

FRONT

PICTURE 1

**IBM Personal System/2
Communications Cartridge**

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IBM PS/2 Communications Cartridge HML

Communications Cartridge Hardware Maintenance Service

FRONT_1 Communications Cartridge Hardware Maintenance Service

FRONT_2 Checkout Procedure

Note: This supplement is intended to be used with the *Hardware Maintenance Service* manual.

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.

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|001|

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DOES THE PROBLEM OCCUR ONLY WITH THE COMMUNICATIONS CARTRIDGE ATTACHED?

Yes No

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|002|

+---+

Follow the instructions described under "General Checkout" in the *Hardware Maintenance Service* manual.

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|003|

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DOES THE PROBLEM APPEAR TO BE A POWER SUPPLY FAILURE?

Yes No

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|004|

+---+

Go to Step 006.

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|005|

+---+

Check the output voltage of the AC adapter for the communications cartridge. (See "Checking the AC Adapter" in topic FRONT_3.) If the AC adapter is correct, go to Step 006

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|006|

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CAUTION:

Be sure to turn off the system power before the communications cartridge is removed from or attached to the system unit.

- Make sure that the communications cartridge is properly connected to the system unit.

- Reseat the adapter in the communications cartridge.

DOES THE PROBLEM STILL EXIST?

Yes No

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|007|

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A faulty connection can be the cause of failure. Check for damage to the connectors of the following and replace the FRU if needed.

Adapter

Communications cartridge

System expansion port

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|008|

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Go to "Communications Cartridge Symptom-to-FRU Index" in topic FRONT_4.

FRONT_3 Checking the AC Adapter

Throughout this procedure we assume that the AC adapter means the one supplied with the communications cartridge, not the one for the system unit.

If the power-on light (green) on the system unit does not turn on when using the communications cartridge with its AC adapter, check the power cord of the AC adapter for proper connection and continuity.

1. Connect the AC adapter cable to the communications cartridge and plug the power cord into the ac power outlet.

If any noise can be heard from the AC adapter, replace the AC adapter with a new one for isolation.

2. If the noise still can be heard from the AC adapter, suspect the communications cartridge. If not, the AC adapter has a problem. Replace the AC adapter with the original one, go to the next step.
3. Disconnect the AC adapter cable from the communications cartridge and measure the output voltage at the plug of the AC adapter cable.

Note: It can take a few minutes for the AC adapter to recover after disconnecting the adapter cable due to the activated protection circuit inside the AC adapter.

PICTURE 2

Pin	Voltage (V dc)
1	+19 to +21
2	Return
3	Not connected
4	Signal Ground

4. If the voltage is not correct, replace the AC adapter. If the voltage is correct, reconnect the AC adapter cable to the communications cartridge and redo the failing operation.

If the problem still remains, replace the AC adapter. If not, check for the continuity of the AC adapter cable and its connection.

IBM PS/2 Communications Cartridge HML
Communications Cartridge Symptom-to-FRU Index

FRONT_4 Communications Cartridge Symptom-to-FRU Index

Error symptoms and the FRUs that might be responsible for the failure are listed below. The most-likely failing FRU is listed first. FRUs that aid in communications cartridge diagnostics are listed in the parts listing below.

Symptom/Error	FRU/Action
System power does not come on when the communications cartridge is attached.	AC Adapter (See "Checking the AC Adapter" in topic FRONT_3 .) Cartridge System Board
System is nonfunctional when the communications cartridge is attached.	Adapter in the cartridge Cartridge System Board Voltage Converter
Adapter is not listed on the installed devices list.	Adapter in the cartridge Cartridge System Board
000165XX	Adapter in the cartridge Cartridge System Board
0016XXXX	36/38 Emulation Adapter
0028XXXX	3270 Adapter
0166XXXX, 0167XXXX	Token-Ring Adapter

FRONT_5 Parts

PICTURE 3

Index Communications Cartridge

	Cartridge Assembly	07G2581
1	□ Top Cover	07G2573
2	□ Bottom Cover	07G2572
3	Adapters:	
	3270 Adapter	53F6382
	36/38 Emulation Adapter	69X6281
	Token-Ring Adapter	83X7488
	AC Adapter	07G2571
	AC Adapter for Japan	07G3641

Note: When you replace the AC adapter with a new one, use the one available for the country you are in even though the system is from another country.

FRONT_6 Communications Cartridge

The IBM (*) Personal System/2 (*) Communications Cartridge can hold any of the three half-size Micro Channel (*) communication adapters and enables the IBM Personal System/2 to provide communication capability of the following:

- IBM 3270 Connection
- IBM System 36/38 Workstation Emulation Adapter/A
- IBM Token-Ring Network Adapter/A.

The Communications Cartridge has the following features:

- The supplied external AC adapter provides +20 V dc to the communications cartridge as its input power.
- A built-in power supply provides enough power to operate both the computer and the communications cartridge.
- All power to the computer is provided through the supplied AC adapter with the communications cartridge when the communications cartridge is attached to the system unit.

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Subtopics

FRONT_6.1 Specifications

FRONT_6.1 Specifications

Subtopics

FRONT_6.1.1 Environment

FRONT_6.1.1 Environment

- Temperature:
 - Operating: 5.0° to 35.0°C (41.0 to 95.0°F)
 - Nonoperating: 0.6° to 45.0°C (33.1 to 113.0°F).
- Relative Humidity: Operating range 5% to 95%.

FRONT_6.1.2 Electrical

- Input Voltage: +20 V dc (+19.0 to +21.0).
- Output Voltage:
 - +5 V dc (+4.8 to +5.3)
 - +12 V dc (+11.5 to +12.6)
 - -12 V dc (-10.9 to -13.2)
 - +20 V dc (+19.0 to +21.0).