

FRONT

PICTURE 1

September 20, 1991

This pamphlet contains procedures for isolating problems to a FRU, a Symptom-To-FRU Index, and a parts listing for the IBM Personal System/2 Model L40 SX.

This pamphlet is intended to be used with the IBM Personal System/2 *Hardware Maintenance Reference* manual (part number 15F2190, form number S15F-2190-00) and the IBM Personal System/2 *Hardware Maintenance Service* manual (part number 15F2200, form number S15F-2200-00).

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FRONT\_1 Safety Information

Refer to the *Hardware Maintenance Service General Information* pamphlet for the following information:

- General Safety
- Electrical Safety
- Safety Inspection Guide.

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*FRONT\_2.1 Trademarks and Service Marks*

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
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1.0 General Checkout

The advanced diagnostic tests are intended to test *only* IBM products. Non-IBM products, prototype cards, or modified options can give false errors and invalid system responses.

**IMPORTANT:**

- If more than one error code is displayed, diagnose the first error code first. The cause of the first error code can cause false error codes to be displayed.
- If an adapter or device consists of more than one FRU, an error code can be caused by any of the FRUs. Before replacing the adapter or device, remove the FRUs, one by one, to see if the symptoms change.
- If you hear three beeps or the icon  starts blinking, connect the AC adapter and continue the test.

+----+  
|001|  
+----+

**IS IT A POWER SUPPLY PROBLEM?**

Yes No

```
|
|
| +----+
| |002|
| +----+
| Go to Step 004.
|
```

+----+  
|003|  
+----+

Go to "Power Supply" in topic 3.0.

+----+  
|004|  
+----+

- Power-off the system and all external devices.
- Check all cables and power cords.
- Power-on all external devices.
- Insert the backup Reference Diskette.
- Power-on the system and check for the following responses:
  1. All icons in the system-status display appear once for about 1 second.

**Note:** Some icons remain on and others go off after 1 second.

2. Memory test (the number increases.)
3. One or two short beeps.
4. The Speaker icon starts blinking and continues to blink until any key is pressed.
5. A correct IBM logo screen appears.

**DID YOU RECEIVE THE RESPONSES LISTED ABOVE?**

Yes No

```
|
|
| +----+
| |005|
| +----+
| Go to "Symptom-to-FRU Index" in topic 14.0.
| - or -
| If that does not correct the problem, go to "Undetermined Problem" in
| topic 2.0 .
|
```

+----+  
|006|  
+----+

- Advance to the Main Menu.
- Press Ctrl+A, then type 0 to run the System Checkout.

**Notes:**

1. If the system has an incorrect keyboard response, go to "Keyboard" in topic 12.0.
2. If the printer has incorrect responses, go to "Printer" in topic 13.0.
3. If the external CRT display has problems such as jittering, rolling, shifting, or being out-of-focus, go to "External Display Self-Test" in topic 11.0.

**IS THE LIST OF INSTALLED DEVICES CORRECT?**

Yes No

```
|
|
```

+---+

|007|

+---+

Go to "Installed Devices List" in topic 9.0.

+---+

|008|

+---+

- Run the diagnostic tests.

**DID THE TEST IDENTIFY A FAILURE?**

**Note:** If the test stops and you cannot continue, replace the last device being tested.

Yes No

|

+---+

|009|

+---+

You may have an intermittent problem:

- Check for damaged cables and connectors.
- Reseat all adapters, drives, and modules.
- Check the power supply in use when the error is reported.
- Start an error log and run the tests multiple times.
- Check "Undetermined Problem" in topic 2.0.
- Go to "Symptom-to-FRU Index" in topic 14.0.

+---+

|010|

+---+

Go to "Symptom-to-FRU Index" in topic 14.0.

-----

2.0 *Undetermined Problem*

1. If there are no symptoms, go to "Power Supply" in topic 3.0.
2. Power-off the system.
3. Remove or disconnect one of the following:
  - a. Any non-IBM device
  - b. Any external device
  - c. Hard disk drive (Fixed disk drive)
  - d. The math coprocessor
  - e. Any other adapter or device.
4. Power-on the system.
5. If the symptom remains, repeat steps 1, 2, and 3 until you find the failing adapter or device.
6. Go to "Power Supply" in topic 3.0. If this does not solve the problem, replace the system board.



3.0 Power Supply

As the Rechargeable, Backup, and Standby batteries have a given lifespan, having spares of these batteries on hand can eliminate problems. When one of these batteries is suspected of failing, the spare can be used in its place. One or all of these batteries can be discharged if a short circuit is present in the system.

1. Replace the failing FRU if the power supply problem is caused by a short circuit.
2. Determine if one (or all) of the batteries have become discharged. Replace any discharged battery with its spare.

The test procedures for each power device are as follows:

- "Testing the AC Adapter" in topic 4.0.
- "Testing the Rechargeable Battery" in topic 5.0.
- "Testing the Backup Battery" in topic 6.0.
- "Testing the Standby Battery" in topic 7.0.
- "Testing the Quick Charger" in topic 8.0.
- None of the above. Follow the steps below.

+----+  
|001|  
+----+

**DID THE PROBLEM OCCUR ONLY WHEN USING THE AC ADAPTER?**

**Yes No**

| |  
| |  
| +----+  
| |002|  
| +----+  
| Go to Step 004.  
|

+----+  
|003|  
+----+

Go to "Testing the AC Adapter" in topic 4.0.

If "Testing the AC Adapter" does not correct the problem, replace the system board.

+----+  
|004|  
+----+

**DID THE PROBLEM OCCUR ONLY WHEN USING THE BATTERY?**

**Yes No**

| |  
| |  
| +----+  
| |005|  
| +----+  
| Go to Step 011.  
|

+----+  
|006|  
+----+

**DOES A FULLY-CHARGED BATTERY DISCHARGE QUICKLY?**

**Yes No**

| |  
| |  
| +----+  
| |007|  
| +----+  
| Go to Step 010.  
|

+----+  
|008|  
+----+

- Run advanced diagnostics for all devices using the AC adapter. Use the 'RUN TEST ONE TIME' option.

**DID ALL THE TESTS END WITHOUT AN ERROR?**

**Yes No**

| |  
| |  
| +----+  
| |009|  
| +----+  
| Follow the instructions on the screen.  
| If the instructions do not appear or do not correct the problem,  
| replace the system board.  
|

+----+  
|010|  
+----+

Go to "Testing the Rechargeable Battery" in topic 5.0.

If "Testing the Rechargeable Battery" does not correct the problem, replace the system board.

-----  
+----+

|011|

+----+

- Remove the following if installed:

- Rechargeable battery
- Standby battery
- Backup battery
- Memory module kits in connectors 1 and 2
- Internal Data/Fax Modem adapter
- Serial adapter
- Numeric keypad
- Trackpoint
- Mouse
- External keyboard
- External CRT display
- Cables to the hard disk drive
- Cables to the diskette drive
- Power cable to the LCD
- Signal cables to the LCD.

- Connect the AC adapter and power-on the system.

**DID YOU HEAR ONE LONG OR TWO SHORT BEEPS?**

**Yes No**

| |

| +----+

| |012|

| +----+

| Replace the system-status display to verify the fix. If the problem  
| still remains, put back the original system-status display, then  
| replace the system board.

+----+

|013|

+----+

- Suspect one of the options or devices. Reinstall each of the options or  
devices to the system one at a time, and power-on the system to see if  
the original problem occurs.

- Replace the last installed option or device when the problem occurs.

4.0 Testing the AC Adapter

1. If a noise can be heard from the AC adapter when it is plugged into line voltage, replace the AC adapter with a new one to isolate the problem.

If a noise still comes from the AC adapter, suspect the system unit.

If not, the AC adapter has a problem. Replace the AC adapter with the original one, then go to the next step.

2. Measure the output voltage at the plug of the AC adapter cable.

PICTURE 3

Pin	Voltage (V dc)
1	+14.3 to +15.8
2	Ground

If the voltage is not correct, replace the AC adapter.

5.0 Testing the Rechargeable Battery

1. Remove the keyboard.
2. Set the rechargeable battery in place without connecting any external power devices.
3. Measure the voltage between terminals 1 (+) and 2 (-) and note the voltage.

PICTURE 4

4. Using the AC adapter, apply external power to the computer. Make sure that a charge arrow ( PICTURE 5) appears in the system-status display.
5. Measure the voltage again between terminals 1 (+) and 2 (-).

If the voltage is not greater than the one measured in Step 3, replace the AC adapter. If the voltage is greater than the one measured in Step 3, go to the next step.

6. Remove the rechargeable battery from the computer.
7. Measure the voltage at the battery terminals.

PICTURE 6

Pin	Voltage (V dc)
1	+8.5 to +12.6
3	Ground

If the voltage is not correct, the rechargeable battery is discharged or defective. If the voltage is correct, go to the next step.

8. Using a low-power ohm meter, measure the resistance at the battery terminals between 2 (T) and 3 (-). The resistance must be 4 kilohms to 30 kilohms.

If the resistance is out of range, replace the rechargeable battery.

6.0 Testing the Backup Battery

1. Remove the keyboard and the top cover.
2. Measure the voltage at the connectors of the backup battery.

PICTURE 7

Pin	Voltage (V dc)
1	+2.8 to +3.2
2	Ground

If the voltage is not correct, the backup battery is discharged by a short circuit or is defective.

7.0 Testing the Standby Battery

**Note:** It takes approximately 48 hours to complete charging of the standby battery.

1. Remove the keyboard and the top cover.
2. Connect the AC adapter to the system.
3. Disconnect the standby battery connector from the system board and measure the voltage at the connector of the standby battery as shown.

PICTURE 8

Pin	Voltage (V dc)
1	+3.0 to +4.5
2	Ground

If the voltage is correct, perform the failing operation with a fully-charged standby battery to isolate the problem.

If the voltage is not correct, note the measured voltage and go to the next step.

4. Measure the output voltage at the connector on the system board.

PICTURE 9

If the voltage is greater than the one measured in Step 3, the standby battery is discharged or is defective.

If the voltage is the same as the one measured in Step 3 or less than +3.0 V dc, replace the standby battery. If the problem still persists, replace the system board.

8.0 *Testing the Quick Charger*

If a noise can be heard from the operating quick charger, replace it.

1. Perform steps 6 through 8 in topic 5.0 of the "Testing the Rechargeable Battery" to verify the rechargeable battery for correct operation.
2. Connect the power cord to the quick charger and the other end to an electrical outlet. Ensure that the power indicator (amber) turns on.

If the power indicator does not turn on, replace the quick charger.

3. Install the rechargeable battery.

If the charging indicator (green) does not start blinking, replace the quick charger.

9.0 Installed Devices List

The Installed Devices List shows the presence of devices on the system (see Figure 1). If an adapter or device is missing from the list, you can have one of the following conditions:

- An adapter or device is defective.
- The missing adapter or device is unrecognizable.
- The Reference Diskette does not contain the module of code required to diagnose the adapter or device. Use the adapter or device Advanced Diagnostics diskettes to test the adapter or device.

If any of the above conditions are not present, replace the system board.

```
+-----+
|
| THE INSTALLED DEVICES ARE
|
|   1 - SYSTEM BOARD
|   2 - 1920KB MEMORY
|   3 - KEYBOARD AND NUMERIC KEYPAD
|   6 - 1 DISKETTE DRIVE(S)
|   9 - PARALLEL PORT
|  11 - SERIAL PORT-A
|  12 - SERIAL PORT-B
|  17 - 1 FIXED DISK DRIVE(S)
|  50 - LCD DISPLAY
| 102 - SYSTEM STATUS DISPLAY
|
| Is the list correct (Y/N)
| ?
|
+-----+
```

Figure 1. Example of the Installed Devices List

**Notes:**

1. **2 - 1920KB MEMORY** indicates no optional memory-module kit is installed. The memory size (1920KB) increases if any memory-module kit is installed.
2. **3 - KEYBOARD AND NUMERIC KEYPAD** is changed to **3 - KEYBOARD** when no numeric keypad is attached.
3. **12 - SERIAL PORT-B** is always shown in the list even if an optional serial adapter does not actually exist. If the adapter is installed, it is automatically tested by the diagnostics program.



10.0 Memory

**Notes:**

1. Power-off the system before removing or replacing any parts.
2. Run **automatic configuration** after removing or replacing memory module kits.
3. Disregard 164 Memory-Size Errors.

```
+----+
|001|
+----+
```

- Remove the memory module kits in connectors 1 and 2 if installed. Note which memory module kit is in connector 1.
- Run the memory tests. Use the RUN TESTS ONE TIME option.

**DID THE MEMORY TESTS END WITHOUT AN ERROR?**

**Yes No**

```
|      |
|      |
|      | +----+
|      | |002|
|      | +----+
|      | Replace the system board.
|      |
+----+
```

```
+----+
|003|
+----+
```

**DID YOU REMOVE THE MEMORY MODULE KIT IN CONNECTOR 1?**

**Yes No**

```
|      |
|      |
|      | +----+
|      | |004|
|      | +----+
|      | Go to Step 007.
|      |
+----+
```

```
+----+
|005|
+----+
```

- Reinstall the memory module kit in connector 1.
- Run the memory test. Use the RUN TESTS ONE TIME option.

**DID THE MEMORY TESTS END WITHOUT AN ERROR?**

**Yes No**

```
|      |
|      |
|      | +----+
|      | |006|
|      | +----+
|      | Replace the memory module kit in connector 1.
|      | If that does not correct the problem, replace the system board.
|      |
+----+
```

```
+----+
|007|
+----+
```

**DID YOU REMOVE THE MEMORY MODULE KIT IN CONNECTOR 2?**

**Yes No**

```
|      |
|      |
|      | +----+
|      | |008|
|      | +----+
|      | Go to Step 011.
|      |
+----+
```

```
+----+
|009|
+----+
```

- Reinstall the memory module kit in connector 2.
- Run the memory test. Use the RUN TESTS ONE TIME option.

**DID THE MEMORY TESTS END WITHOUT AN ERROR?**

**Yes No**

```
|      |
|      |
|      | +----+
|      | |010|
|      | +----+
|      | Replace the memory module kit in connector 2.
|      | If that does not correct the problem, replace the system board.
|      |
+----+
```

```
+----+
|011|
+----+
```

Check if the actual memory size of the memory module is different from the displayed memory size on the screen. If the problem occurs

intermittently, run the memory tests multiple times to have an error log.  
-----

11.0 External Display Self-Test

If the display problem occurs only when using an external display, use the following instructions to correct the problem.

1. If the screen is rolling, replace the display assembly.  
If the problem remains, go to the next step.
2. Run the following display self-test:
  - a. Power-off the system and the display.
  - b. Disconnect the display signal cable from the system.
  - c. Power-on the display.
  - d. Turn the contrast control to its maximum position.
  - e. Turn the brightness control to the center detent position.
3. Check for the following conditions:
  - The screen should be white or light gray, with a black margin as described below:
    - **8503, 8512, 8513, 8514:** 2-20 mm (0.08-0.79 in.) wide on one or both sides
    - **8506:** 2-50 mm (0.08-1.97 in.) wide on the top, bottom, or both
    - **8507, 8508, 8515:** 2-20 mm (0.08-0.79 in.) wide on the top, bottom, or both.
  - The screen intensity should vary when turning the contrast and brightness controls.

If the screen differs from the above, replace the display.

If the display passes the display self-test, replace the system board.

12.0 Keyboard

- Make sure that the two keyboard cables are properly attached to the connectors on the system board.
- If you suspect a problem with any of the auxiliary input devices, replace the device. If that does not correct the problem, replace the system board.
- If the system has no response or an incorrect keyboard response, replace the keyboard. If that does not correct the problem, replace the system board.

**Note:** The following auxiliary input devices are available for Model L40 SX.

- Numeric keypad
- Trackpoint
- Mouse.

13.0 Printer

1. Using the Set Features Menu selection, turn on the power to the port where the printer cable is plugged in.
2. Make sure the printer is properly connected and powered on.
3. Run the printer self-test.

If the printer self-test does not run correctly, the problem is in the printer. Refer to the printer service manual.

If the printer self-test runs correctly, install a wrap plug on the parallel port and run the advanced diagnostics tests to determine which of the following FRUs is failing:

- System board
- Parallel adapter
- Printer cable.

14.0 Symptom-to-FRU Index

The Symptom-to-FRU Index lists symptoms and errors and the possible causes. The most likely cause is listed first and probabilities for each FRU are shown in percentage under the % column. Probabilities of less than 10% are not shown. Use this index to help you decide which FRUs you should have available when servicing a system.

If the system displays an error message, first replace FRUs listed in the error message. An X in an error message can be any number.

**Note:** If you are unable to find an error message, you have an IBM device with its own service manual or a device not supported by the advanced diagnostics tests. Refer to the manual for that device.

Symptom/Error	FRU/Action	%
One or more keys do not work. (See "Keyboard" in topic 12.0 before replacing any FRUs.)	<b>Keyboard</b> System Board	80 20
No beep and a blank or unreadable display during POST. (See "Power Supply" in topic 3.0 before replacing any FRUs.)	<b>System Board</b> Any options or devices Power source when failing Speaker	50 30
No beep with a normal display during POST.	<b>Speaker</b> System Board	60 40
Continuous beep	<b>System Board</b> Any options or devices	70 30
Repeating short beeps. (See "Keyboard" in topic 12.0 before replacing any FRUs.)	<b>System Board</b> Keyboard	80 20
Dew Point or Temperature icon appears with one long and one short beep.	<b>System Board</b> Power source when failing	90
One long and one short beep.	<b>System Board</b> Power source when failing	90
One long and two short beeps.	<b>System Board</b> Power source when failing	90
One short beep and a blank, unreadable, or flashing display with no external display attached.	<b>Display (LCD)</b> System Board Power source when failing	50 40
One short beep and Diskette Prompt or a program load from the hard disk drive or unable to read diskette(s).	<b>Diskette Drive</b> System Board Diskette Drive Cable	60 30
Two short beeps and a blank display.	<b>System Board</b> Any options or devices	90
External display problems. (See "External Display Self-Test" in topic 11.0 before replacing any FRUs.)	<b>External Display</b> System Board	90

Incorrect memory size during POST. (See "Memory" in topic 10.0 before replacing any FRUs.)	<b>System Board</b> Memory Module Kits	80 20
System hang-up or intermittent hang-up.	<b>System Board</b> Hard Disk Drive Math Coprocessor Replace the last device being tested  (See "Undetermined Problem" in topic 2.0.)	50 20 20
The system does not suspend or resume. (Check the Suspend icon to make sure of the failure.)	<b>System Board</b> System-Status Display Assembly Any options or devices	80
The system does not power off.	<b>System-Status Display Assembly</b> System Board	60 40
Real-time clock inaccurate.	<b>System Board</b>	100
Printer problems.	See "Printer" in topic 13.0.	
Serial or parallel port device problems.	<b>Device</b> Cable System Board	80
ICON is incorrectly blinking or stays on.	<b>System Board</b> Related Device	70 30
ICON incorrectly remains off, but diagnostics runs without an error.	<b>System Board</b> Related Device System-Status Display Assembly	70 20
Internal Data/Fax Modem does not communicate with a remote modem or a fax.	<b>Check if the setup data defined by a communication software is suitable for the communication.</b> Internal Data/Fax Modem  (Make sure <i>Data/Fax Modem power</i> option is set to on in the Set Features program.)	
101, 103, 107, 111	<b>System Board</b> Hard Disk Drive Diskette Drive Any attached devices	90
109, 110, 121 (See "Memory" in topic 10.0 before replacing any FRUs.)	<b>Memory Module Kits</b> System Board	60 40
122, 124	<b>System Board</b> Auxiliary Input Device Keyboard	70 20
123	<b>Hard Disk Drive</b> System Board Hard Disk Drive Cable	70 20
141	<b>System-Status Display Assembly</b>	

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	System Board	80 20
149	<b>System Board</b> Hard Disk Hard Disk Drive Cable	90
161	<b>Run Automatic configuration</b> Backup Battery System Board	90
162	<b>Run Automatic configuration, then check the installed devices using the View configuration utility.</b> System Board Diskette Drive Hard Disk Drive Math Coprocessor Diskette Drive Cable Hard Disk Drive Cable	40
163	<b>Time and Date Set?</b> System Board	100
164 (See "Memory" in topic 10.0 before replacing any FRUs.)	<b>Run Automatic configuration</b> Memory Module Kits System Board	70 30
199	<b>See "Installed Devices List"</b> in topic 9.0.	
1XX (not listed above)	<b>System Board</b>	100
211 (on POST)	<b>System Board</b> Memory Module Kits	90
221 (on POST)	<b>System Board</b>	100
204, 214, 224, 240	<b>System Board</b> Memory Module Kits	90
25X	<b>System Board</b>	100
2XX (not listed above) (See "Memory" in topic 10.0 before replacing any FRUs.)	<b>Memory Module Kits</b> System Board	90
301, 302	<b>System Board</b> Keyboard	90
303	<b>System Board</b> Numeric Keypad Keyboard	70 20
304, 305 (See "Keyboard" in topic 12.0 before replacing any FRUs.)	<b>Keyboard</b> System Board Numeric Keypad	60 30
306, 310	<b>System Board</b>	100
308	<b>Numeric Keypad</b>	100
3XX (not listed above) (See "Keyboard" in topic 12.0 before replacing any FRUs.)	<b>System Board</b> Auxiliary input device Keyboard	70 20



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602, 653, 654	<b>Defective diskette</b> Diskette Drive System Board	60 30
655, 660, 661	<b>System Board</b>	100
6XX (not listed above)	<b>Diskette Drive</b> System Board Diskette Drive Cable	60 30
7XX	<b>Math Coprocessor</b> System Board  (IBM does not supply the math coprocessor.)	80 20
9XX	<b>System Board</b> Any parallel Device Communication Cable	90
1107	<b>Communication Cable</b>	100
11XX	<b>System Board</b> Any serial adapter Communication Cable	90
1207	<b>Communication Cable</b>	100
12XX	<b>Any serial adapter</b> System Board Any serial device Communication Cable	50 40
1705-1707, 1709, 1711, 1718-1720, 1730, 1732	<b>Hard Disk Drive</b>  (Reformatting the hard disk can recover from the problem.)	100
17XX (not listed above)	<b>Hard Disk Drive</b> System Board Hard Disk Drive Cable	80
24XX	<b>System Board</b>	100
5001 through 5016	<b>System Board</b>	100
5017 through 502X	<b>System Board</b> LCD Display Assembly	70 30
503X	<b>External CRT Display</b> System Board	50 50
8601, 8602	<b>Pointing Device</b> System Board Numeric Keypad	60 30
8604	<b>System Board</b>	100
86XX (not listed above)	<b>System Board</b> Pointing Device Numeric Keypad	70 20
101XX	<b>Internal Data/Fax Modem</b> System Board Any serial device	90
102XX	<b>System-Status Display Assembly</b> System Board Related device	70 20

If problem remains, see "Undetermined Problem" in topic 2.0.

Symptom-to-FRU Supplemental Numbers:

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15.0 How To Use This Parts Catalog

**SIMILAR ASSEMBLIES:** If two assemblies contain a majority of identical parts, they are broken down on the same list. Parts peculiar to one or the other of the assemblies are listed separately and identified by description.

**AR:** (As Required) indicates that the quantity is not the same for all machines.

**R:** (Restricted) indicates that the part has a restricted availability.

**INDENTURE** is marked by a series of dots located before the parts description. The indenture indicates the relationship of a part to the next higher assembly. For example:

**Indenture Relationship of Parts**

- (No dot) Main Assembly
- (One dot) □ Detail parts of a main assembly
- (One dot) □ Subassembly of the main assembly
- (Two dots) □ □ Detail part of a one-dot sub-assembly
- (Two dots) □ □ Subassembly of a one-dot sub-assembly

Subtopics

15.1 Example of a Parts List

15.1 Example of a Parts List

**System Unit**

Cover	72X8501
Front Bezel/Logo (R)	72X8502
Miscellaneous Hardware Kit (AR)	72X8580
□ Knob Assembly, Hard Disk Drive Support Structure	
□□ Knob	
□□ Washer	

PICTURE 10

Index	System Unit	
1	Display Assembly, LCD	79F0984
1	Display Assembly, LCD	95F4878
2	System-Status Display Assembly	79F0991
3	Top Cover	79F3893
4	Memory Module Kit: 2MB 4MB 8MB	79F1002 79F1003 79F1004
5	Diskette Drive	79F0983
6	Math Coprocessor, 80387SX (**)	79F1006
7	Bottom Cover	79F3884
8	System Board	79F0985
	<b>Note:</b> Two types of system boards can have two LCD signal-cable connectors (J14 and J15) positioned opposite on the system board. Be sure to plug the cables extending from the LCD into each right-size connector on the system board.	
8	System Board	95F4879
9	Speaker	79F0989
10	Bezel, Blank	79F3888
10	Bezel, Modem	79F3889
10	Bezel, Serial Adapter	79F3868
	Bezel, Diskette Drive	79F3892
11	Backup, Lithium	79F0986
12	Hard Disk Drive: 60MB 80MB	79F1009 95F4714
13	Shield, Battery	79F3891
14	Standby	79F0992
15	Door, Bus Connector	79F3886
16	Door, Battery	79F3887
17	Door, I/O Connector	79F3885
18	Rechargeable Battery	79F0994
18	Rechargeable Battery (Switzerland only)	79F3881
	Miscellaneous Kit: Screws Rubber bumpers Modem clip Caps on bottom cover	79F3894
	Carrying Case	79F3869
	Cable, Diskette Drive	79F0987

	Cable, Hard Disk Drive	79F0988
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**Options and Adapters**

	AC Adapter	79F0993
	Quick Charger	79F0995
	Data/Fax Modem Adapter (U.S./Canada only)	79F0996
	Communication cable (for 79F0996)	94X1540
	Serial Adapter	79F0998

**Keyboard**

	Arabic	1396825
	Belgian	1396812
	Canadian French	1396810
	Danish	1396813
	Dutch	1396817
	French	1396814
	German	1396815
	Greek	1396826
	Hebrew	1396827
	Icelandic	1396828
	Italian	1396816
	Norwegian	1396818
	Portuguese	1396819
	Spanish	1396820
	Spanish Speaking	1396811
	Swedish / Finish	1396821
	Swiss / French	1396822
	Swiss / German	1396823
	Turkish	1396829
	U.K. English	1396824
	U.S. English	1396181

**Numeric Keypad and Mouse**

	U.S.	1396182
	Arabic	1396806
	Canadian French	1396800
	French	1396801
	German	1396802
	Greek	1396807
	Italian	1396803
	Spanish	1396804

IBM PS/2 Model L40 SX HMS  
Parts

Swedish / Finland	1396805
Swiss / French	1396809
Swiss / German	1396808
Trackpoint for Model L40 SX	1397090

**8503 Monochrome Display**

110/120 V ac	68X3045
220/240 V ac (Northern Hemisphere)	68X3046
220/240 V ac (Southern Hemisphere)	72X7878
Tilt/Swivel Stand	68X3061

**8506 Monochrome Display**

110/125 V ac (US/Canada)	39F8087
110/125 or 200/240 V ac (Northern Hemisphere)	39F8088
110/125 or 220/240 V ac (Southern Hemisphere)	39F8089

**8507 Monochrome Display**

110/120 or 220/240 V ac (Universal Model)	6247808
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**8508 Monochrome Display**

110/125 V ac (U.S./Canada)	6247838
110/125 or 200/240 V ac (Northern Hemisphere)	39F8067
110/125 or 220/240 V ac (Southern Hemisphere)	39F8068

**8512 Color Display**

110/120 V ac	61X8924
220/240 V ac (Northern Hemisphere)	61X8928
220/240 V ac (Southern Hemisphere)	61X8927
Tilt/Swivel Stand	61X8925

**8513 Color Display**

110/120 V ac	68X3088
220/240 V ac (Northern Hemisphere)	72X7870
220/240 V ac (Southern Hemisphere)	72X7877
Tilt/Swivel Stand	68X3061

**8514 Color Display**

110/120 V ac	75X5945
220/240 V ac (Northern Hemisphere)	75X5946

220/240 V ac (Southern Hemisphere)	75X5947
Tilt/Swivel Stand	75X5907

**8515 Color Display**

110/120 V ac	38F3905
220/240 V ac (Northern Hemisphere)	38F3912
220/240 V ac (Southern Hemisphere)	38F3913
A01 (Japan, Taiwan, and Korea)	38F3914

**Power Cords**

PICTURE 11

Index	Power Cords	
	Warning: Use the power cord certified for your country.	
1	Power Cord, AC Adapter, for: Colombia, U.S., Venezuela	62X1045
1	Power Cord, AC Adapter, for: Japan	65F0031
2	Power Cord, AC Adapter, for: Hong Kong, Singapore, U.K.	6952356
3	Power Cord, AC Adapter, for: France, Germany, Spain	6952320
4	Power Cord, AC Adapter, for: Italy	72X8539
5	Power Cord, AC Adapter, for: Australia, New Zealand	6952311
5	Power Cord, AC Adapter, for: Paraguay	72X8508
6	Power Cord, AC Adapter, for: Denmark	72X8566
7	Power Cord, AC Adapter, for: Israel	72X8564
8	Power Cord, AC Adapter, for: Pakistan	72X8556
9	Power Cord, AC Adapter, for:	72X8536



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**Supplemental Parts:**

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