



Personal System/2
Model 55 SX
Hardware Maintenance
Service

June 1991

This pamphlet contains procedures for isolating problems to a FRU, a Symptom-to-FRU Index, and a parts listing for all models of the IBM Personal System/2 Model 55.

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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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 you do not receive any error codes, see if the error symptom is listed in the "Symptom-to-FRU Index" on page 16.
- If an adapter or device consists of more than one FRU, an error code may 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.
- The LAN administrator is responsible for making the diagnostic program available to the servicer of medialess systems. Instructions for the LAN administrator are in the *LAN Reference*.
- For carry-in service on medialess systems, a diskette drive compatible to the IBM 1.44MB Diskette Drive (FRU No. 33F8211) and a diskette-drive cable compatible to the IBM Diskette-Drive Cable (FRU No. 27F4912) can be temporarily installed to run the diagnostic program using the Reference Diskette.

Note: Before returning the system to the customer, be sure to remove the diskette drive from the Installed Devices List; then remove the diskette drive and cable from the system.

001

- Power-off the system and all external devices.
- Check all cables and power cords.

(Step **001** continues)

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001 (continued)

- Make sure there are no diskettes in the drives.
- Power-on all external devices.
- Power-on the system.

Note: Watch the screen for a POST error code. If a POST error code occurs, write down the POST error code, then press F1 to continue.

ARE ANY EXTERNAL SCSI DEVICES ATTACHED TO THE SYSTEM?

Yes No

002

Go to Step 005.

003

DID THE POWER-GOOD LIGHT ON ALL OF THE EXTERNAL DEVICES COME ON?

Yes No

004

Go to the external devices service pamphlet.

005

DID YOU RECEIVE A POST ERROR CODE?

Yes No

006

Continue with Step 018 on page 5.

007

IS THE FIRST POST ERROR CODE WITHIN THE RANGE OF 02080000 190I TO 02410000 190I?

Yes No

008

Write down the error code, then continue with Step 018 on page 5.

009

(Step 009 continues)

009 (continued)

ARE YOU SERVICING A LOCAL AREA NETWORK STATION?

Yes No

010

Insert the Reference Diskette and go to Step 013.

011

Gain access to the diagnostic program from the file server before running the diagnostic tests.

CAN YOU GAIN ACCESS TO THE DIAGNOSTIC PROGRAM FROM THE FILE SERVER?

Yes No

012

If the failure occurs during Remote Program Load (RPL), replace the network adapter.

— or —

Go to "Symptom-to-FRU Index" on page 16.

013

- Power-on the system and verify that the "Enable" and "Disable" settings are correct. For more information, go to "Enable and Disable Settings" on page 12. If you receive a warning on the screen regarding the "Keep" and "Remove" settings, follow the instructions on the screen before continuing.

DID YOU HAVE TO CORRECT ANY OF THE ENABLE AND DISABLE SETTINGS?

Yes No

014

Go to "Symptom-to-FRU Index" on page 16. Before replacing any SCSI devices, verify there are no duplicate SCSI ID settings.

015

- Remove the Reference Diskette, if installed.
- Restart the system.

(Step 015 continues)

015 (continued)

DID THE POST THE ERROR REMAIN?

Yes No

016

If you suspect another problem, or want to run system checkout, continue with Step 022.

017

Go to "Symptom-to-FRU Index" on page 16.

018

ARE YOU SERVICING A LOCAL AREA NETWORK STATION?

Yes No

019

Insert the Reference Diskette and go to Step 022.

020

Gain access to the diagnostic program from the file server before running the diagnostic tests.

CAN YOU GAIN ACCESS TO THE DIAGNOSTIC PROGRAM FROM THE FILE SERVER?

Yes No

021

If the failure occurs during Remote Program Load (RIPL), replace the network adapter.

— or —

If you received a POST error code or suspect a problem, go to "Symptom-to-FRU Index" on page 16.

022

– Press Ctrl + Alt + Del and check for the following responses:

1. One or two short beeps.

Note: If the Not-Ok Icon appears, press F1 to continue.

2. IBM logo screen appears.

(Step 022 continues)

022 (continued)

DID YOU RECEIVE THE RESPONSES LISTED ABOVE?

Yes No

023

Go to "Symptom-to-FRU Index" on page 16.

024

Note: Do not run configuration.

- Advance to the Main Menu.
- Press Ctrl + A and run system checkout.

Notes:

1. If the system has incorrect keyboard responses, go to "Keyboard" on page 14.
2. If the printer has incorrect responses, go to "Printer" on page 14.
3. If the display has problems such as jittering, rolling, shifting, or being out-of-focus, go to "Display Self-Test" on page 12.
4. A minimum of 512KB of memory must be active to load the diagnostic tests.

IS THE LIST OF INSTALLED DEVICES CORRECT?

Yes No

025

Go to "Installed Devices List" on page 7.

026

- Run the diagnostic tests.

DID THE TESTS IDENTIFY A FAILURE?

Note: If the test stops and you cannot continue, replace the last device being tested. If the problem remains, go to "Undetermined Problem" on page 10.

Yes No

027

Note: If you noticed an error symptom or if you received any POST error codes when the system was powered on, go

to "Symptom-to-FRU Index" on page 16.

You may have an intermittent problem:

- Check for damaged cables and connectors.
- Reseat all adapters, drives, and modules.
- Check the system unit fan for proper operation.
- Start an error log and run the tests multiple times.

028

Follow the action described on the screen. If that does not correct the problem go to "Symptom-to-FRU Index" on page 16.

Installed Devices List

If an adapter or device is missing from the list, you may have one of the following conditions:

- Your Reference Diskette does not contain the module of code required to support that device.
- The missing device is a 5.25-Inch 360KB External Diskette Drive adapter or another unrecognizable adapter.
- The missing device is defective.
- An adapter is defective.

If none of these conditions apply, go to "Undetermined Problem" on page 10.

Automatic Configuration

Warning: A customized setup configuration (other than default settings) may exist on the system you are servicing. Running Automatic Configuration may alter those settings. Note the current configuration settings (using the View Configuration option) and verify that the settings are in place when service is complete. (For more information about configuration, refer to the *Hardware Maintenance Reference* manual.)

Device Type

Run **Automatic Configuration** (see "Automatic Configuration" on page 7 before continuing) and determine which type of device, SCSI or non-SCSI, is missing from the Installed Devices List, in Advanced Diagnostics, then continue with the following steps. (If SCSI and non-SCSI devices both are missing, go to "Undetermined Problem" on page 10.)

SCSI Devices

The adapter supporting the missing device may be defective. If more than one SCSI adapter is installed, isolate them one at a time.

1. Power-off the system and disconnect all internal and external cables attached to the SCSI adapter.
2. Terminate each SCSI adapter, as required.

Warning: See "Automatic Configuration" on page 7 before continuing.

3. Power-on the system and run **Automatic Configuration**. If the adapter is not on the Installed Devices List, in Advanced Diagnostics, the adapter is defective. If the adapter is on the list, run the adapter diagnostic tests.
4. If the adapter fails the tests, replace it. If the adapter passes the tests, a different adapter may be defective.
5. Reconnect the cables to the SCSI adapter, then terminate the adapter, as required.
6. Go to "Undetermined Problem" on page 10 to find the problem.

Non-SCSI Devices

Replace the missing device. If that does not correct the problem, go to "Undetermined Problem" on page 10.

Note: If the number of diskette drives shown on the list is incorrect, an error can occur during the tests. Restart the system and select **View Configuration** from the **Set Configuration** menu. Verify that the drive information on the **View Configuration** menu is correct, then run the Diagnostic tests.

Power-On Password

To service a system with an active, unknown power-on password, reverse the speaker connector located on the bus adapter. The change in the connector position is detected, and the password is removed. It is not necessary to move the connector back to its previous position after service.

Power-on the system and leave the assembly shorted until completion of POST. This deactivates the password.

Undetermined Problem

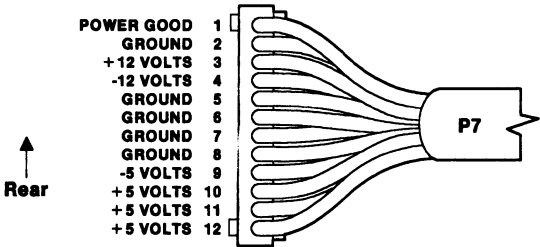
1. Power-off the system.
2. Remove or disconnect one of the following adapters or devices.
 - Non-IBM devices
 - Any external device (modem, printer, or mouse)
 - Any adapter (except the Network Adapter and Bus Adapter)
 - Math coprocessor
 - Fixed disk or diskette drive
 - Memory module kit.
3. Power-on the system.
4. If the symptom remains, repeat steps 1, 2, and 3 until you find the failing adapter or device.
5. If all adapters and devices have been removed or replaced and the problem remains, check the power supply voltages. If the voltages are correct, replace the system board. If the voltages are not correct, replace the power supply.
6. If you are servicing a Local Area Network Station and the problem remains, replace the network adapter. If that does not correct the problem, replace the bus adapter.

Power Supply Voltages / Fan

If the voltages are not correct, or if the fan is not running, replace the power supply.

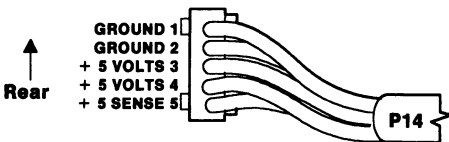
Power-off the system. Remove the power supply connectors P7 and P14 from the system board. Power-on the system and check for the voltages listed below. If the voltages are not correct, check the power cord for continuity. If the power cord is good, replace the power supply.

Power Check (P7)



V dc Minimum	V dc Maximum	-Lead Pin	+Lead Pin
+4.8	+5.2	P7-5	P7-10
+4.5	+5.4	P7-9	P7-5
+11.5	+12.6	P7-5	P7-3
+10.8	+12.9	P7-4	P7-8

Power Check (P14)



V dc Minimum	V dc Maximum	-Lead Pin	+Lead Pin
+4.8	+5.2	P14-1	P14-3
+4.8	+5.2	P14-1	P14-4
+4.8	+5.2	P14-2	P14-5

Enable and Disable Settings

To verify that the "Enable" and "Disable" settings are correct, select **Set and View SCSI Device Configuration** from the **Set Configuration** menu, and determine if there are any "Presence Error Reporting" devices listed. The settings must be as follows:

- Devices connected to the system must be set to "Enabled."
- Devices listed but not connected must be set to "Disabled."

Change the settings by pressing the F5 key; then save them by pressing the F10 key.

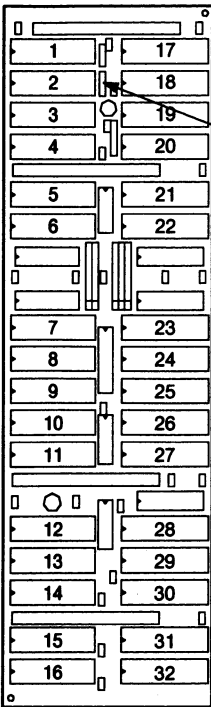
Display Self-Test

1. Power-off the system unit and display.
2. Disconnect the display signal cable.
3. Power-on the display.
4. Turn the contrast to its maximum position.
5. Turn the brightness control to the center detent position.

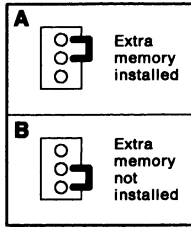
The screen should be white with a black margin, as described below (some shading may occur near the edges). If the screen differs, replace the display. If the display passes the test, replace the display adapter or system board.

- **8503, 8512, 8513, 8514:** 2 – 20 mm (0.08 – 0.79 in.) wide on one or both sides.
- **8506:** 2 – 35 mm (0.08 – 1.38 in.) wide on the top, or bottom, or both.
- **8507, 8508, 8515:** 2 – 20 mm (0.08 – 0.79 in.) wide on the top, or bottom, or both.
- **8604:** 2 – 20 mm (0.08 – 0.79 in.) wide, on all four sides.

Display Adapter 8514/A



Jumper Link



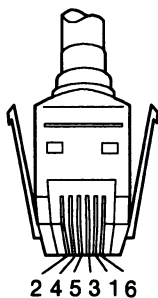
Error Code	Module No.	Error Code	Module No.
007440XX	31	007460XX	16
007441XX	30	007461XX	27
007442XX	29	007462XX	26
007443XX	28	007463XX	25
007444XX	22	007464XX	24
007445XX	21	007465XX	23
007446XX	18	007466XX	20
007447XX	17	007467XX	19
007448XX	32	007468XX	15
007449XX	14	007469XX	11
007450XX	13	007470XX	10
007451XX	12	007471XX	9
007452XX	6	007472XX	8
007453XX	5	007473XX	7
007454XX	2	007474XX	4
007455XX	1	007475XX	3

Keyboard

001

- Power-off the system.
- Disconnect the keyboard cable from the keyboard.
- Power-on the system and check the keyboard cable connector for the voltages shown. All voltages are $\pm 5\%$.

Pin	Voltage (Vdc)
1	+ 5.0
2	0 (Not Used)
3	Ground
4	+ 5.0
5	+ 5.0
6	0 (Not Used)



ARE THE VOLTAGES CORRECT?

Yes No

002

Possible failing FRUs are:

- Fuse, or keyboard cable
- System board.

003

Replace the keyboard.

Printer

1. Make sure the printer is properly connected and powered-on.
2. 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 diagnostic tests to determine which of the following FRUs is failing:

- System board
- Parallel adapter
- Printer cable.

Memory

Note: Power-off the system before removing or replacing parts.

00011000 indicates a system board parity check error.

Remove the memory module kit in connector 2. If the problem remains, replace the kit in connector 1; if that does not solve the problem, replace the system board.

If the problem disappears after removing the memory module kit from connector 2, replace the kit; if that does not solve the problem, replace the system board.

00011100 indicates a memory expansion adapter parity check error.

Remove the memory expansion adapters from the expansion slots one at a time until you no longer get a 111 error. (If all of the adapters have been removed and you still have a 00011100 error, replace the system board.)

Remove the memory expansion kits from the adapter that was removed last. Install the kits one at a time until the failure returns. Replace the kit that caused the error to return; if that does not solve the problem, replace the adapter.

00021500, 00021600 indicates a failing system board memory module kit.

If the error message does not indicate the location of the failing kit, follow the procedure for a 00011000 error, described above.

Symptom-to-FRU Index

Error symptoms and the FRUs that might be responsible for the failure are listed in the "Symptom-to-FRU index." The most-likely failing FRU is listed first. If you are unable to correct the problem using this index, go to "Undetermined Problem" on page 10.

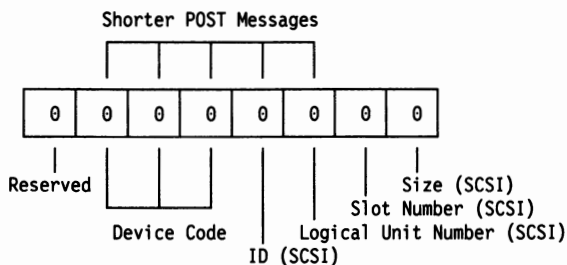
If the system displays an error message and gives an incorrect audio response, start with the FRUs listed for that error message. An "X" in an error message can be any number.

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

How to Read POST Error Messages

POST error messages are displayed on the screen as three, four, five, or eight digits. The error messages that can be displayed as shorter POST messages are highlighted in this index. Some digits will represent different information for SCSI errors versus non-SCSI errors.

The following example shows which digits display the shorter POST error messages and also defines the SCSI information in an eight-digit error message.



All SCSI devices must be set to a different SCSI ID. Duplicate SCSI ID settings can generate a false error message. Use the SCSI ID to determine whether the error message is coming from an internal or an external device.

Symptom/Error	FRU/Action
One or more keys do not work and system is otherwise functional	Keyboard Keyboard Cable System Board
Changing colors (See "Display Self-Test" on page 12 before replacing any FRUs.)	Display
No beep and system is otherwise functional.	Speaker Assembly System Board
No beep and system is nonfunctional (See "Undetermined Problem" on page 10 before replacing any FRUs.)	System Board Power Supply Memory Module Kit
Continuous beep (See "Display Self-Test" on page 12 before replacing any FRUs.)	Power Supply System Board
Repeating short beeps	Keyboard (Stuck Key) System Board Power Supply
One long and one short beep	Display Adapter System Board Power Supply
One long and two short beeps (See "Display Self-Test" on page 12 before replacing any FRUs.)	Display Adapter System Board Power Supply Display
One or two short beeps and a blank or unreadable display (See "Display Self-Test" on page 12 before replacing any FRUs.)	System Board Display Power Supply
One short beep and load diskette prompt or a program loads from the fixed disk drive	Diskette Drive (If Installed) System Board Power Supply Diskette Drive Cable
BASIC Screen appears (See "Undetermined Problem" on page 10 before replacing any FRUs.)	System Board
000110XX (See "Memory" on page 15 before replacing any FRUs.)	System Board Memory Module Kit System Board

Symptom/Error	FRU/Action
000111XX (See "Memory" on page 15 before replacing any FRUs.)	Memory Expansion Kit Memory Expansion Adapter
000112XX, 000113XX	Any Adapter System Board
000161XX	Real-Time Clock Module System Board
000162XX	Any Device
000163XX, 000164XX, 000165XX See "Installed Devices List" on page 7 before replacing any FRUs.	2KB NV-RAM Module (if installed) Real-Time Clock Module System Board
000166XX	Any Adapter
0001XXXX (not listed above)	System Board
000201XX (See "Memory" on page 15 before replacing any FRUs.)	System Board Memory Module Kit or Memory Expansion Adapter or Memory Expansion Kit System Board
00020XXX (slot 0)	System Board Memory Module Kit System Board
00020XXX (slot 1 - 3)	Adapter Memory Memory Adapter Bus Adapter
000215XX, 000216XX, 000221XX (See "Memory" on page 15 before replacing any FRUs.)	System Board Memory System Board
000301XX, 000302XX	Keyboard Keyboard Cable System Board
000303XX	System Board Keyboard Keyboard Cable
000304XX	System Board Keyboard
000305XX	Fuse Keyboard Cable
000401XX	System Board
000602XX	Defective Diskette

Symptom/Error	FRU/Action
0006XXXX	Diskette Drive System Board Diskette Drive Cable
0007XXXX	Math Coprocessor System Board
0001102XX, 0001106XX	System Board Any Serial Device
0001107XX	Communications Cable System Board
0001108XX, 0001109XX	System Board Any Serial Device
00011XXXX (not listed above)	System Board
001202XX, 001206XX	Dual Async Adapter/A Any Serial Device Bus Adapter
001207XX	Communications Cable Dual Async Adapter/A Bus Adapter
001208XX, 001209XX	Dual Async Adapter/A Any Serial Device Bus Adapter
0012XXXX (not listed above)	Dual Async Adapter/A System Board Bus Adapter
0014XXXX (See "Printer" on page 14 before replacing any FRUs.)	Printer System Board
001780XX, 001781XX, 001782XX	Fixed Disk Bus Adapter System Board
001790XX, 001791XX	Fixed Disk Fixed Disk Cable Bus Adapter
0017XXXX (not listed above)	Fixed Disk Fixed Disk Cable Bus Adapter System Board Power Supply
0024XXXX	System Board
002401XX, 002402XX (changing colors)	Display System Board
002401XX, 002402XX (no changing colors)	System Board Display

Symptom/Error	FRU/Action
002409XX	Display System Board
002410XX	System Board
004611XX, 004630XX	Multiport/2 Interface Board Multiport/2 Adapter
004612XX, 004613XX, 004640XX, 004641XX	Memory Module Package Multiport/2 Adapter
004650XX	Multiport/2 Interface Cable
0046XXXX	Multiport/2 Adapter Multiport/2 Interface Board Memory Module Package
006402XX, 006405XX, 006405XX, 006411XX, 006412XX, 006416XX, or 006417XX,	Ethernet Adapter/A System Board
006418XX, 006419XX, 006420XX, 006421XX, 006422XX, 006423XX, 006424XX, or 006425XX	Contact the LAN Administrator
0064XXXX (not listed above)	Ethernet Adapter/A System Board
00744XXX, 00745XXX 00746XXX, 00747XXX (See "Display Adapter 8514/A" on page 13 to determine failing module.)	8514 Memory Module
0074XXXX (not listed above)	Display Adapter 8514/A System Board Bus Adapter
007509XX	Display XGA Display Adapter/A
007510XX	XGA Display Adapter/A Video-Memory Module System Board
008601XX, 008602XX	Pointing Device
008603XX	System Board
008604XX	System Board Pointing Device
0096XXXX	SCSI Adapter (with cache) Any SCSI Device System Board
010002XX, 010006XX	Multiprotocol Adapter/A Any Serial Device Bus Adapter

Symptom/Error	FRU/Action
010007XX	Communications Cable Multiprotocol Adapter/A Bus Adapter
010008XX, 010009XX	Multiprotocol Adapter/A Any Serial Device Bus Adapter
0100XXXX (not listed above)	Multiprotocol Adapter/A System Board Bus Adapter
010102XX, 010106XX, 010108XX, 010109XX	Modem Adapter/A Any Serial Device Bus Adapter
0101XXXX (not listed above)	Modem Adapter/A System Board Bus Adapter
010480XX, 010481XX, 010482XX, 010483XX	Fixed Disk Drive System Board Fixed Disk Cable Bus Adapter
010490XX 010491XX	Fixed Disk Drive Fixed Disk Cable Bus Adapter
0104XXXX (not listed above)	Fixed Disk Drive System Board Fixed Disk Cable Bus Adapter Power Supply
0107XXXX	5.25 inch External Diskette Drive 5.25 inch External Diskette Drive Adapter/A
0112XXXX	SCSI Adapter (without cache) Any SCSI Device System Board
012102XX, 012106XX, 012108XX, 012109XX	300/1200/2400 Modem/A Any Serial Device
0121XXXX (not listed above)	300/1200/2400 Modem/A System Board
0147XXXX, 0152XXXX	XGA Display Adapter/A Video-Memory Module System Board
016500XX	6157 Tape Attachment Adapter Bus Adapter
016520XX	6157 Streaming Tape Drive
016540XX	6157 Streaming Tape Drive 6157 Tape Attachment Adapter

Symptom/Error	FRU/Action
0166XXXX, 0167XXXX, (For diagnostic information refer to the Token-Ring Network Adapter/A service information.)	Token-Ring Network Adapter/A System Board
0194XXXX	Memory-module package on the 2-8MB 80286 Memory Expansion Option 2-8MB 80286 Memory Expansion Option System Board
0200XXXX	Image Adapter/A Video-Memory Module System Board
0208XXXX (Verify there are no duplicate SCSI ID settings.)	Any SCSI Device
0210XXXA 0210XXXB 0210XXXC 0210XXXD 0210XXXE 0210XX XU (If the failing device is an external device, go to the external devices service pamphlet.)	SCSI Fixed Disk Drive (60MB) SCSI Fixed Disk Drive (80MB) SCSI Fixed Disk Drive (120MB) SCSI Fixed Disk Drive (160MB) SCSI Fixed Disk Drive (320MB) SCSI Fixed Disk Drive (Size Undetermined) SCSI Adapter SCSI Cable
0215XXXX (If the failing device is an external device, go to the external devices service pamphlet.)	SCSI CD-ROM Drive SCSI Adapter SCSI Cable

How To Use This Parts Catalog

INDEX REFERENCE NUMBERS: Refer to the illustrations for index reference numbers listed in the left margin of the parts listing.

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.

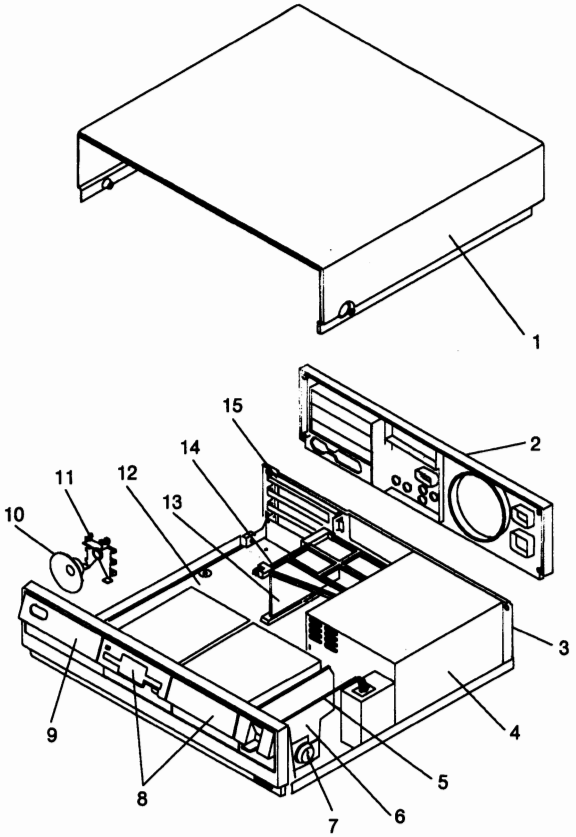
AR: (As Required) indicates that the quantity is not the same for all machines.

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

INDENTURE the 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 dot)	• • Detail part of a one-dot subassembly
(Two dot)	• • Subassembly of a one-dot subassembly

System Overview



Parts

Trade 433-4763

Index	System Unit	
1	Top Cover	27F4172
2	Rear Cover	27F4670
9	Front Cover with Logo (for Model 55 SX) (R) (exchange basis only)	27F4677
9	Front Cover with Logo (for Model 55 LS) (R) (exchange basis only)	33F8230
3	Base Frame Assembly (R)	27F4167
4	Power Supply/Fan Assembly	27F4166
5	Power Switch Link	27F4168
6	Drive Cradle	27F4170
7	Keylock Assembly	27F4169
8	Diskette Drive Bezel (AR)	27F4230
8	Blank Bezel (AR)	72X7534
8	Fixed Disk Drive Bezel 30MB and 40MB (AR)	27F4177
8	Fixed Disk Drive Bezel 60MB, 80MB, and 160MB (AR)	27F4675
10	Speaker	27F4672
11	Speaker/Adapter Guide (without speaker)	27F4673
12	System Board (for Model 55 SX) • 3 Amp. Fuse • Real-Time Clock Module	27F4667 72X8561 8509237
12	System Board (for Models 55 LS LT0 and LE0) • 3 Amp. Fuse • Real-Time Clock Module • 2KB NV-RAM Module 1MB Memory Module Kit 2MB Memory Module Kit 4MB Memory Module Kit 80387SX** Math Coprocessor, 16 MHz 2KB NV-RAM Module	57F3003 72X8561 8509237 64F0722 90X8624 90X8625 87F9980 33F8160 64F0722
13	Bus Adapter (for Model 55 LS)	64F3732
13	Bus Adapter (for Model 55 SX)	27F4666
14	Bus Adapter Support	27F4674
15	Adapter Support Panel	27F4671
	Adapter Bracket	27F4674
	Drive Grounding Bracket	33F8156
	Miscellaneous Parts Kit • Expansion Slot Screw (Qty 1) • Cover Screw (Qty 1)	33F8174
	Keyboard Cable Assembly 0.9 m (3 ft.)	61X8898

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Diskette Drive

1.44MB Diskette Drive(1/3 High)	33F8211
• Diskette Drive Slide (for 33F8211)	64F0156
Diskette Drive Bezel	27F4230
Diskette 1 Drive Cable	27F4912
Diskette 2 Drive Cable	34F0000
5.25-Inch Diskette Drive:	
360KB External (4869-001)	72X6759
360KB External (4869-501)	72X6768
1.2MB External (4869-002)	15F7993
1.2MB External (4869-502)	15F7994
5.25-Inch Diskette Drive Adapter/A	15F7996

Fixed Disk Drive

30MB Fixed Disk Drive Assembly	64F4146
40MB Fixed Disk Drive Assembly	56F8896
60MB Fixed Disk Drive Assembly	85F0049
80MB Fixed Disk Drive Assembly	56F8892
160MB Fixed Disk Drive Assembly	56F8893
Fixed Disk Drive Bezel	
30MB and 40MB (AR)	27F4177
Fixed Disk Drive Bezel	
60MB, 80MB, and 160MB (AR)	27F4675
Fixed Disk Drive Cable	27F4669

Options and Adapters

Display Adapter 8514/A	1887971
• Memory Module (for 1887971)	1887708
XGA Display Adapter/A	75X5886
Video-Memory Module (for 75X5886)	75X5894
Image Adapter/A	07F2508
Video-Memory Module (512KB) (for 07F2508)	07F4401
Video-Memory Module (1MB) (for 07F2508)	07F4403
Dual Async Adapter/A	34F0008
Internal 60MB Adapter/A	30F5273
Adapter Cable (34 pin)	34F2990
Tape Cover Plate	30F5275
Formatted Blank Tape	30F5277
Multiprotocol Adapter/A	90X8995
Realtime Interface CoProcessor Multiport/2	09F1888
• 8-port RS232-C Electrical Interface Board	09F1889
• 4-port RS232-C Electrical Interface Board	09F1957
• 4 + 4-port RS232-C RS422-A Electrical Interface Board	09F1890
• 512KB Memory Module Package	16F2267
Multiprotocol Interface Cable (for 09F1888)	00F5524
Screen Reader Keypad	1393515
Screen Reader Keypad Cable	72X8537
SCSI Adapter/A With Cache	85F0000
Terminator, External (for 85F0000)	33F8464
Terminator, Internal (for 85F0000)	34F0016
SCSI Adapter/A Without Cache	85F0002
Terminator (for 85F0002)	57F2058
Token-Ring Network Adapter/A	83X7488
RPL Module (for 83X7488)	83X9180
Token-Ring 16/4 Adapter/A	16F1144
Token-Ring 16/4 Adapter/A with RPL Module	53F7747
Ethernet Adapter/A	64F0217
0-8MB Expanded Memory Adapter/A	1497253
• 256KB Memory Module (for 1497253)	1497256
• 1MB Memory Module (for 1497253)	74X8637
2-8MB 80286 Memory Expansion Option	15F8292
• 1MB Memory Module (for 15F8292)	90X8624
• 2MB Memory Module (for 15F8292)	90X8625
300/1200 Modem Adapter/A	34F0006
Communications Cable (for 34F0006)	8285985
300/1200/2400 Modem Adapter/A	65X1253
Communications Cable (for 65X1253)	94X1540
3270 Connection	74F3458
36/38 Emulation Adapter	69X6281
6157 Tape Adapter	92X1459
80387SX Math Coprocessor, 16 MHz	33F8160

Keyboard / Mouse

Belgian	1392012
Canadian French	1392011
Danish	1392005
Dutch	1392013
French	1392000
German	1392001
Italian	1392002
Norwegian	1392007
Portuguese	1392008
Spanish	1392003
Spanish / Latin	1392015
Swedish	1392009
Swiss / French / German	1392010
U.K. English	1392004
U.S. English	1392090
Keyboard Cable	61X8898
Mouse	61X8923
Mouse Ball and Pop-Off Retainer	33F8461
Mouse Ball and Twist-Off Retainer	33F8462

8503 Monochrome Display (with Tilt/Swivel Stand)

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 (with Tilt/Swivel Stand)

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 (with Tilt/Swivel Stand)

110/120 or 220/240 V ac (Universal Model)	6247808
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8508 Monochrome Display (with Tilt/Swivel Stand)

110/125 V ac (US/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 (without Tilt/Swivel Stand)

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 (with Tilt/Swivel Stand)

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 (without Tilt/Swivel Stand)

110/120 V ac	75X5945
220/240 V ac (Northern Hemisphere)	75X5946
220/240 V ac (Southern Hemisphere)	75X5947
Tilt/Swivel Stand	75X5907

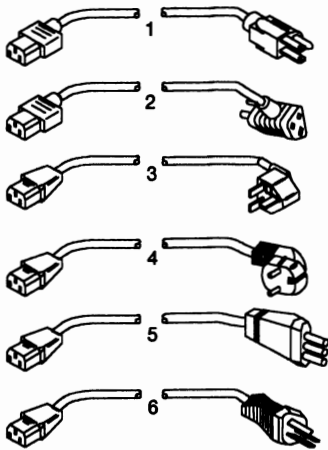
8515 Color Display (with Tilt/Swivel Stand)

90/137 V ac (U.S. and Canada)	38F3911
90/265 V ac (Northern Hemisphere)	38F3912
180/265 V ac (Southern Hemisphere)	38F3913
90/137 V ac (Japan, S.Korea, Taiwan)	38F3914

8604 Monochrome Display (with Tilt/Swivel Stand)

110/120 V ac	6398267
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Power Cords



Index Power Cords

Warning: Use the power cord certified for your country.

1	Power Cord, Displays (except 8514), for: Colombia, U.S., Venezuela	68X3071
2	Power Cord, System Unit, for: Colombia, U.S., Venezuela	62X1045
3	Power Cord, System Unit, for: Hong Kong, Singapore, U.K.	8529341
4	Power Cord, System Unit, for: France, Germany, Spain	8529281
5	Power Cord, System Unit, for: Italy	8529282
6	Power Cord, System Unit, for: Australia, New Zealand	8529284

Tools and Miscellaneous

Tri-Connector Wrap Plug	72X8546
Wrap Plug (for 6157 Tape Attachment Adapter)	59X4115
Wrap Plug (for Token-Ring Network Adapter/A)	6165899
Wrap Plug (for Ethernet Adapter/A)	85F0036
BNC T-Connector	84F8207
BNC 50-ohm Terminator	85F0037
Wrap Plug (for Real-time Interface Co-Processor Multiport/2) 78-pin	16F2478
Wrap Plug (for Multiport Interface Cable) Direct Connect 25-pin, ports 0 and 1	6425494
Wrap Plug (for Multiport Interface Cable) Direct Connect 25-pin, ports 2 through 7	09F1799
Plastic Envelope (For Wrap Plug)	6138013
Data Migration Facility	61X8936
Tool (For Key Cap Removal)	6110464
Snap Tool (For Snap Removal)	72X8547
Shipping Carton (Type 8555)	83X9431

Supplemental Parts:

Safety Information

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

- General Safety
- Electrical Safety
- Safety Inspection Guide.

Third Edition (June 1991)

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