM (ABA) - US English | F1033-60908 | ✓ | ✓ | ✓ | ✓
   - System ROM (ABB) Intl. English | F1033-60909 | ✓ | ✓ | ✓ | ✓
   - System ROM (ABD) German | F1033-60910 | ✓ | ✓ | ✓ | ✓
   - System ROM (ABF) French | F1033-60911 | ✓ | ✓ | ✓ | ✓
   - System ROM (ABE) Spanish | F1033-60912 | ✓ | ✓ | ✓ | ✓
   - System ROM (ABF) Spanish | F1033-60912 | ✓ | ✓ | ✓ | ✓
   - System ROM (ABF) French | F1033-60912 | ✓ | ✓ | ✓ | ✓
32 Battery Pack | F1045-60901 | ✓ | ✓ | ✓ | ✓
33 Hard Drive Tray | F1065-60929 | ✓ | ✓ | ✓ | ✓
34 Flash Tray | F1030-60923 | ✓ | ✓ | ✓ | ✓
35 Mass Storage
   - 5 MB Flash Disk Card | F1012-60902 | ✓ | ✓ | ✓ | ✓
   - 10 MB Flash Disk Card | F1013-60901 | ✓ | ✓ | ✓ | ✓
   - 20 MB Flash Disk Card | F1014-60901 | ✓ | ✓ | ✓ | ✓
   - 40 MB Hard Drive (DOS/Win/PIM) | F1035-60901 | ✓ | ✓ | ✓ | ✓
   - 40 MB Hard Drive (unprogrammed) | F1050-60901 | ✓ | ✓ | ✓ | ✓
   - 105 MB Hard Drive (DOS/Win/PIM) | F1037-60908 | ✓ | ✓ | ✓ | ✓
   - 105 MB Hard Drive (Word/Excel) | F1037-60909 | ✓ | ✓ | ✓ | ✓
   - 105 MB Hard Drive (unprogrammed) | F1039-60901 | ✓ | ✓ | ✓ | ✓
   - 130 MB Hard Drive (unprogrammed) | F1057-60901 | ✓ | ✓ | ✓ | ✓
   - 130 MB Hard Drive (programmed) | F1052-60909 | ✓ | ✓ | ✓ | ✓

Note, this is a partial parts list. For a complete parts list, please refer to Appendix D or the current Product Support Plan.
Part 2

Troubleshooting

- OmniBook Self Test
- Troubleshooting Flowchart
OmniBook Self-Test
The OmniBook Self-Test provides on-board hardware and firmware diagnostics. To operate the self-test, perform the following steps:

1. Save all files and close all applications: The OmniBook is reset at the end of the self-test.
2. Turn the OmniBook OFF.
3. Press and hold the [Esc] key and press [ON]. You will hear a short three-tone beep.
4. Self Test will initialize and start.
5. To run a test:
   - Highlight the test name and press [ENTER].
   - Highlight the test name and press [Ctrl][ENTER] to run a longer and more extensive version of a test—not available for all tests.
   - The test runs and its results are reported.
6. To run several tests in a continuous loop:
   - Highlight one or more using [ space bar ] and press [ENTER].
   - Each test runs and its results are reported.
   - Press [Backspace] to stop the loop.
7. To exit the self-test, press [Esc].

Interpretation of test results
A result of “OK” on any test indicates that the test did not find problems while the unit was operating in its current state. A “BAD” result indicates that the test found a problem while the unit was operating in its current state. A “BAD” result should always be confirmed by running the test in a loop for several iterations or running the long version of the test. Further inspection of the unit to rule out configuration or installation conflicts is necessary prior to diagnosing the unit as needing repair.

Any test that is halted by [Backspace] is shown as “aborted” and no results are displayed.

The OmniBook will not enter sleep mode while the self-test is executing.

Loop Back Connectors
In order to run the RS232 serial port or parallel port self-test, a loop back connector is needed. The loop back may be placed on either the OmniBook port or at the end of the corresponding cable. This feature is also helpful in diagnosing a defective serial or parallel cable.

Loop back connectors may be purchased or can easily be constructed. The following illustrations identify the correct pin-out configurations for the serial and parallel loop back connectors.
Figure 3 - Serial Loop Back Connector

Figure 4 - Parallel Loop Back Connector
Troubleshooting Flowchart

The following series of flowcharts is intended as a guide for troubleshooting the OmniBook 300, 425, 430, and 530. Each technician should still rely on personal experience and supplemental knowledge when diagnosing a problem.

These tips should be kept in mind when referencing the troubleshooting flowcharts:

- Use the Main Troubleshooting Flowchart to isolate the problem to a particular area.
- Use the additional individual troubleshooting flowcharts to narrow down the problem to a specific component or item.
- Always use supplemental information resources, including the Product Support Plan, Service Notes, and the World Wide Web, to aid in diagnosing problem areas.
Main Troubleshooting Flowchart

START

Get user information:
Name
Telephone number
Unit serial number
Repair history

Yes

Eliminate all obvious physical problems?

No
Isolate damage. Refer to repair process

Yes

OB unit's power light comes on?

No
See Power Source flowchart

Yes

Single beep during boot-up?

No
See Boot-up flowchart

Yes

See something in display?

No
See Display flowchart

Yes

See DOS or Windows?

No
See Hard Disk flowchart

Yes

Memory OK? (No memory errors)

No
See Memory flowchart

Yes

Hard disk operates OK?

No
See Hard Disk flowchart

Yes

Unit has at least 1-1/2 hours battery life?

No
See Power Management flowchart

Yes

Pop-out mouse works correctly?

No
See Mouse flowchart

Yes

External floppy drive operates correctly?

No
See Floppy Drive flowchart

Yes

A
Main Troubleshooting Flowchart (continued)

If you still have a problem, it's in software or in a part of the unit not covered by these flowcharts.
Power Source Problems

**Start:** No power lamp, or low battery life

- **Yes:** Battery in Omnibook?
  - **Yes:** HP ac adapter and cable?
    - **Yes:** Connect OB to ac adapter, plug adapter into wall socket
      - **Turn on Omnibook**
        - **Yes:** See power light?
          - **Yes:** Light on continuously (not intermittent)?
            - **A**
          - **No:** Try different power socket
            - **B**
        - **No:** Try different power socket
      - **No:** Turn Omnibook off
        - **Remove and reinsert battery**

- **No:** Turn Omnibook off
  - **Remove and reinsert battery**
  - **Done**
Power Source Problems (continued)

A

Light on continuously (not intermittent)?

Yes

Ambient temperature within specification?

Yes

Done: Bring temperature within specifications

No

Recheck cables, connections: ac adapter to

Yes

Light still intermittent?

Yes

Done: Suspect bad ac adapter, cable, or connector

No

Done

No

Go to Power Management Problems flowchart

B

Try different power socket

Yes

See power light?

Yes

Done: Power source problem

No

No

Ensure power coming from wall socket

No

Ensure battery installed correctly

C
Power Source Problems (continued)

- Can you substitute known good ac adapter?
  - Yes: See steady power light?
    - Yes: Done: Original ac adapter or cable bad
    - No: Can you substitute known good OB?
      - Yes: Ac adapter warm?
        - Yes: Done: Suspect bad ac adapter or cable
        - No: Done: Suspect bad original OB base unit bad
      - No: Done: Suspect original OB base unit bad
  - No: Done: Suspect original OB base unit bad
Boot-Up Problems

Start: Problems during bootup

Press Ctrl Alt Del to get a clean boot

Hear single or multiple beeps during boot?

Multiple beeps

See Windows or DOS prompt in display?

Yes

Done

No

Single beeps

Yes

OB support utility disk available?

Yes

Suspect software problem: locate OB support utility disk and call back

No

No

Insert OB support utility disk and reboot

Yes

See prompt to enter time and date?

Yes

Done

No

Done: Suspect bad Omnibook base unit
Display Problems

Start:
Power light on, but no display

Physical inspection of display

Adjust brightness and contrast controls

Yes

See anything in display?

No

Done

Go to Boot-Up Problems flowchart
Hard Disk Problems

Start: Hard disk fails to boot up to DOS or Windows; or other hard disk problems

Yes

See anything in drive C:?

Yes

HP hard disk?

No

Insert hard disk in C:

Done

No

Noisy?

Yes

Suspect corrupt files on hard disk

Insert hard disk containing system files

Done

Done: Hard disk bad

No

See "Non-system disk"?

Yes

Boot from OB companion disk in drive A:

Do SCANDISK C:

Yes

Soft checking OK?

No

A

B
Hard Disk Problems (continued)

A

Do hard checking. 
Save logs. 
Let SCANDISK repair errors.

Yes

Space available on hard disk within spec?

No

Done: Hard disk bad

Boot from drive C:

Yes

Boots without errors?

No

Done

Go to Boot-Up Problems flowchart

B

Do hard checking. 
Save logs. 
Let SCANDISK repair errors.

Boot from OB companion disk in drive A:

Yes

Number of bad sectors out of spec?

No

Suspect software problem

Yes

Done: Hard disk bad

Boot from OB companion disk in drive A:

Do SCANDISK C:

No

Do CHKDSK C:

Do SCANDISK C:/AUTOFIX

C
Hard Disk Problems (continued)

1. Remove disk from drive A:
2. Boot from drive C:
3. Give customer general data recovery hints:
   - DOS and Windows boot OK?
     - Yes: Boot from drive A:
       - Back up hard disk to A:
       - Reformat hard disk
       - Reload image
       - Done
     - No: Is customer willing to reformat hard disk?
       - Yes: Boot from drive A:
       - Back up hard disk to A:
       - Reformat hard disk
       - Reload image
       - Done
       - No: Done: Customer must purchase another hard disk
   - No: Give customer general data recovery hints
Memory Problems

Start: Problem with plug-in memory

- **Yes**: Intermittent problem?
  - **Yes**: Run short OB memory self-test
    - **Yes**: Memory self-test OK?
      - **Yes**: Run long OB memory self-test
        - **Yes**: Memory self-test OK?
          - **Yes**: Run different software to eliminate potential software
          - **No**: Memory appears OK now?
            - **Yes**: Done: Suspect memory module problem
            - **No**: With memory module removed, replace battery, attach ac adapter
              - **Yes**: Done: Memory inappropriate for this model OB
              - **No**: Done
    - **No**: With memory module appropriate and compatible?
      - **Yes**: Done: Suspect memory module problem
      - **No**: Done
  - **No**: Memory self-test OK?
    - **Yes**: Done: Suspect bad memory module
    - **No**: End current session.

- **No**: End current session.

Exit software and turn off OB

Remove OB battery, disconnect ac adapter

Remove and examine memory module

Done: Memory self-test OK?
Memory Problems (continued)

A

Power up OB (memory module removed)

Memory problem disappears?

Yes

Done: Suspect bad memory module

No

Run short OB memory self-test (without memory module)

Memory self-test OK?

Yes

Done: Suspect memory module bad

No

Run long OB memory self-test (without memory module)

Memory self-test OK?

Yes

Done: Suspect OB base unit bad

No
Power Management Problems

Start: Low battery life

- Physical inspection: HP battery? Contacts dirty? Physically OK?
  - Yes
    - Ac adapter attached to OB and wall?
      - Yes
        - Attach ac adapter
      - No
        - Recharge sufficiently
  - No
    - Has unit recharged sufficiently?
      - Yes
        - Power on during recharge?
          - Yes
            - Ensure power on
          - No
            - DOS or Windows running?
              - Yes
                - Start DOS or Windows
              - No
                - Start: Low battery life
      - No
        - Recharge sufficiently

- See OB power icon?
  - Yes
    - Done: Suspect software problem
  - No
    - Is Windows running?
      - Yes
        - Start Windows
      - No
        - Power icon in Control Panel?
          - Yes
            - Power Mgmnt icon in OB Tools?
              - Yes
                - 1-1/2 hours per charge?
                  - Yes
                    - Done: Standard or Off means processor always on; uses more power
                  - No
                    - Enable OB power management
              - No
                - Done
          - No
            - Done
Power Management Problems (continued)

A

Does battery indicator reach full charge?

Yes

Ambient temperature in spec?

Yes

Ensure ac adapter plugged into OB and wall

Clean boot: Ctrl Alt Del, press F4 during boot

"Bad/no battery" message?

Yes

"Bad/no battery" message?

Yes

Done: Replace battery or use OB on ac power only

No

Bring ambient temperature within specification, recharge battery

Charging circuitry may be defective

No

No

PCMCIA cards installed?

Yes

PCMCIA cards?

Yes

Speech: PCMCIA cards can use power even when not on

Remove PCMCIA cards, recharge battery

Yes

1-1/2 hours battery life?

Get 1-1/2 hours battery life?

Yes

Done

No

No

"Bad/no battery" message?

"Bad/no battery" message?

3rd-party software installed?

Yes

Speech: DOS games, TSR’s, other software can reduce battery life

Disable 3rd-party software and recharge battery

Done

B

No

No

No

No
Power Management Problems (continued)

- **Get 1-1/2 hours battery life?**
  - **Yes**: Done
  - **No**: Use MSD to determine what TSR's are running
    - **Disable TSR's**
      - **Yes**: Get 1-1/2 hours battery life?
        - **Yes**: Done
        - **No**: Done: Suspect bad or old battery
      - **No**: Done: Suspect bad or old battery
Pop-Out Mouse Problems

Start: OB popout mouse problem

Eliminate obvious physical problems

See Windows?

Yes

Start Windows running

No

Is mouse OB popout mouse?

Yes

Disable other mouse

No

Enable OB popout mouse

See mouse pointer?

Yes

Does mouse pointer move?

Yes

Done: Suspect software problem (Windows problem)

No

B

No

A
Pop-Out Mouse Problems (continued)

A

Yes

Reaches all 4 corners of screen?

Yes

Can you calibrate mouse?

No

No

Is mouse jittery, intermittent?

Yes

Done: Mouse should be OK

No

Suspect bad mouse

C
Pop-Out Mouse Problems (continued)

B

Suspect software configuration problem

Check for correct OB mouse driver

Yes

Mouse driver OK?

Yes

Look at mouse in Windows Control Panel

Yes

See OB punch button?

Yes

Set Control Panel for OB punch button mouse

Yes

OB mouse works OK?

Yes

Done

No

Exit Windows, run Setup from DOS command line

No

Done: Replace with known good version of correct OB mouse driver

Yes

Setup shows correct mouse driver?

Yes

Configure Setup for correct OB mouse driver

Yes

Mouse moves?

Yes

Done: Mouse OK

No

Suspect bad mouse

C
Clean boot: Ctrl Alt Del, press F5 when starting
Run OB diagnostic program
Yes
Does mouse pass all tests?
Removes mouse from OB base unit, examine mouse, and reinsert
Run OB diagnostic program
Yes
Does mouse pass all tests?
Put known good OB mouse in suspect base unit
Yes
Known good mouse works?
Suspect bad mouse. Replace mouse. Have customer call back if problem not solved.
Done: Suspect bad OB base unit
No
Yes
Suspect mouse works in known good OB?
Put known good OB mouse in suspect base unit
No
Can you put suspect mouse in known good OB?
Yes
Suspect mouse works in known good OB?
Yes
Boot normally to Windows
OB mouse operates correctly?
Yes
Done: Suspect software problem
No
Done
Yes
No
Yes
No
Yes
No
Floppy Drive Problems

Start: External floppy disk drive problem

External FDD is HP device?

Yes

Cable is correct one?

Yes

Eliminate obvious physical problems:
   Cable OK?
   Pins not bent?
   Cable connected and solidly in connectors?

Yes

Inserts, ejects known good disk cleanly?

Yes

Has drive ever worked?

Yes

No

A

B

Done: Suspect bad or damaged drive

No

Locate and attach correct cable

Yes

Drive works OK?

Yes

Done

No

Done
Floppy Drive Problems (continued)

A

Clean boot: Ctrl Alt Del, press F5 during boot

Yes

Drive works OK?

Yes

Can you swap with known good drive and cable?

Yes

With original OB turned on, connect good drive and cable

Yes

Good drive works OK?

Yes

Original drive works OK?

Suspect software problem

No

Original drive works OK?

Suspect software problem

No

Original drive or cable bad

Yes

Original OB base unit bad

Suspect software problem

No

Yes

Run short self-test twice

Yes

Drive passes self-test OK?

Yes

Done: Suspect bad drive

No

No

Suspect software problem (proceed to B)

No

Original drive or cable bad

Original OB base unit bad

Suspect software problem
Floppy Drive Problems (continued)

Clean boot: Ctrl Alt Del, press F5 during boot

Run OB disk self-test: Put empty, known good disk, formatted for DOS, in drive. Press Enter.

Repeat disk self-test

Disk self-test OK?

Yes

Boots OK?

Yes

Insert blank, formatted floppy disk, do long-term disk self-test

Long-term self-test OK?

Yes

Boot from drive A: with OB companion disk

Yes

Change diskette, run self-test again

No

Suspect bad floppy diskette; replace floppy with known good one

Done: If long-term self-test works but floppy drive still has problem, suspect runtime environment software problem

No

Self-test OK?

Yes

Done: Suspect bad floppy drive

No
Parallel Port Problems

Start: Problem with parallel port

Yes

Problem with Laplink Remote?

Troubleshoot Laplink Remote

No

Physical inspection: Cable connected? Cable pins OK?

Clean boot: Ctrl Alt Del, press F5 during boot

Yes

See Windows?

Yes

Exit to DOS

No

Use PRN command to print a file

Yes

Prints file OK?

Done: Parallel port OK

No

No

Other printer available?

Attach OB and use PRN command to print file on different printer

Yes

Prints file OK?

Done: Suspect bad printer or cable

No

Run OB self-test diagnostics: CDIAG or OBTEST, depending on unit

A
Parallel Port Problems (continued)

A

Self-test OK?

Yes

Reconfirm:
Printer plugged in?
On?
On line?

Attach printer to desktop PC

Clean boot to DOS on desktop PC:
Ctrl Alt Del, press F5 during boot

Yes

PRN prints file OK?

Yes

Done: Suspect original OB bad

No

Done: Suspect bad printer or cable

No

Done: Bad OB base unit
Serial Port Problems

Start: Problem with serial port

Yes

Problem with Laplink Remote?

Troubleshoot Laplink Remote

No

Cable connected?

Yes

Bent pins?

Cable appears OK?

No

Install loopback connector

Run OB self-test procedure

Yes

Self-test OK?

No

Done: Serial port OK

Done: Suspect bad serial port in OB base unit

A

Yes

Loopback connector available?

No

Connected to what?

Modem?

Printer?

Other?

Yes

Physical inspection: Cable connected? Bent pins? Cable appears OK?

No

Done: Suspect bad serial port in OB base unit
Serial Port Problems (continued)

1. Ensure proper default serial port configuration
   - Yes: Serial port works OK?
     - Yes: Done
     - No: Can you eliminate all potential software conflicts?
       - Yes: Eliminate software conflicts
       - No: Plug another device and cable into serial ports
         - Yes: Serial port works OK?
           - Yes: Done
           - No: Done: Suspect original device or cable bad
         - No: Done: Suspect bad OB base unit serial port
   - No: Serial port works OK?
     - Yes: Done
     - No: Eliminate software conflicts

Note: The diagram is a flowchart outlining the troubleshooting process for serial port problems.
PCMCIA Problems

Start: PCMCIA card problem

Determine type of card

Has card ever worked?

No

Remove card (with power on or off)

Visually inspect card: Connectors bent? Damaged? Wet?

Suspect software configuration problem

Inspection reveals problems?

Yes

Done: Suspect bad PCMCIA card

No

Reinsert card

Has any software been loaded or modified since card worked?

No

Yes

Seek additional information on card

Known issue with this card?

Yes

No

A

B
PCMCIA Problems (continued)

A

Clean boot: Ctrl Alt Del, press F5 during boot

Run OB self-test

Yes

Self-test OK?

No

Suspect bad card

Done: Software configuration or setup problem

Yes

HP card?

No

Done: Return card to HP

Done: Contact card vendor

B

Press Ctrl Alt Del

Yes

See Windows display?

No

Exit to DOS prompt

Yes

See DOS prompt?

No

Exit to DOS prompt

Remove card and run CARDINFO

Interpret CARDINFO results

C

Done: Contact card vendor

Done: Return card to HP
PCMCIA Problems (continued)

Hardware problem?

Yes
Done: Suspect bad OB base unit

No
Software problem?

Yes
Check CONFIG.SYS and AUTOEXEC.BAT

No
Insert card in top slot

Interpret results

Hardware problem in both slots?

Yes
Suspect bad card

No
Card is HP device?

Yes
Done: Contact card vendor

No
Done: Replace card

Done
PCMCIA Problems (continued)

D

Yes

Hardware problem in one slot only?

Done: Suspect bad OB base unit

No

Software problem in both slots?

Yes

Software problem in one slot only?

Seek further information - consult with Technical Support

No

Done: Suspect software configuration problem

Done
IR Port Problems

Start: Problem with infrared (IR) port

Problem with Laplink Remote?  
Troubleshoot Laplink Remote

Physical inspection: IR port not covered? Painted over? Obscured?

Ensure operating distance within specification (1 meter or less)

Ensure operating environment OK: Not next to bright or oscillating light?

Clean boot: Ctrl Alt Del, press F5 during boot

Run OB self-test

Run IR self-test in proper environment

IR self-test OK?

Yes

Done: Suspect software problem

No

Move OB to different desk, room

Run IR self-test in proper environment

IR self-test OK?

Yes

Done: Suspect bad OB base unit

No

Done: Suspect no problem or software problem
Part 3

Hardware Repair

- Battery
- Memory
- Hard Disk Drive/Flash Card and System ROM
- Mouse
- Small Parts
- Display
- Keyboard
- Logic PCA Board
- Paw Carrier
- Other Components

**CAUTION:** Always provide proper grounding when performing any of the following repairs. An electrostatic discharge may cause irreparable damage to the OmniBook and its components.
Battery  
(End User Replaceable)

All of the monochrome OmniBook models use the same HP Nickel-Metal-Hydride (NiMH) Battery Pack, part number F1045A (service replacement part number F1045-60901). However, for some models, 1.5 V AA batteries can be used in place of the NiMH battery pack. The following table lists all of the monochrome OmniBooks and the batteries that can be used safely in each model.

<table>
<thead>
<tr>
<th></th>
<th>OmniBook 300</th>
<th>OmniBook 425</th>
<th>OmniBook 430</th>
<th>OmniBook 530</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Disk Version</td>
<td>• NiMH Battery Pack</td>
<td>• NiMH Battery Pack</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td></td>
<td>• AA Alkaline</td>
<td>• AA Alkaline</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• AA Lithium</td>
<td>• AA Lithium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard Disk Version</td>
<td>• NiMH Battery Pack</td>
<td>• NiMH Battery Pack</td>
<td>• NiMH Battery Pack</td>
<td>• NiMH Battery Pack</td>
</tr>
<tr>
<td></td>
<td>• AA Alkaline</td>
<td>• AA Lithium</td>
<td>• AA Lithium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• AA Lithium</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WARNING:** Do not mutilate, puncture, or dispose of batteries in fire. The batteries can burst or explode, releasing hazardous chemicals.

A nickel-metal-hydride rechargeable battery pack must be recycled or disposed of properly. Recycle or discard used size-AA batteries according to the manufacturer’s instructions.

**Required Equipment**
- none

**Removal Procedure**
1. Release the two latches on the battery cover on the bottom case, then remove the cover. Refer to the below illustration.
2. Do one of the following to remove the battery:
   - If an OmniBook battery pack is installed, lift it out by its tab.
   - If AA batteries are installed in place of the OmniBook battery pack, lift each out individually.
Replacement Procedure

1. To replace the battery, do one of the following:
   - To replace the OmniBook battery pack, insert the rounded side of the pack into the compartment first. It is not possible to fully insert the battery pack incorrectly.
   - To replace AA batteries, orient them as shown by the symbols in the battery compartment.

2. Replace and latch the battery cover.
Memory
(End User Replaceable)

The OmniBook 530 uses a unique memory module that is not compatible with the OmniBook 300, 425, or 430. The table below summarizes the compatibility of the memory modules for each OmniBook model.

<table>
<thead>
<tr>
<th>Memory Module</th>
<th>Accessory Number</th>
<th>Service Replacement</th>
<th>OB 300</th>
<th>OB 425</th>
<th>OB 430</th>
<th>OB 530</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-MB</td>
<td>F1041A</td>
<td>F1041-60901</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>4-MB</td>
<td>F1042A</td>
<td>F1038-60901</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4-MB</td>
<td>F1054A</td>
<td>F1054-60901</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>8-MB</td>
<td>F1055B</td>
<td>F1055-60002</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

The following illustration provides a visual representation of the physical differences between the memory module for the OmniBook 300, 425, and 430 and the memory module for the OmniBook 530.

*Figure 5 - OmniBook Memory Modules*
Required Equipment
• Probe (or similar device) for the OmniBook 300, 425, and 430 only

CAUTION: To avoid damage due to electrostatic discharge, handle the memory module by the edges only.

Removal Procedure
1. Remove the battery and ac adapter from the OmniBook.
2. Slide the memory door off (see below illustration).

Figure 6 - Removing the Memory Module

3. Perform the appropriate action for the corresponding OmniBook:
• OmniBook 300, 425, or 430 -- Use a probe or similar device to pull on the small post located on the front edge of the memory module.
• OmniBook 530 -- Flip out the plastic tab on the memory module and pull the module out.

Replacement Procedure
1. Insert the memory module into the slot. (It is not possible to completely insert the memory if it is upside down.)
• OmniBook 300, 425, 430 -- the small post on the board faces the bottom surface of the OmniBook.
• OmniBook 530 – the plastic tab on the board faces the bottom surface of the OmniBook.
2. Press in the module until it seats fully.
3. Replace the slot cover.
4. Replace the battery and press reset.
Hard Disk Drive/Flash Card and System ROM
(End User Replaceable)

The Hard Disk Drives for the OmniBook 300, 425, 430, and 530 can be reimaged if necessary. If the software is corrupted, or otherwise damaged, on the hard drive, it can be reformatted and the software reloaded. Also, if the hard drive fails and must be replaced, a blank hard drive can be ordered and the appropriate software loaded. The below procedures indicate the proper actions necessary for reloading software on each OmniBook model.

For the OmniBook 300 and 425:
1. Place the hard drive into the OmniBook.
2. Reformat the hard drive.
3. Run OBSETUP /F from the System ROM to reload the software onto the hard drive.

For the OmniBook 430:
1. Place the hard drive into the OmniBook.
2. Reboot and press Alt then D to boot from the System ROM.
3. Reformat the hard drive.

For the OmniBook 530:
1. Place the hard drive into the OmniBook.
2. Boot from the Companion Disk or other bootable floppy disk.
3. Reformat the hard drive.
**Required Equipment**
- none

**Removal Procedure**
1. Exit all applications, including Windows.
2. Turn the OmniBook off and remove the battery and ac adapter.
3. Turn the OmniBook over, release the two latches on the bottom of the tray, and pull out the tray. See below illustration.

4. Lift the Hard Disk, Flash Card, or System ROM out of the tray.

**Replacement Procedure**
1. Reverse the above steps to replace the Hard Disk, Flash Card, or System ROM.
2. Replace the battery and ac adapter.
3. Press reset.

![Figure 7 - Removing Card Slot Tray](image-url)
Mouse
(End User Replaceable)

Required Equipment
• none

Removal Procedure
1. Press the mouse-eject button to eject the mouse.
2. Pull the mouse firmly away from the OmniBook (see below illustration). The entire mouse assembly will pull free.

![Image of removing the mouse](image.png)

Figure 8 - Removing the Mouse

Replacement Procedure
1. Place the end of the mouse “stick” into the mouse housing.
2. Slide the mouse into the slot and firmly push the mouse until it is completely flush with the side of the OmniBook.
Small Parts
(End User Replaceable)

The following small parts are all end user replaceable.

Battery Door
Push the two battery door latches away from the battery door. Remove the battery door by lifting up at the notch in the bottom case. Place the battery door, tab side first, over the battery compartment. Slide the two battery latches in place to secure the door.

Battery Door Latch
Once the battery door is removed (see above), the battery door latches will slide out of the bottom case. To replace, align the sides of the latches with the groves in the slots. Press firmly into place.

Blank Modem Door
Use a flat-blade screwdriver or similar device to press the small latch on the bottom of the blank modem door. Pull the door free of the bottom case. To replace, simply reinsert the door into the modem slot and press firmly.

Memory Door
Use a flat-blade screwdriver or similar device to pry the memory door from the bottom case. Replace by aligning the edges of the door with the slots on the bottom case. Press firmly into place.

I/O Door
To remove the I/O door, open it fully. Flex the middle of the door until the side pins clear the holes in the back case. Reverse to replace.

Rubber Feet
Place a probe or similar device between the rubber foot and the plastic of the bottom case. Pry upward to pop the foot out. To replace, firmly press the foot into the hole.

PCMCIA Card Tray
Slide the two tray latches toward each other. Pull the tray out of the card slot. If present, remove the PCMCIA card from the tray. To replace the tray, insert into the appropriate card slot. Slide the two latches away from each other to secure the tray.
Display
(HP Authorized Service Providers Only)

Required Equipment
- Appropriate ESD station
- Torx #6 screwdriver
- 5mm Hexdriver
- Two small flat tip screwdrivers (or similar prying devices)
- Probe

Removal Procedure
1. Remove the battery, ac adapter, mass storage, system card (if applicable), memory module (if installed), modem (if installed), mouse, and any installed PCMCIA accessory cards.
2. Remove the four Rubber Feet and seven Screws from the bottom case (see below illustration).

![Figure 9 - Outer Bottom Case Components](image-url)
3. Remove the I/O Door and the four standoffs located on the I/O backplane (see figure below).

Figure 10 - Backplane Standoffs

4. Two flat tip screwdrivers, or similar prying devices, are needed to remove the Top Case and Display Assemblies. Four plastic tabs hold the Top Case and Bottom Case together. Two tabs are located in each PCMCIA slot (see below illustration). Note, the screws seen in the PCMCIA slot do not need to be removed.

Figure 11 - Bottom Case Tabs
Place a prying device at a tab location between the metal and plastic of the Bottom Case (see figure below, left). Place another prying device in the PCMCIA eject button (see figure below, right). To release the tab, simultaneously twist prying device A while lifting on prying device B. Use caution with this maneuver, as the plastic tabs can break off the Bottom Case. If this occurs, the Bottom Case must be replaced.

5. Perform step four for each of the four tabs.
6. Once the Bottom Case tabs are released, the Bottom Case and Top Case are being held together only by the display cable and the two keyboard cables. Do not allow the Top Case and Bottom Case to separate at this point. The display cable and keyboard cables will be damaged if they are not properly disconnected.
7. Use a prying device to increase the separation of the Top Case and Bottom Case (see figure below). Do not separate the Top Case and Bottom Case more than 1 cm. A separation greater than 1 cm will damage the keyboard flex cables by pulling them out of the zero-force insertion connectors. The intent is to be able to view the display cable, located to the left of the ac adapter socket.
8. With the separation increased slightly, the display cable can be disconnected using a probe. **Use caution to keep the OmniBook on a level surface.** With the Top Case partially separated, small internal parts may dislodge when the OmniBook is tilted at a sharp angle. Place the probe at the base of the display cable connector between the two rows of pins. Use a rocking motion to lift the cable from the connector. See the below illustration for proper placement of the probe.

![Figure 14 - Disconnecting Display Cable](image)

9. With the display cable removed, the Top Case and Bottom Case can be opened partially to gain access to the keyboard flex cables (see below illustration). **Do not open the unit completely as this will damage the keyboard flex cables by pulling them out of the zero-force insertion connectors.** Open the zero-force insertion connectors and remove the keyboard flex cables. The Top Case can now be removed completely from the Bottom Case.
10. To separate the Keyboard from the Display, five grounding eyelets must be removed from the display posts (see below illustration). **Use caution when removing the grounding eyelets, as they can be broken off easily. If this happens, the assembly must be replaced.** To prevent the eyelets from breaking, bend the grounding eyelet tabs at the farthest point from the eyelet.

![Figure 15 - Keyboard Flex Cables](image15)

**Figure 16 - Display Grounding Eyelets**
11. To remove the Display from the Top Case, the display cable and two grounding cables must be guided through the holes in the Top Case.

Replacement Procedure
1. Guide the display posts, display cable and two grounding cables on the Display through the holes in the Top Case.
2. Replace the grounding eyelets over the display posts (see Figure 16). Use caution when replacing the grounding eyelets, as they can be broken off easily. If this happens, the assembly must be replaced.
3. Press the Display and Top Case firmly at each display post to snap the assembly in place.
4. Position the Top Case and Display Assembly over the Bottom Case and insert the two keyboard flex cables into the zero-force insertion connectors. Ensure the connectors are fully closed. Once the keyboard flex cables are secured in the connectors, do not allow them to be pulled out. This will damage the cables.
5. To reconnect the display cable, position a probe in the cable as shown in the below illustration.

![Figure 17 - Display Cable Probe Position](image)

6. Use the probe to connect the display cable into the connector as shown below. **Use caution to keep the OmniBook on a level surface.** With the Top Case partially separated, small internal parts may dislodge when the OmniBook is tilted at a sharp angle.

![Figure 18 - Reconnecting Display Cable](image)

7. With the display cable reconnected, the I/O grounding eyelets must be slid into place. **Use caution when positioning the I/O grounding eyelets as they can be broken off easily.** It is acceptable to reassemble the OmniBook with certain I/O grounding eyelets broken if there is **at least one eyelet in each of the four positions AND at least two matched sets remaining.** See Figure 19, Figure 20, Figure 21, and Figure 22 for examples.
8. Open the display and firmly press the Top Case and Bottom Case together around the entire parameter of the OmniBook. This will lock the tabs of the two cases.

9. Replace the seven screws and four standoffs and the remainder of the components.
Keyboard  
(HP Authorized Service Providers Only)

Required Equipment
• Appropriate ESD station
• Torx #6 screwdriver
• Two small flat tip screwdrivers (or similar prying devices)
• Probe

Removal Procedure
1. Follow the Display Removal Procedure to separate the Display and Top Case from the Bottom Case.
2. Once the Display is removed, the Keyboard must now be separated from the Top Case. Hold the Top Case and Keyboard Assembly exactly as shown in the below illustration.

3. Apply even upward pressure with the fingers of the left hand. At the same time use the tip of the thumb of the right hand to twist the backside of the Top Case icon panel inward and toward the keyboard. There will be a slight bending in the plastic of the Top Case. This is normal and will not damage the assembly.

Replacement Procedure
1. To replace the Keyboard, snap it into the Top Case. Ensure the entire perimeter of the Keyboard is securely snapped into place.
2. Follow the Display Replacement Procedure to replace the Display and remaining components.
Logic PCA Board
(HP Authorized Service Providers Only)

Required Equipment
- Appropriate ESD station
- Torx #6 screwdriver
- Two small flat tip screwdrivers (or similar prying devices)
- Probe

Removal Procedure
1. Follow the Display Removal Procedure to separate the Display and Top Case Assembly from the Bottom Case.
2. Remove the Eject Arms (both right and left) and Mouse Button Latch and Spring (see below illustration). Note, the Mouse Latch Spring is very small and can be misplaced easily.

Figure 23 - Logic Board PCA Removal
3. The Eject Buttons and Springs do not need to be removed to gain access to the Logic Board. However, because they can be dislodged easily, setting them aside is recommended.
4. Remove the Paw Carrier Flex Cable from the zero-force insertion slot.
5. Remove the five (5) screws from the Logic Board (see previous illustration).
6. The Logic Board can now be lifted from the Bottom Case.

Replacement Procedure
1. To replace the Logic Board, reverse the steps in the Removal Procedure. Ensure the Paw Carrier flex cable is positioned properly – the end of the cable should be folded along the holes in the cable. This folded portion then needs to be placed between the posts and guided on the bottom case.
2. Follow the Display Replacement Procedure to replace the Display and remaining components.
Paw Carrier (Paw Active)
(HP Authorized Service Providers Only)

Required Equipment
- Appropriate ESD station
- Torx #6 screwdriver
- Two small flat tip screwdrivers (or similar prying devices)
- Probe

Removal Procedure
1. Follow the Logic Board PCA Removal Procedure.
2. Remove the Mylar Mouse Shield. Refer to the below illustration for location of components.
3. The Mouse Eject Arm and Eject Arm Spring may be removed at this point for convenience.
4. Gently bend the Pivot Bracket Tabs upward. **Take caution not to break these tabs. If this occurs the Bottom Case must be replaced.**
5. Remove the Pivot Bracket.
6. Lift the Paw Carrier from the plastic posts holding it in place.

![Figure 24 - Paw Carrier Removal](image)

Replacement Procedure
1. To replace the Paw Carrier, reverse the steps in the Removal Procedure.
2. Follow the Logic Board PCA Replacement Procedure to replace the Logic Board and remaining components.
Other Components  
(HP Authorized Service Providers Only)

The below table list additional replaceable components and the disassembly procedure(s) necessary to gain access to each.

<table>
<thead>
<tr>
<th>Component</th>
<th>Disassembly Procedure(s)</th>
<th>Equipment</th>
<th>Special Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Case</td>
<td>Display Keyboard</td>
<td>Torx #6 screwdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5mm hexdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two flat tip screwdrivers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probe</td>
<td></td>
</tr>
<tr>
<td>Bottom Case</td>
<td>Display Logic PCA Board</td>
<td>Torx #6 screwdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paw Carrier</td>
<td>5mm hexdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two flat tip screwdrivers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probe</td>
<td></td>
</tr>
<tr>
<td>Mouse Button Latch</td>
<td>Display</td>
<td>Torx #6 screwdriver</td>
<td></td>
</tr>
<tr>
<td>Mouse Latch Spring</td>
<td></td>
<td>5mm hexdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two flat tip screwdrivers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probe</td>
<td></td>
</tr>
<tr>
<td>Mylar Mouse Shield</td>
<td>Display</td>
<td>Torx #6 screwdriver</td>
<td></td>
</tr>
<tr>
<td>Pivot Bracket</td>
<td></td>
<td>5mm hexdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two flat tip screwdrivers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probe</td>
<td></td>
</tr>
<tr>
<td>Eject Buttons (A&amp;B)</td>
<td>Display</td>
<td>Torx #6 screwdriver</td>
<td></td>
</tr>
<tr>
<td>Eject Arms (L&amp;R)</td>
<td></td>
<td>5mm hexdriver</td>
<td></td>
</tr>
<tr>
<td>Eject Arm Spring</td>
<td></td>
<td>Two flat tip screwdrivers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probe</td>
<td></td>
</tr>
<tr>
<td>Pivot Doors (A&amp;B)</td>
<td>Display</td>
<td>Torx #6 screwdriver</td>
<td></td>
</tr>
<tr>
<td>Pivot Door Spring</td>
<td></td>
<td>5mm hexdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two flat tip screwdrivers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probe</td>
<td></td>
</tr>
<tr>
<td>Hinge Cap</td>
<td>Display</td>
<td>Torx #6 screwdriver</td>
<td>The Hinge Caps simply slide off of the ends of the Display.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5mm hexdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two flat tip screwdrivers</td>
<td></td>
</tr>
<tr>
<td>Security Latch</td>
<td>Display</td>
<td>Torx #6 screwdriver</td>
<td>Use a probe to remove the Security Latch from the Bottom Case.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5mm hexdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two flat tip screwdrivers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Probe</td>
<td></td>
</tr>
</tbody>
</table>
# Appendix A - Technical and Resource Specifications

## Mass Storage Specifications

<table>
<thead>
<tr>
<th></th>
<th>40MB</th>
<th>105MB</th>
<th>131MB</th>
<th>Flash Disk Cards (Typical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average seek</td>
<td>&lt; 19 ms</td>
<td>19 ms</td>
<td>19 ms</td>
<td>2-3 ms</td>
</tr>
<tr>
<td>Track to Track seek</td>
<td>5 ms</td>
<td>6 ms</td>
<td>6 ms</td>
<td>NA</td>
</tr>
<tr>
<td>Average Latency</td>
<td>6.67 ms</td>
<td>6.72 ms</td>
<td>6.72 ms</td>
<td>NA</td>
</tr>
<tr>
<td>Rotational speed</td>
<td>4503 rev/m</td>
<td>4464 rev/m</td>
<td>4464 rev/m</td>
<td>NA</td>
</tr>
<tr>
<td>Data transfer rate</td>
<td>13-21 Mbits/sec</td>
<td>11.4 - 19.2 Mbits/sec</td>
<td>11.4 - 19.2 Mbits/sec</td>
<td>2.5 MBytes/sec</td>
</tr>
<tr>
<td>Buffer to disc</td>
<td>4.5 Mbytes/sec</td>
<td>4 Mbytes/sec</td>
<td>4 Mbytes/sec</td>
<td>6.0 MBytes/sec</td>
</tr>
<tr>
<td>Buffer to host</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buffer size</td>
<td>32 Kbytes static RAM</td>
<td>31 Kbytes</td>
<td>31 Kbytes</td>
<td>NA</td>
</tr>
<tr>
<td>Spindle start time</td>
<td>1 sec typical</td>
<td>&lt;2 sec maximum</td>
<td>&lt;2 sec maximum</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>3 sec maximum</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Card Services and Socket Services Version Matrix

<table>
<thead>
<tr>
<th></th>
<th>OB300</th>
<th>OB425</th>
<th>OB430</th>
<th>OB530</th>
</tr>
</thead>
<tbody>
<tr>
<td>Card Services</td>
<td>Card BIOS 1.0</td>
<td>Card BIOS 1.0</td>
<td>Card BIOS 1.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Socket Services</td>
<td>1.01a</td>
<td>1.08</td>
<td>1.14</td>
<td>2.1</td>
</tr>
</tbody>
</table>
Memory Map

Upper Memory Block Space

<table>
<thead>
<tr>
<th></th>
<th>OB300/425</th>
<th>OB430</th>
<th>OB530</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMB Space Available</td>
<td>64k</td>
<td>64k + 32k</td>
<td>112k contiguous</td>
</tr>
</tbody>
</table>

DOS Conventional Memory

<table>
<thead>
<tr>
<th></th>
<th>OB300</th>
<th>OB425</th>
<th>OB430</th>
<th>OB530</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows DOS Box (with LapLink Remote)</td>
<td>315 KB</td>
<td>315</td>
<td>505</td>
<td>404</td>
</tr>
<tr>
<td>Exit Windows (with out LapLink Remote)</td>
<td>435 KB</td>
<td>435</td>
<td>533</td>
<td>437</td>
</tr>
</tbody>
</table>
# Appendix B - Power On Self Test Codes

## Beep Codes

Beep Codes are used to identify a Power On Self Test (POST) error that occurs when the screen is not available. Once the screen is operational, diagnostic messages are reported to the screen. There are beep codes for both fatal and nonfatal system board errors.

The codes are shown as x-y-z where 2-2-1 represents 2 beeps - pause - 2 beeps - pause - 1 beep.

<table>
<thead>
<tr>
<th>Fatal Errors</th>
<th>Non-Fatal Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1-1 CPU failure</td>
<td>4-2-1 8253 timer tick test</td>
</tr>
<tr>
<td>1-1-3 CMOS failure</td>
<td>4-2-2 Shutdown/Restart sequence</td>
</tr>
<tr>
<td>1-1-4 BIOS Checksum failure</td>
<td>4-2-3 Gate A20 failure</td>
</tr>
<tr>
<td>1-2-1 8253 timer failure</td>
<td>4-2-4 Unexpected virtual mode interrupt</td>
</tr>
<tr>
<td>1-2-2 DMA setup failure</td>
<td>4-3-1 RAM test in progress</td>
</tr>
<tr>
<td>1-2-3 DMA page register failure</td>
<td>4-3-3 8253 timer channel 2 test</td>
</tr>
<tr>
<td>1-3-1 RAM refresh not verified</td>
<td>4-3-4 Time of day clock test</td>
</tr>
<tr>
<td>1-3-2 SMI RAM bad</td>
<td>4-4-1 Serial port test</td>
</tr>
<tr>
<td>1-3-3 Low 64K RAM failure</td>
<td>4-4-2 Parallel port test</td>
</tr>
<tr>
<td>1-3-4 Low 64K RAM even/odd failure</td>
<td>4-4-3 Math coprocessor test</td>
</tr>
<tr>
<td>1-4-1 Low 64K RAM address line failure</td>
<td></td>
</tr>
</tbody>
</table>
Display Codes

There are a number of Power On Self Test (POST) tests that are performed after the Beep Code tests. Failure of one or more of these tests will result in a displayed failure code (such as 0240). It is extremely important not to interpret a failure code immediately as a hardware failure. The failure should be confirmed with a clean boot. A clean boot is defined as pressing the reset button after removing all accessories (including memory cards, external floppy drive, modems, PCMCIA cards, and printers) and providing a reliable power source.

The following list explains a number of POST Display Codes. Note, not all codes are available on all models of the OmniBook.

<table>
<thead>
<tr>
<th>No Error; Self-Test Routine Passed</th>
<th>0000h</th>
<th>test passed</th>
</tr>
</thead>
<tbody>
<tr>
<td>80x86 Microprocessor Error</td>
<td>000fh</td>
<td>MPU failed self test</td>
</tr>
<tr>
<td>BIOS ROM Checksum Errors</td>
<td>0010h</td>
<td>errors relating to the BIOS rom checksums</td>
</tr>
<tr>
<td></td>
<td>0011h</td>
<td></td>
</tr>
<tr>
<td>Real Time Clock Errors</td>
<td>0110h</td>
<td>011X where X = bad register</td>
</tr>
<tr>
<td></td>
<td>0120h</td>
<td>RTC clock tick error</td>
</tr>
<tr>
<td>CMOS Errors</td>
<td>0240h</td>
<td>CMOS power bad</td>
</tr>
<tr>
<td></td>
<td>0241h</td>
<td>CMOS checksum bad</td>
</tr>
<tr>
<td></td>
<td>0280h</td>
<td>HP checksum bad</td>
</tr>
<tr>
<td></td>
<td>0282h</td>
<td>EISA checksum bad</td>
</tr>
<tr>
<td></td>
<td></td>
<td>error code 0281 was previously used</td>
</tr>
<tr>
<td>8041 Errors</td>
<td>0301h</td>
<td>did not read 0AAH command</td>
</tr>
<tr>
<td></td>
<td>0302h</td>
<td>did not respond to 0AAH command</td>
</tr>
<tr>
<td></td>
<td>0303h</td>
<td>bad Response to 0AAH command</td>
</tr>
<tr>
<td></td>
<td>0305h</td>
<td>did not respond when setting keyclick volume</td>
</tr>
<tr>
<td></td>
<td>0306h</td>
<td>did not read 0C0H command</td>
</tr>
<tr>
<td></td>
<td>0307h</td>
<td>did not respond to 0C0H command</td>
</tr>
<tr>
<td></td>
<td>0308h</td>
<td>keyboard fuse is open</td>
</tr>
<tr>
<td></td>
<td>0311h</td>
<td>did not read 060H command</td>
</tr>
<tr>
<td></td>
<td>0312h</td>
<td>did not read data for 060H command</td>
</tr>
<tr>
<td></td>
<td>0341h</td>
<td>did not read kbd interface test cmd</td>
</tr>
<tr>
<td></td>
<td>0342h</td>
<td>did not respond to kbd intrf test</td>
</tr>
<tr>
<td></td>
<td>0342h</td>
<td>add 1-4 to this to get</td>
</tr>
<tr>
<td></td>
<td>00343h</td>
<td>kbd clock line stuck low</td>
</tr>
<tr>
<td></td>
<td>00344h</td>
<td>kbd clock line stuck high</td>
</tr>
<tr>
<td></td>
<td>00345h</td>
<td>kbd data line stuck low</td>
</tr>
<tr>
<td></td>
<td>00346h</td>
<td>kbd clock line stuck high</td>
</tr>
<tr>
<td></td>
<td>0350h</td>
<td>no ACK from kbd test</td>
</tr>
<tr>
<td></td>
<td>0351h</td>
<td>bad ACK from kbd test</td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>03E0h</td>
<td>send enable-aux cmd to 8042 cmd byte failed</td>
<td></td>
</tr>
<tr>
<td>03E1h</td>
<td>8042 failed to accept write-aux-device cmd</td>
<td></td>
</tr>
<tr>
<td>03E2h</td>
<td>write-aux-device cmd not sent by 8042</td>
<td></td>
</tr>
<tr>
<td>03E3h</td>
<td>reset-aux cmd not accepted by 8042</td>
<td></td>
</tr>
<tr>
<td>03E4h</td>
<td>8042 failed to send aux-interface-test</td>
<td></td>
</tr>
<tr>
<td>03E5h</td>
<td>no reply for aux-interface-test cmd from 8042</td>
<td></td>
</tr>
<tr>
<td>03E6h</td>
<td>aux device clock line stuck low</td>
<td></td>
</tr>
<tr>
<td>03E7h</td>
<td>aux device clock line stuck high</td>
<td></td>
</tr>
<tr>
<td>03E8h</td>
<td>aux device data line stuck low</td>
<td></td>
</tr>
<tr>
<td>03E9h</td>
<td>aux device data line stuck high</td>
<td></td>
</tr>
<tr>
<td>03EAh</td>
<td>no reply for aux-reset cmd from aux</td>
<td></td>
</tr>
<tr>
<td>03EBh</td>
<td>aux failed to perform reset</td>
<td></td>
</tr>
<tr>
<td>03ECh</td>
<td>send default cmd to 8042 cmd byte failed</td>
<td></td>
</tr>
<tr>
<td>0401h</td>
<td>failed to switch to protected mode</td>
<td></td>
</tr>
<tr>
<td>0503h</td>
<td>no serial port</td>
<td></td>
</tr>
<tr>
<td>0505h</td>
<td>bad serial port</td>
<td></td>
</tr>
<tr>
<td>0543h</td>
<td>no parallel port</td>
<td></td>
</tr>
<tr>
<td>0600h</td>
<td>kbd has keys stuck</td>
<td></td>
</tr>
<tr>
<td>06XXh</td>
<td>where XX = the scan code of the stuck key</td>
<td></td>
</tr>
<tr>
<td>0702h</td>
<td>timer failed to interrupt</td>
<td></td>
</tr>
<tr>
<td>0703h</td>
<td>CPU clock too slow in SLOW speed</td>
<td></td>
</tr>
<tr>
<td>0704h</td>
<td>CPU clock too fast in SLOW speed</td>
<td></td>
</tr>
<tr>
<td>0707h</td>
<td>CPU clock too slow in FAST speed</td>
<td></td>
</tr>
<tr>
<td>0708h</td>
<td>CPU clock too fast in FAST speed</td>
<td></td>
</tr>
<tr>
<td>1100h</td>
<td>failed timer test</td>
<td></td>
</tr>
<tr>
<td>110Xh</td>
<td>where X = failed timer #</td>
<td></td>
</tr>
<tr>
<td>1200h</td>
<td>no refresh tick</td>
<td></td>
</tr>
<tr>
<td>1201h</td>
<td>refresh signal stuck low</td>
<td></td>
</tr>
<tr>
<td>13XY</td>
<td>X = slot number where error occurred</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Y = error type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1300h</td>
<td>error code displayed if fdc is not configured properly</td>
<td></td>
</tr>
<tr>
<td>1301h</td>
<td>error code if board is not ready</td>
<td></td>
</tr>
<tr>
<td>1302h</td>
<td>error code if cmos says slot is empty but a card is present in the slot</td>
<td></td>
</tr>
<tr>
<td>1303h</td>
<td>error code if cmos says slot does not have board with readable id but can read board id</td>
<td></td>
</tr>
<tr>
<td>1304h</td>
<td>error code if cmos id and board id do not match</td>
<td></td>
</tr>
<tr>
<td>1305h</td>
<td>error code if incomplete configuration bit is set</td>
<td></td>
</tr>
<tr>
<td>Memory Configuration (POST) Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000h</td>
<td>bad port or wrong memory board</td>
<td></td>
</tr>
<tr>
<td>2001h</td>
<td>bad port or wrong board type</td>
<td></td>
</tr>
<tr>
<td>2002h</td>
<td>port reports null or no SIMMs</td>
<td></td>
</tr>
<tr>
<td>2003h</td>
<td>can't mix single and double density SIMM parts</td>
<td></td>
</tr>
<tr>
<td>2005h</td>
<td>physical SIMM config. invalid 20X5h X = the memory bank the checking routine stopped at - banks are numbered 0, 1, 2, or 3</td>
<td></td>
</tr>
<tr>
<td>2006H</td>
<td>bad memory controller</td>
<td></td>
</tr>
<tr>
<td>DMA Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21XYh</td>
<td>DMA controller errors</td>
<td></td>
</tr>
<tr>
<td>XY= 0001 bbbb = register bbbb of controller 01 failed write/read test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XY= 0010 bbbb = register bbbb of controller 02 failed write/read test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>213Xh</td>
<td>DMA status register errors</td>
<td></td>
</tr>
<tr>
<td>X=0 =&gt; Controller 1’s status register failed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X=1 =&gt; Controller 2’s status register failed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22XYh</td>
<td>DMA Page register errors</td>
<td></td>
</tr>
<tr>
<td>XY= 0001 abbb = channel bbb of page register bad bit a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 = ISA (0xxh) register</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 = EISA (4xxh) register</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0010h</td>
<td>DMA page mask</td>
<td></td>
</tr>
<tr>
<td>error codes 3000-3010 were previously used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real-Mode (0-1Mb) RAM Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4000h</td>
<td>4XYZ - the interpretation of this error code is machine dependent</td>
<td></td>
</tr>
<tr>
<td>error codes 5000-5FFF were previously used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAM Address Line Independence, Parity, &amp; IO_CHK Errors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6100h</td>
<td>errors relating to the address independence test of ram</td>
<td></td>
</tr>
<tr>
<td>XX = xxxx bbbb = address line bbbb is bad (no. 0 to 19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6200h</td>
<td>errors relating to the RAM parity 620X</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td></td>
</tr>
</tbody>
</table>
| test (low 640k).  
  \( x = 64k \text{ bank no. with problem (i.e. 6204 = bank 4 is bad = address range 40000h to 4ffffh)} \) |  |
| 6300h | I/O channel check came active during write read test of protected mode ram  
  63xx = xx = 256k ram bank/block with problem |

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500h</td>
<td>shadow RAM BIOS failed</td>
</tr>
<tr>
<td>6510h</td>
<td>shadow RAM video BIOS failed</td>
</tr>
<tr>
<td>6520h</td>
<td>shadow RAM option ROM failed</td>
</tr>
<tr>
<td>65A0h</td>
<td>A000 shadow RAM test failed</td>
</tr>
<tr>
<td>65B0h</td>
<td>B000 shadow RAM test failed</td>
</tr>
<tr>
<td>65C0h</td>
<td>C000 shadow RAM test failed</td>
</tr>
<tr>
<td>65D0h</td>
<td>D000 shadow RAM test failed</td>
</tr>
<tr>
<td>65E0h</td>
<td>E000 shadow RAM test failed</td>
</tr>
<tr>
<td>65F0h</td>
<td>F000 shadow RAM test failed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 07000h | 7XYY where  
  \( X = 0 \text{ master's mask reg. failed} \)  
  \( X = 1 \text{ slave's mask reg. failed} \)  
  \( YY = \text{XOR of value read & written to the mask reg} \) |
| 07400h | IRQ 0 error |
| 07500h | IRQ 8 error |
| error code 7600 was previously used |

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8310h</td>
<td>controller fail</td>
</tr>
<tr>
<td>8311h</td>
<td>fixed disk fail</td>
</tr>
<tr>
<td>8312h</td>
<td>drive splitting failure</td>
</tr>
<tr>
<td>error codes 8001-8002, 8100, 8200, 8300 were previously used</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 9X0Z | \( X = \text{drive number (0..3 correspond to drives A:, B:, FDE#1, FDE#2)} \)  
  \( Z = \text{determined by the following equates} \) |
| 9000H | FDC input error |
| 9001H | FDC output error |
| 9002H | FDC seek error |
| 9003H | FDC recall error |
| 9005H | FDC reset error |
| 9006H | FDC wrong drive |
| 9008H | FDC no interrupt |
| 9009h | FDC track 0 error |
| error codes 90XX and 98XX were previously used |

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0a001h</td>
<td>there is no 80287 in the system</td>
</tr>
<tr>
<td>0a002h</td>
<td>problem with the 80287's registers</td>
</tr>
<tr>
<td>0a003h</td>
<td>problem with the 80287's stack</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>0a004h</td>
<td>FXCH or FCOMP didn’t work</td>
</tr>
<tr>
<td>0a005h</td>
<td>FADD didn’t work</td>
</tr>
<tr>
<td>0a006h</td>
<td>FMUL didn’t work</td>
</tr>
<tr>
<td>0a007h</td>
<td>FDIV didn’t work</td>
</tr>
<tr>
<td>0a008h</td>
<td>FSQRT didn’t work</td>
</tr>
<tr>
<td>0a009h</td>
<td>FPATAN didn’t work</td>
</tr>
<tr>
<td>0a00ah</td>
<td>invalid operation exception err</td>
</tr>
<tr>
<td>0a00bh</td>
<td>denormal operand exception error</td>
</tr>
<tr>
<td>0a00ch</td>
<td>zero divide exception error</td>
</tr>
<tr>
<td>0a00dh</td>
<td>overflow exception error</td>
</tr>
<tr>
<td>0a00eh</td>
<td>underflow error</td>
</tr>
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</table>

**Weitek Numerical Co-Processor Errors**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0af00h</td>
<td>failed to enter protected mode</td>
</tr>
<tr>
<td>0af01h</td>
<td>there is no Weitek in the system</td>
</tr>
<tr>
<td>0af02h</td>
<td>error in Weitek data register</td>
</tr>
<tr>
<td>0af05h</td>
<td>ADD didn’t work</td>
</tr>
<tr>
<td>0af06h</td>
<td>MULT didn’t work</td>
</tr>
<tr>
<td>0af0Ch</td>
<td>Zero Divide exception error</td>
</tr>
</tbody>
</table>

**Video Errors**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0b009h</td>
<td>beep if no video card is installed</td>
</tr>
<tr>
<td></td>
<td>error codes B001-B008, B100, B200, B301-B307, B400-BFFF were previously used</td>
</tr>
</tbody>
</table>

**Cache Errors**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0b308h</td>
<td>internal cache error</td>
</tr>
<tr>
<td>0b300h</td>
<td>P4 cache test failure</td>
</tr>
</tbody>
</table>

**Protected Mode RAM Errors**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0c000h</td>
<td>0CXYZ - the interpretation of this error code is machine dependent</td>
</tr>
<tr>
<td></td>
<td>error codes D000, D003-D040, D050, D1XX, EXXX, FFXX were previously used</td>
</tr>
</tbody>
</table>
Appendix C - Password Policy

If the user forgets the system password, there is a master password that will
unlock the OmniBook. The user calls Technical Support to determine this
master password as follows:

1. Support will tell the user the keys to type at the password entry screen:
   [alt][shift][f10]

2. The OmniBook generates and displays an encoded master password. This
   is displayed under the normal password entry area. At this point, this is the
   only password that will unlock the OmniBook unless the user presses [ESC] to
   remove the encoded master from the password entry screen. Then the user's
   stored password can be entered.

3. The user reads the encoded master password to Support.

4. Support runs a program that decodes the encoded password, and reads the
   decoded password (alphanumeric) to the user.

5. The user types in the decoded password.

6. OmniBook decodes the encoded master password it generated and
   compares it to the decoded password typed in by the user.

7. If the two passwords match, the OmniBook is unlocked. The forgotten
   password is automatically erased. Support can then guide the user through
   the process of entering a new password.

8. If the two passwords do not match, the previous sequence must be
   repeated until the user correctly enters a master password.

The encoded master password is an eight-character alphanumeric sequence
that the OmniBook generates at random every time the appropriate keys are
pressed in the password entry screen. Because it is generated randomly, a
master password can only be used to unlock the OmniBook once. If the user
forgets the password at another time, it will require another call to Support. (If
the user presses the appropriate keys by mistake, pressing [ESC] will allow
entering the stored password.)

The password descramble programs for the HP OmniBook PCs are protected
as HP Company Private information. They may not be copied, backed-up,
printed or distributed. There are only six official copies of each program.

In addition to the program being protected, its use is also controlled. Hewlett-
Packard and authorized support providers must ensure with written evidence
that the OmniBook that is being "descrambled" is actually in the hands of the
unit's actual and current owner. This requires a sales receipt showing the unit
serial number and owner's name, or a written statement from the owner
attesting that he or she is the owner of the unit. The statement can be a FAX
copy of the document. The fact that the unit is in the hands of an HP
representative on behalf of the customer is not evidence of ownership. In
addition, HP will not descramble a unit for any non-owner, even if it involves
law enforcement agencies. If you receive such a request, you should notify
management and HP Corporate Legal immediately. (These requests may
require a court order prior to our participation.)
Further, you must log the name, serial number and date of the running of the descramble program, and file the written backup with the log. The log and backup are subject to standard record retention process and review.

The final issue relating to descramble of passwords is that HP cannot provide information to users that would assist them in improperly descrambling a password and opening a unit.
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>OB300</th>
<th>OB425</th>
<th>OB430</th>
<th>OB530</th>
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<tbody>
<tr>
<td>0380-4060</td>
<td>Standoff</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>0515-2396</td>
<td>Screw M2x4.6mm (T6)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>F1030-00016</td>
<td>Arm Eject Mouse Spring</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>F1030-00026</td>
<td>Pivot Door Spring</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>F1030-00029</td>
<td>Spring Card Eject</td>
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<tr>
<td>F1030-00030</td>
<td>Mouse Latch Spring</td>
<td>✓</td>
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<td>✓</td>
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<td>F1030-20001</td>
<td>Mylar Mouse Shield</td>
<td>✓</td>
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<td>F1030-40013</td>
<td>Pivot Door A</td>
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<td>F1030-40016</td>
<td>Door Modem Blank</td>
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<td>F1030-40017</td>
<td>Door RAM</td>
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<td>✓</td>
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<tr>
<td>F1030-40018</td>
<td>Rubber Foot</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>F1030-40019</td>
<td>Hinge Cap</td>
<td>✓</td>
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<tr>
<td>F1030-40021</td>
<td>Mouse Button Latch</td>
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<td>F1030-40025</td>
<td>Battery Door Latch</td>
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<td>✓</td>
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<td>F1030-40033</td>
<td>Security Latch</td>
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<tr>
<td>F1030-40044</td>
<td>Eject Button A</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>F1030-40045</td>
<td>Eject Button B</td>
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<td>✓</td>
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<tr>
<td>F1030-40046</td>
<td>Eject Arm Left</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>F1030-40047</td>
<td>Eject Arm Right</td>
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<td>✓</td>
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<td>✓</td>
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<tr>
<td>F1030-40050</td>
<td>Arm Eject Mouse</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>F1030-60901</td>
<td>Paw Carrier Svc Assy</td>
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<td>✓</td>
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<tr>
<td>F1030-60904</td>
<td>LCD Display Assy (new)</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>F1030-60907</td>
<td>Logic PCA (new)</td>
<td>✓</td>
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<td>F1030-60908</td>
<td>Door I/O</td>
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<td>✓</td>
<td>✓</td>
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<td>F1030-60909</td>
<td>Pivot Bracket</td>
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<td>F1030-60910</td>
<td>Bottom Case</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>F1030-60911</td>
<td>Top Case</td>
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<td>✓</td>
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<tr>
<td>F1030-60912</td>
<td>SVC Door Battery (10 pack)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>F1030-60923</td>
<td>SVC Flash Tray Assy</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>F1030-60924</td>
<td>SVC ID Plate (10 pack)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>F1030-60925</td>
<td>SVC Short Bar (10 pack)</td>
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<td>F1030-60926</td>
<td>SVC Bat Jumper (10 pack)</td>
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<td>Keyboard USA</td>
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<td>✓</td>
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<tr>
<td>F1030-80015</td>
<td>Regulatory Label</td>
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<td>✓</td>
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<td>F1030-80018</td>
<td>Icon Label</td>
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<td>F1030-80019</td>
<td>Logo - Display</td>
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<td>F1030-80031</td>
<td>Keyboard German</td>
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<td>Keyboard French</td>
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<td>F1030-80044</td>
<td>Foam Shipping Pouch</td>
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<tr>
<td>F1030-80057</td>
<td>Keyboard Int English</td>
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<td>✓</td>
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<tr>
<td>F1030-80063</td>
<td>FFC - Theta</td>
<td>✓</td>
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<td>F1033-60901</td>
<td>Regulatory Label (10 pack)</td>
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</tr>
<tr>
<td>F1033-60902</td>
<td>SVC Icon Label 425 (10 pack)</td>
<td>✓</td>
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**Accessories**

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Note, for the most current parts list, always refer to the latest Product Support Plan.