

FRONT

PICTURE 1

September 1990

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 65 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) and the IBM Personal System/2 *Hardware Maintenance Service* manual (part number 15F2200, form number S15F-2200).

Part Number 84F8549

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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.

Second Edition (September 1990)

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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.

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Subtopics

- 1.1 How to Diagnose Combined FRUs
- 1.2 How to Use Error Messages

1.1 How to Diagnose Combined FRUs

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.

1.2 How to Use Error Messages

Use the error codes displayed on the screen to diagnose failures. 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 there is not an error code on the screen, see if the error symptom is listed in the Symptom-To-FRU Index.

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

- Power-off the system and all external devices.
- Check all cables and power cords.
- 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. Write down any POST error codes that are displayed, 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 014.
|
```

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

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

Yes No

```
|
|
| +----+
| |008|
| +----+
| Continue with Step 014.
|
```

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

- Start the Reference Diskette and verify that the "Enable" and "Disable" settings are correct. For more information, go to "Enable, Disable Settings" in topic 6.0. 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

```
|
|
| +----+
| |010|
| +----+
| Go to "Symptom-to-FRU Index" in topic 12.0. Before replacing any
| SCSI devices, verify there are no duplicate SCSI ID settings.
|
```

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

+----+

- Remove the Reference Diskette and restart the system.

DID THE ERROR REMAIN?

Yes No

| |
| |
| +----+
| |012|
| +----+
| If you suspect another problem, or want to run system checkout,
| continue with Step 014.

+----+

|013|

+----+

Go to "Symptom-to-FRU Index" in topic 12.0.

+----+

|014|

+----+

- Insert your Reference Diskette.

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

1. One or two short beeps.
2. IBM logo screen appears.

DID YOU RECEIVE THE RESPONSES LISTED ABOVE?

Yes No

| |
| +----+
| |015|
| +----+
| Go to "Symptom-to-FRU Index" in topic 12.0.
| - or -
| If that does not correct the problem, go to "Undetermined Problem" in
| topic 4.0.

+----+

|016|

+----+

- Advance to the Main Menu.

- Press Ctrl+A and run system checkout.

Notes:

1. If the system has incorrect keyboard responses, go to "Keyboard" in topic 9.0.
2. If the printer has incorrect responses, go to "Printer" in topic 10.0.
3. If the display has problems such as jittering, rolling, shifting, or being out-of-focus, go to "Display Self-Test" in topic 7.0.
4. A minimum of 512KB of memory must be active to load the diagnostic tests.

IS THE LIST OF INSTALLED DEVICES CORRECT?

Yes No

| |
| +----+
| |017|
| +----+
| Go to "Installed Devices List" in topic 2.0.

+----+

|018|

+----+

- 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.

Yes No

| |
| +----+
| |019|
| +----+
| You may have an intermittent problem:

| **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" in topic 12.0.

| Check for damaged cables and connectors.

IBM PS/2 Model 65 SX HMS
How to Use Error Messages

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

+---+

|020|

+---+

Follow the action described on the screen. If that does not correct the problem go to "Symptom-to-FRU Index" in topic 12.0.

2.0 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.

Subtopics

- 2.1 Automatic Configuration
- 2.2 Device Type
- 2.3 SCSI Devices
- 2.4 Non-SCSI Devices

2.1 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.)

2.2 Device Type

Run **Automatic Configuration** (see "Automatic Configuration" in topic 2.1 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" in topic 4.0.)

2.3 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 the adapter, as required.

Warning: See "Automatic Configuration" in topic 2.1 before continuing.

3. Power-on the system and run **Automatic Configuration**. If the adapter is not on the Installed Devices List, 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" in topic 4.0 to find the problem.

2.4 Non-SCSI Devices

The missing device is defective. If that does not correct the problem, go to "Undetermined Problem" in topic 4.0.

Note: If the number of diskette drives shown on the list is incorrect, an error can occur during the tests. Restart the system and verify that the drive information on the **Set Configuration** menu is correct, then continue testing.

3.0 *Power-On Password*

To service a system with an active, unknown, power-on password, do the following:

1. Power-off the system.
2. Unplug the speaker connector, turn it over (180°) and plug it back in.
3. Power-on the system.

4.0 *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
 - Fixed-disk or diskette drive
 - Memory-module kits
 - Math coprocessor
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 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.

5.0 Power Supply Voltages / Fan

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

Vdc Minimum	Vdc Maximum	-Lead Pin	+Lead Pin
-9.0	-15.0	2	9
+9.0	+15.0	2	3
+3.7	+6.2	2	1
+3.7 *	+6.2 *	B	D
+9.0 *	+15.0 *	C	A

* Disconnect the 15-pin connector from the system board before taking this reading.

PICTURE 2

6.0 Enable, 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.

7.0 *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 that the display is attached to.

- 8503, 8512, 8513, 8514, 8515:** 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:** 2-20 mm (0.08-0.79 in.) wide on the top, or bottom, or both.

8.0 Display Adapter 8514/A

PICTURE 3

9.0 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 $\pm 5\%$.

PICTURE 4

ARE THE VOLTAGES CORRECT?

Yes No

```
| |
| |
| +----+
| |002|
| +----+
| Possible failing FRUs are:
|  Keyboard cable
|  Fuse
|  System board.
|
```

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

Replace the keyboard.

- or -

If the symptom remains, replace the system board.

10.0 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.

11.0 Memory

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

00011000 indicates a system board parity check error. Replace the memory modules. If that does not solve the problem, replace the system board.

00011100 indicates a memory adapter parity check error. Remove the memory adapters one at a time until the error disappears, then replace the last memory adapter removed.

201 memory errors display as **AAAAAA** BBBB 201. Use the following table to identify the possible failing FRUs.

AAAAAA	Possible FRUs
000000 to 1FFFFF	1. System Board Memory 2. System Board
200000 and above	1. Memory on an adapter 2. Memory adapter

12.0 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.

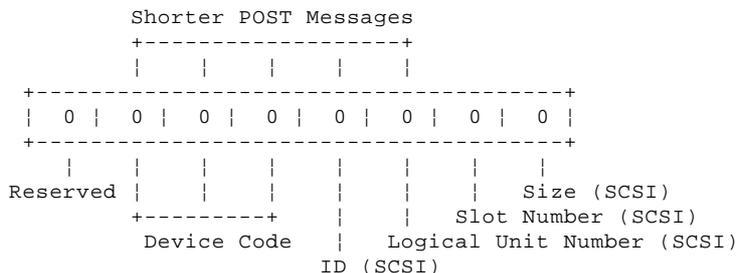
If the system displays an error message and gives an incorrect audio response, start with the FRUs listed for that error message. An "X" in an error message can be any number.

Note: If an error message is not listed, there is a device installed that requires an additional diskette or service manual. Refer to the diskette or service 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 are 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	Keyboard Keyboard Cable System Board
Changing colors	Display
No beep and the system is otherwise functional (See "Undetermined Problem" in topic 4.0 before replacing any FRUs.)	Speaker System Board
No beep and the system is nonfunctional (See "Undetermined Problem" in topic 4.0 before replacing any FRUs.)	System Board Power Supply Speaker Memory Module Kit
Continuous beep (See "Undetermined Problem" in topic 4.0 before replacing any FRUs.)	Power Supply System Board
Repeating short beeps (See "Undetermined Problem" in topic 4.0 before replacing any FRUs.)	Keyboard (stuck key) System Board Power Supply
One long and one short beep (See "Undetermined Problem" in topic 4.0 before replacing any FRUs.)	Display Option Adapter System Board Power Supply
One long and two short beeps (See "Display Self-Test" in topic 7.0 before replacing any FRUs.)	Display Option Adapter System Board Power Supply Display
One or two short beeps and a blank	Display Option Adapter

or unreadable display (See "Display Self-Test" in topic 7.0 before replacing any FRUs.)	System Board Display Power Supply
One short beep and load diskette icon or a program loads from the fixed disk drive	Diskette Drive System Board Power Supply Diskette Drive Cable
Printer Problem (See "Printer" in topic 10.0 before replacing any FRUs.)	Printer System Board Option Adapter Printer Cable
000110XX (See "Memory" in topic 11.0 before replacing any FRUs.)	System-Board Memory-Module Kit System Board
000111XX (See "Memory" in topic 11.0 before replacing any FRUs.)	Memory Expansion Kit Memory Expansion Adapter
000112XX, 000113XX (See "Undetermined Problem" in topic 4.0 before replacing any FRUs.)	Any Adapter System Board
000161XX	Real-Time Clock Module System Board
000162XX (Verify the "Enable, Disable Settings" in topic 6.0 are correct before replacing any FRUs.)	Any Adapter System Board
000163XX, 000164XX, 000165XX (If setting the configuration does not solve the problem, see "Installed Devices List" in topic 2.0.)	Set Configuration/Features 2KB NV-RAM Module System Board
000166XX	Any Adapter
0001XXXX (not listed above)	System Board
000201XX (See "Memory" in topic 11.0 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
XXXXXX XXXX 201 (See "Memory" in topic 11.0 before replacing any FRUs.)	System Board Memory System Board Adapter Memory Memory Adapter
000215XX, 000216XX, 000221XX (See "Memory" in topic 11.0 before replacing any FRUs.)	System Board Memory System Board
000301XX, 000302XX (See "Keyboard" in topic 9.0 before replacing any FRUs.)	Keyboard Keyboard Cable
000303XX (See "Keyboard" in topic 9.0 before replacing any FRUs.)	System Board Keyboard Keyboard Cable
000304XX (See "Keyboard" in topic 9.0 before replacing any FRUs.)	System Board Keyboard
000305XX (See "Keyboard" in topic 9.0)	Fuse Keyboard Cable

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Symptom-to-FRU Index

before replacing any FRUs.)	
000401XX	System Board
000602XX	Defective Diskette
0006XXXX	Diskette Drive System Board Diskette Drive Cable Power Supply Fixed Disk Drive
0007XXXX	Math Coprocessor System Board
001102XX, 001106XX	System Board Any Serial Device
001107XX	Communications Cable System Board
001108XX, 001109XX	System Board Any Serial Device
0011XXXX (not listed above)	System Board
001202XX, 001206XX	Dual Async Adapter/A Any Serial Device
001207XX	Communications Cable Dual Async Adapter/A
001208XX, 001209XX	Dual Async Adapter/A Any Serial Device
0012XXXX (not listed above)	Dual Async Adapter/A System Board
0014XXXX (See "Printer" in topic 10.0 before replacing any FRUs.)	Printer System Board
002401XX, 002402XX (changing colors)	Display System Board
002401XX, 002402XX (no changing colors)	System Board Display
002409XX	Display
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 Interface Board Memory Module Package
00744XXX, 00745XXX, 00746XXX, 00747XXX (See "Display Adapter 8514/A" in topic 8.0 to determine failing module.)	8514/A Memory Module
0074XXXX (not listed above)	Display Adapter 8514/A System Board
008601XX, 008602XX	Pointing Device
008603XX	System Board
008604XX	System Board Pointing Device

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Symptom-to-FRU Index

0096XXXX	SCSI Adapter (with cache) SCSI Device System Board
010002XX, 010006XX	Multiprotocol Adapter/A Any Serial Device
010007XX	Communications Cable Multiprotocol Adapter/A
010008XX, 010009XX	Multiprotocol Adapter/A Any Serial Device
0100XXXX (not listed above)	Multiprotocol Adapter/A System Board
010102XX, 010106XX, 010108XX, 01010 9XX	Modem Adapter/A Any Serial Device
0101XXXX (not listed above)	Modem Adapter/A System Board
0107XXXX	1.2MB 5.25 Inch Internal/External Drive 5.25 Inch Adapter
0112XXXX	SCSI Adapter (without cache) SCSI Device System Board
016500XX	6157 Tape Attachment Adapter
016520XX	6157 Streaming Tape Drive
016540XX	6157 Streaming Tape Drive 6157 Tape Attachment Adapter
0166XXXX, 0167XXXX (For diagnostic information see "IBM Token-Ring Network Adapter/A Installation and Testing Instructions".)	Token-Ring Network Adapter System Board
0194XXXX	Adapter Memory Module Memory Adapter System Board
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	SCSI CD-ROM Drive SCSI Adapter

Supplemental Symptom-to-FRU Index:

13.0 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

14.0 System Overview

PICTURE 5

15.0 Parts

Index System Unit Exterior

1	Handle	72X8569
2	Bezel/Logo (R)(Exchange Only)	72X8549
4	1/3 High Diskette-Drive Bezel	34F0030
5	Base Foot	72X8565
9	Cover	64F0160
15	System Base	64F0159
	<input type="checkbox"/> 6 mm Screw	
	<input type="checkbox"/> Flat Washer	
	<input type="checkbox"/> Spring Washer (Rear Foot)	
	<input type="checkbox"/> Detent (Front Foot)	
	Blank Diskette Drive Bezel	72X8535
	Cover-Lock Assembly	72X8557
	Cover-Lock Kit	72X8572
	<input type="checkbox"/> Ring (Break-Away)	
	<input type="checkbox"/> Pawl	
	Feature Blank Bezel (for CD-ROM Drive)	72X8560

Index System Unit Interior

3	Diskette Drive (see Diskette Drives)	
6	Speaker	57F1437
7	Fixed-Disk Drive Support Structure	72X8527
8	Adapter(see Options and Adapters)	
10	Fixed-Disk Drive (see Fixed Disk Drives)	
11	Fixed-Disk Drive Support Structure Bracket	72X8563
12	1/3-High Diskette Drive Support Structure	34F0032
13	System Board, 16 MHz	57F1444
14	Power Supply/Fan Assembly	57F1600
	Fuse (3 Amp.)	72X8561
	Real-Time Clock Module	8509237
	1MB Memory Module Kit	90X8624
	2MB Memory Module Kit	90X8625
	4MB Memory Module Kit	87F9980
	2KB NV-RAM Module	64F0722
	80387SX (***) Math Coprocessor, 16 MHz	33F8160

Miscellaneous Kits

Label Kit	72X6674
<input type="checkbox"/> Cover Blank Label	
<input type="checkbox"/> Power-Supply Warning Label	
<input type="checkbox"/> Weight Warning Label	
Misc Parts Kit (System)	72X8578
<input type="checkbox"/> Handle Screw	
<input type="checkbox"/> Air Baffle Push Nut	
<input type="checkbox"/> 4 mm Screw	
<input type="checkbox"/> Fixed Disk Drive Ground Wire	
Misc Parts Kit (Options)	72X8579
<input type="checkbox"/> Adapter-Slot Cover	
<input type="checkbox"/> Adapter-Handle Bracket	
<input type="checkbox"/> Cable Clip	
Expansion Kit	
Misc Parts Kit (Hardware Kit)	72X8580
<input type="checkbox"/> Knob Assembly, Fixed Disk Drive Support Structure	
<input type="checkbox"/> Knob	
<input type="checkbox"/> Washer	
<input type="checkbox"/> Insert Screw	
<input type="checkbox"/> Captive Cover Screw, Retainer, Washer	

Diskette Drives

Diskette Drive Bezel	34F0030
1/3-High 1.44MB Diskette Drive	33F8211
<input type="checkbox"/> Diskette Drive Slide	64F0156
5.25-Inch Diskette Drive:	
360KB External (4869-001)	72X6759
360KB External (4869-501)	72X6768
360KB Feature Group with Adapter	72X6758
1.2MB Internal	15F6912
1.2MB External (4869-002)	15F7993
1.2MB External (4869-502)	15F7994
1.2MB Adapter/A	15F7996
Diskette Drive Cables (see DASD Cables)	

Fixed Disk Drives

60MB Fixed Disk Drive (SCSI)	6128296
80MB Fixed Disk Drive (SCSI)	56F8854
120MB Fixed Disk Drive (SCSI)	6128298
160MB Fixed Disk Drive (SCSI)	56F8851
320MB Fixed Disk Drive (SCSI)	85F0011
Fixed Disk Drive Slide Tray	34F0031
Fixed Disk Drive Cables (see DASD Cables)	

CD-ROM

Internal CD-ROM Drive	81F7930
Terminators (two) (for 81F7930)	59F3530
Rail Kit (for 81F7930)	34F0041
Ground Wire - Included in Misc Parts Kit	72X8579
Power Cable (single)	72X8521
Signal Cable (single)	34F0043

DASD Cables

PICTURE 6

Index DASD Cables

1	1/3 High Diskette Drive Cable	34F0036
2	Power Cable (single)	72X8521
2	Power Cable (dual)	34F0034
3	Fixed Disk Drive Ground Wire, see Miscellaneous Parts Kit (System)	
4	1.2MB Internal Cable (for 15F6912)	15F6914
5	(SCSI) Signal Cable (supports 2 devices)	64F0154
5	(SCSI) Signal Cable (supports 3 devices)	34F0035
5	(SCSI) Signal Cable (supports 4 devices)	64F0155

Options and Adapters

Display Adapter 8514/A	1887971	
□ Memory Module (for 1887971)	1887708	
Dual Async Adapter/A	34F0008	
Fixed Disk Drive Adapter (ESDI)	15F6865	
Fixed Disk Drive Adapter (ST506)	72X8540	
Internal Tape Backup Unit	30F5273	
Adapter Cable (with 34 pin Berg Connector)		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)	34F0025	
SCSI Adapter/A Without Cache	85F0002	
Terminator, (for 85F0002)	57F2870	
Token-Ring Network Adapter/A	83X7488	
Token-Ring 16/4 Adapter/A	16F1144	
Token-Ring Adapter/A RPL	83X9180	
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	74F3464	
36/38 Emulation Adapter	69X6281	
6157 Tape Adapter	92X1459	
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	

Parts

□ 1MB Memory Module (for 15F8292)	90X8624
□ 2MB Memory Module (for 15F8292)	90X8625
80286 Memory Expansion Adapter	72X8532
□ Memory Module (for 72X8532)	61X8906
80387SX Math Coprocessor, 16 MHz	33F8160

Keyboards / 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
101/102-Key Keyboard Cable	72X8537
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 Vac	68X3045
220/240 Vac (Northern Hemisphere)	68X3046
220/240 Vac (Southern Hemisphere)	72X7878
Tilt/Swivel Stand	68X3061

8506 Monochrome Display (with Tilt/Swivel Stand)

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

8507 Monochrome Display (with Tilt/Swivel Stand)

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

110/125 Vac (US/Canada)	6247838
110/125 or 200/240 Vac (Northern Hemisphere)	39F8067
110/125 or 220/240 Vac (Southern Hemisphere)	39F8068

8512 Color Display (without Tilt/Swivel Stand)

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

8513 Color Display (with Tilt/Swivel Stand)

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

8514 Color Display (without Tilt/Swivel Stand)

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

8515 Color Display (with Tilt/Swivel Stand)

Model 001 (90/137 Vac, U.S. and Canada)	
with tilt/swivel and packaging set	07F6650
Model 002 (90/265 Vac, Universal voltage)	
with tilt/swivel and packaging set	07F6652
Model A01 (90/265 Vac) with	

Parts

tilt/swivel and packaging set	07F6651
Shipping material:	16F0188
<input type="checkbox"/> Box	
<input type="checkbox"/> Front cushion	
<input type="checkbox"/> Rear cushion	
Power cable, 1.8 (6 ft), U.S.	38F3968
Alternative to part number 38F3968 above	6952301

Tools and Miscellaneous

Tri-Connector Wrap Plug	72X8546
Wrap Plug	59X4115
(for 6157 Tape Attachment Adapter)	
Wrap Plug	6165899
(for Token-Ring Network Adapter/A)	
Wrap Plug (for Realtime Interface Coprocessor 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 8565)	72X8591

Power Cords

PICTURE 7

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

Supplemental Part Numbers:

Printed in the United States of America

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