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IBM RT PC User Setup Guide

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IBM RT PC User Setup Guide

Second Edition (September 1986)

This is a major revision of an obsoletes the first edition of *IBM RT PC User Setup Guide*.

This edition applies to all subsequent releases until otherwise indicated in new editions or technical newsletters. Changes are made periodically to the information herein; these changes will be incorporated in new editions of this publication.

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Products are not stocked at the address given below. Requests for copies of this product and for technical information about the system should be made to your authorized IBM RT PC dealer.

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Warning: This equipment has been tested and found to comply with the limits for a Class A computing device, pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to correct the interference.

Instructions To User

This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instruction manual, the equipment may cause interference to radio communications.

The equipment has been tested and found to comply with the limits for a Class A computing device according to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

If this equipment causes interference to radio communications, which can be determined by turning the equipment off and on, try to correct the interference by one or more of the following measures:

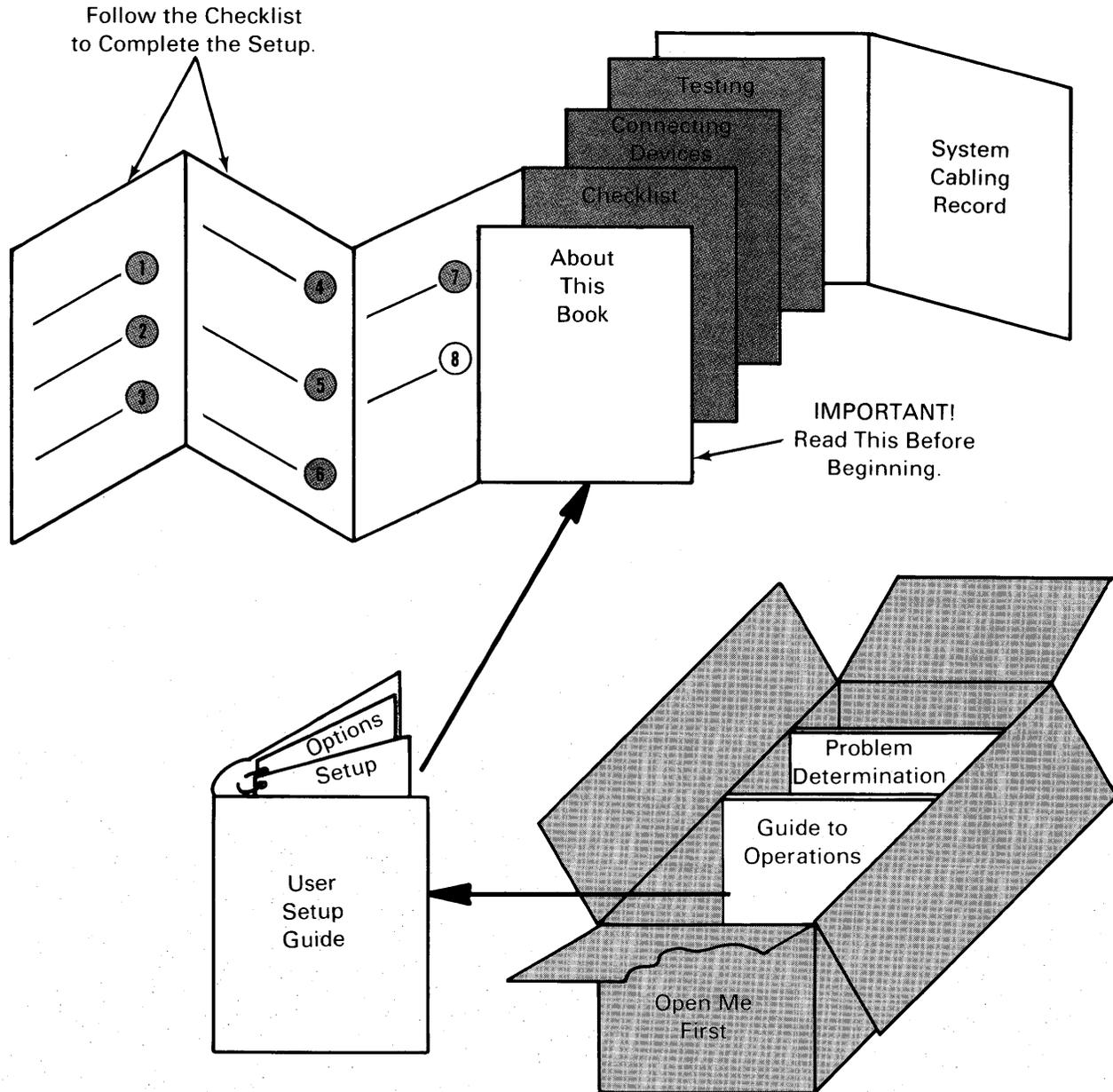
- Reorient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Move the equipment away from the receiver.
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.
- Ensure that card mounting screws, attachment connector screws, and ground wires are tightly secured.

-
- Ensure that card slot covers are in place when no card is installed.
 - If peripherals not offered by IBM are used with this equipment, it is suggested to use shielded, grounded cables, with in-line filters if necessary.

Consult the dealer service representative for additional suggestions.

IBM is not responsible for any radio or television interference caused by unauthorized modifications to this equipment. The user is responsible for correcting such interference.

User Setup Process



About This Book

IBM RT PC User Setup Guide contains information to help you set up the IBM RT Personal Computer¹. The setup process consists of three basic tasks:

1. Identifying, unpacking, and connecting (cabling) the devices to the system unit
2. Testing the system setup
3. Installing the operating system and adding devices.

To help you set up the IBM RT¹ PC, IBM has provided three types of information:

- Check list of tasks (Section 1, the most important section of this book)
- Sections 2 and 3 of this book (supporting information for every type of setup)
- Other books (detailed information).

How to Do The Setup Task

Section 1, “Setup Tasks Check List” directs you through a check list of tasks to completely set up the IBM RT PC¹ System. Each task refers you to other documentation for information about the task.

Do the tasks in the order given, and complete each individual task before going to the next one.

Section 2, “Connecting Devices to the IBM RT PC System Unit” contains drawings and reference material to help you connect IBM-supported devices

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to the system units. The section shows the adapters, ports, connectors, and cables needed to connect each device.

The book shows every possible setup situation for IBM-supported devices. Select the instructions for the devices you need to connect to the system unit. This section helps you do task 6 on page 1-7.

Section 3, “Testing the System” contains the steps for testing the hardware setup. This section helps you do task 7 on page 1-8.

A Reader’s Comment Form and Book Evaluation Form are provided at the back of this book. Use the Reader’s Comment Form at any time to give IBM information that may improve the book. After you become familiar with the book, use the Book Evaluation Form to give IBM specific feedback about the book.

What You Need

You can unpack, set up, connect devices, test the hardware, and install the operating system programs using the check list, the other information in this book, other referenced documentation, and two flat-bladed screwdrivers (small and medium).

You also need sufficient floor space in which to work, sturdy desks or tables on which to set up the devices, and grounded electrical outlets for most of the devices.

To begin the setup, go to task 1 in Section 1 of this book.

Related Information

You may find the following books helpful:

- *IBM RT PC Guide to Operations* describes the IBM 6151 and IBM 6150 system units, the displays, keyboard, and other devices that can be attached. This guide also includes procedures for operating the hardware and moving the IBM 6151 and IBM 6150 system units.
- *IBM RT PC Installing and Customizing the AIX Operating System*² provides step-by-step instructions for installing and customizing the AIX Operating System², including how to add or delete devices from the system and how to define device characteristics. This book also explains how to create, delete, or change AIX and non-AIX minidisks.
- *IBM RT PC Options Installation* provides instructions for installing optional adapters in IBM 6151 and IBM 6150 and installing fixed-disk and diskette drives in IBM 6150 (packaged with *IBM RT PC User Setup Guide*).
- *IBM RT PC Problem Determination Guide* provides instructions for running diagnostic routines to locate and identify hardware problems. A problem determination guide for software and two high-capacity (1.2MB) diskettes containing the IBM RT PC diagnostic routines are included.

See *IBM RT PC Bibliography and Master Index* for order numbers of IBM RT PC publications and diskettes.

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Ordering Additional Copies of This Book

To order additional copies of this publication, use either of the following sources:

- To order from your IBM representative, use Order Number SV21-8020.
- To order from your IBM dealer, use part 08F3464.

A binder and tabs are included with the order.

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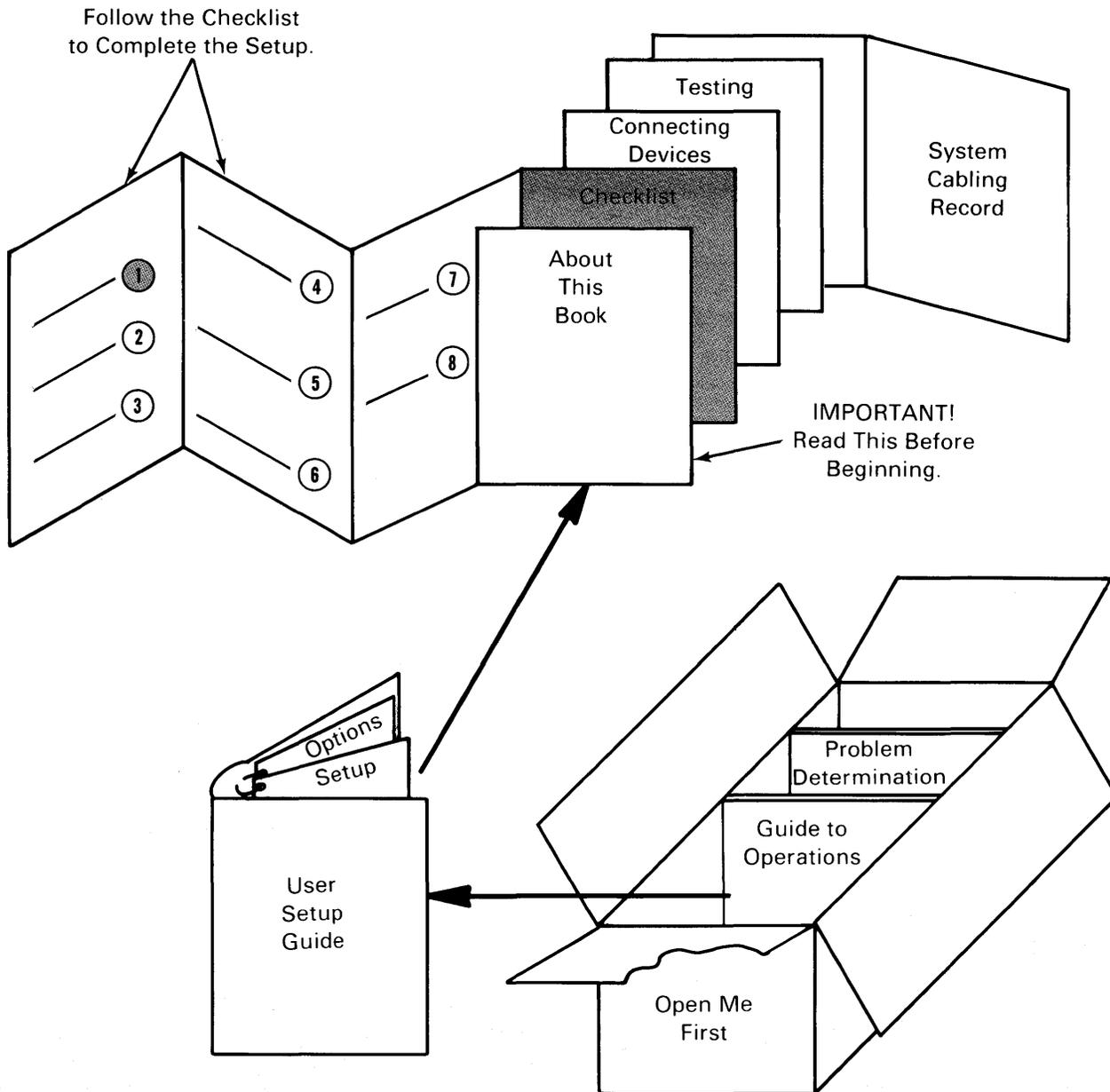
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Section 1. Setup Tasks Check List



Before You Start

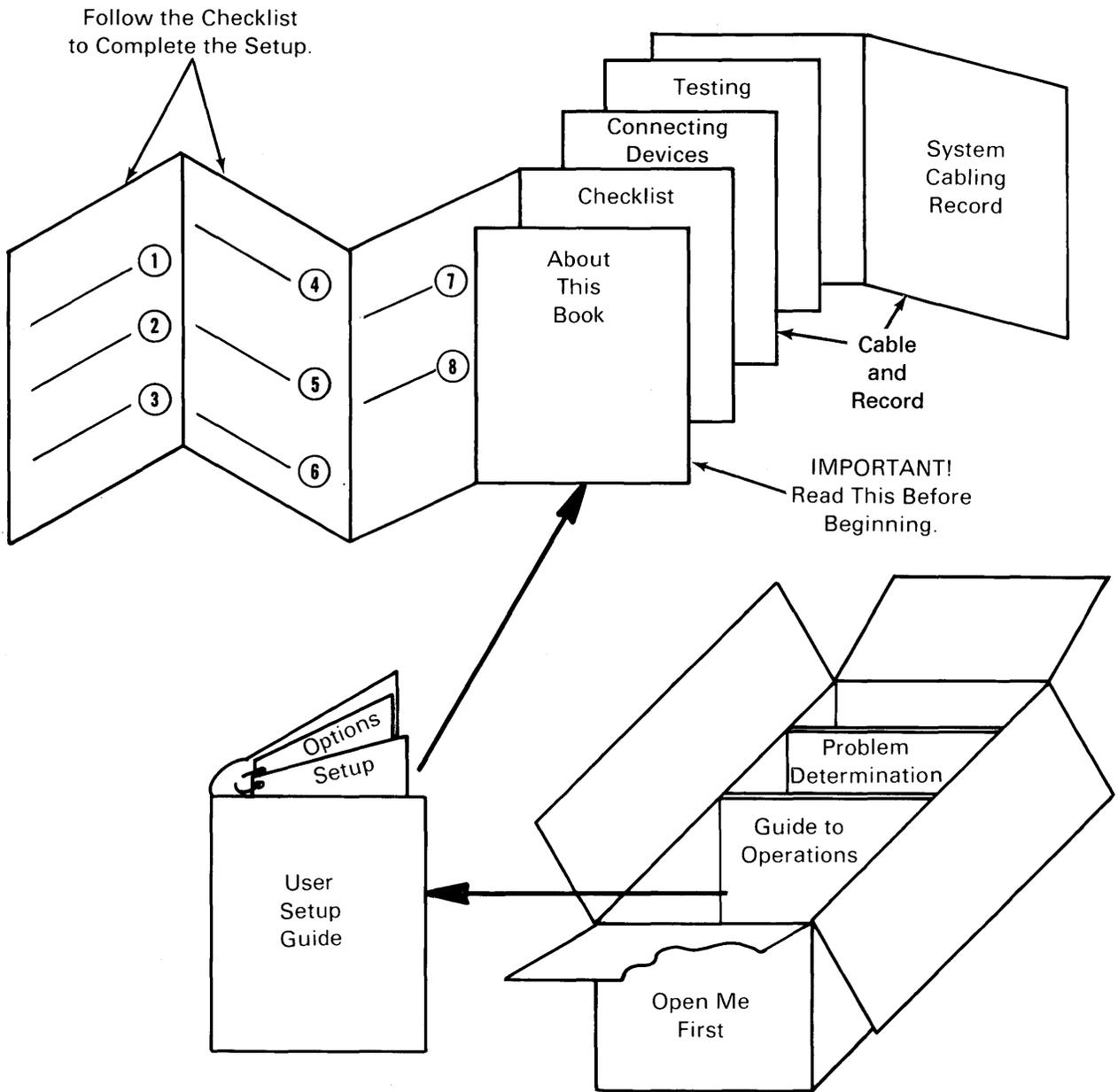
To set up the IBM RT PC System, you must complete the tasks on the check list. The check list guides you through the setup process. As you complete each task, write a check by the task before you go to the next one. Use the referenced information to help you do each task.

**FIND THE SEPARATE PACKAGE CONTAINING
THE SETUP FORMS.**

**UNFOLD THE CHECK LIST OF SETUP TASKS
AND USE IT THROUGHOUT THIS PROCESS.**

After you finish all the tasks, insert the check list after this page.

Section 2. Connecting Devices to the IBM RT PC System Unit

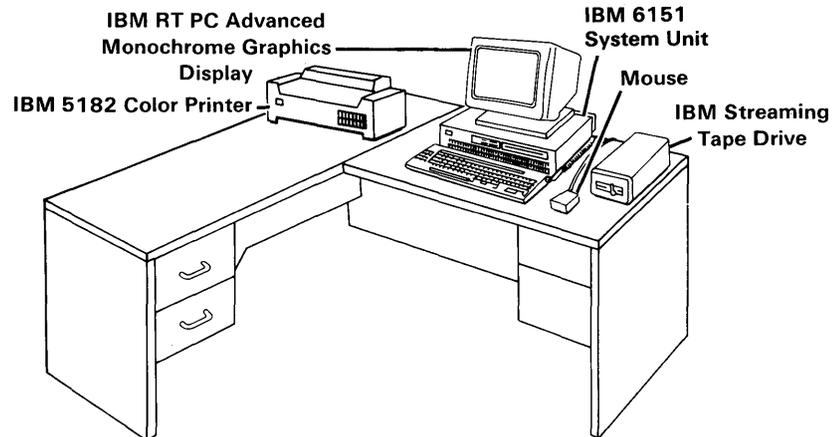
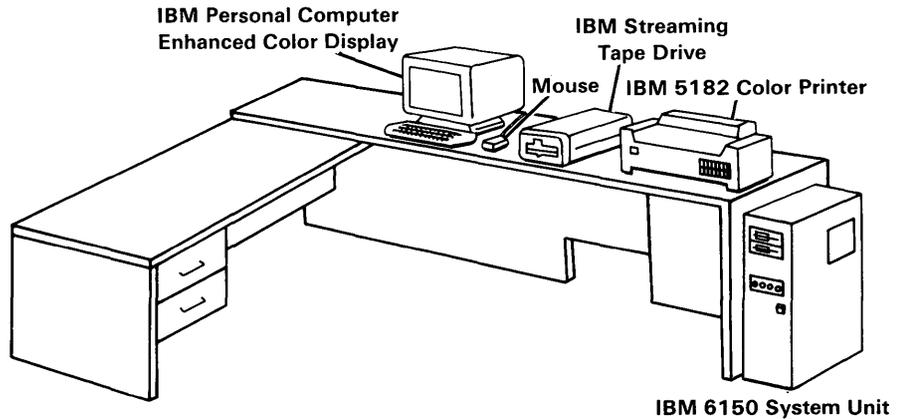


Before You Start

Use this section to do tasks 2, 4, 5, and 6 on the check list in Section 1 of this book.

At any point in this process, when you have connected all the devices you have, return to the check list.

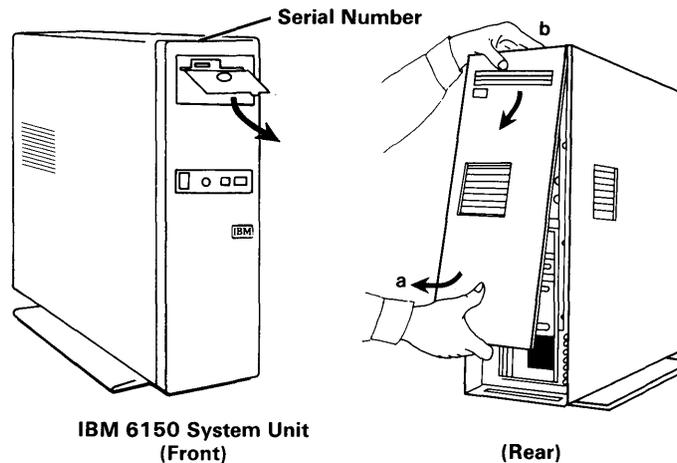
Example Office Arrangements



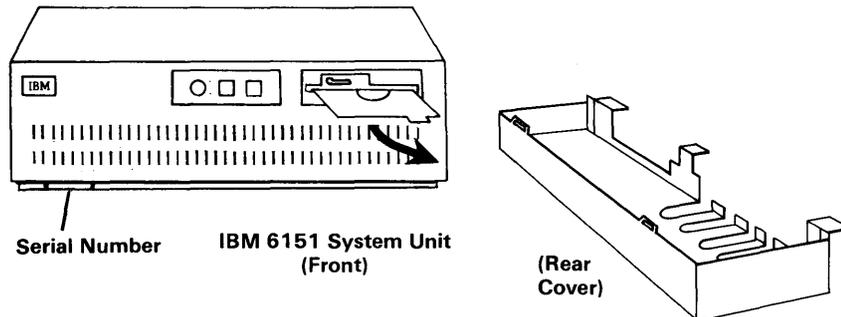
Preparing the Devices

Prepare the system unit for connecting devices by doing the following:

1. For IBM 6150 System Units, open the diskette drive lever, remove the shipping card (if one is present), and close the lever. Remove the rear cover:
 - a. Pull the bottom of the rear cover free.
 - b. Lower the cover to free the hooks from the frame.



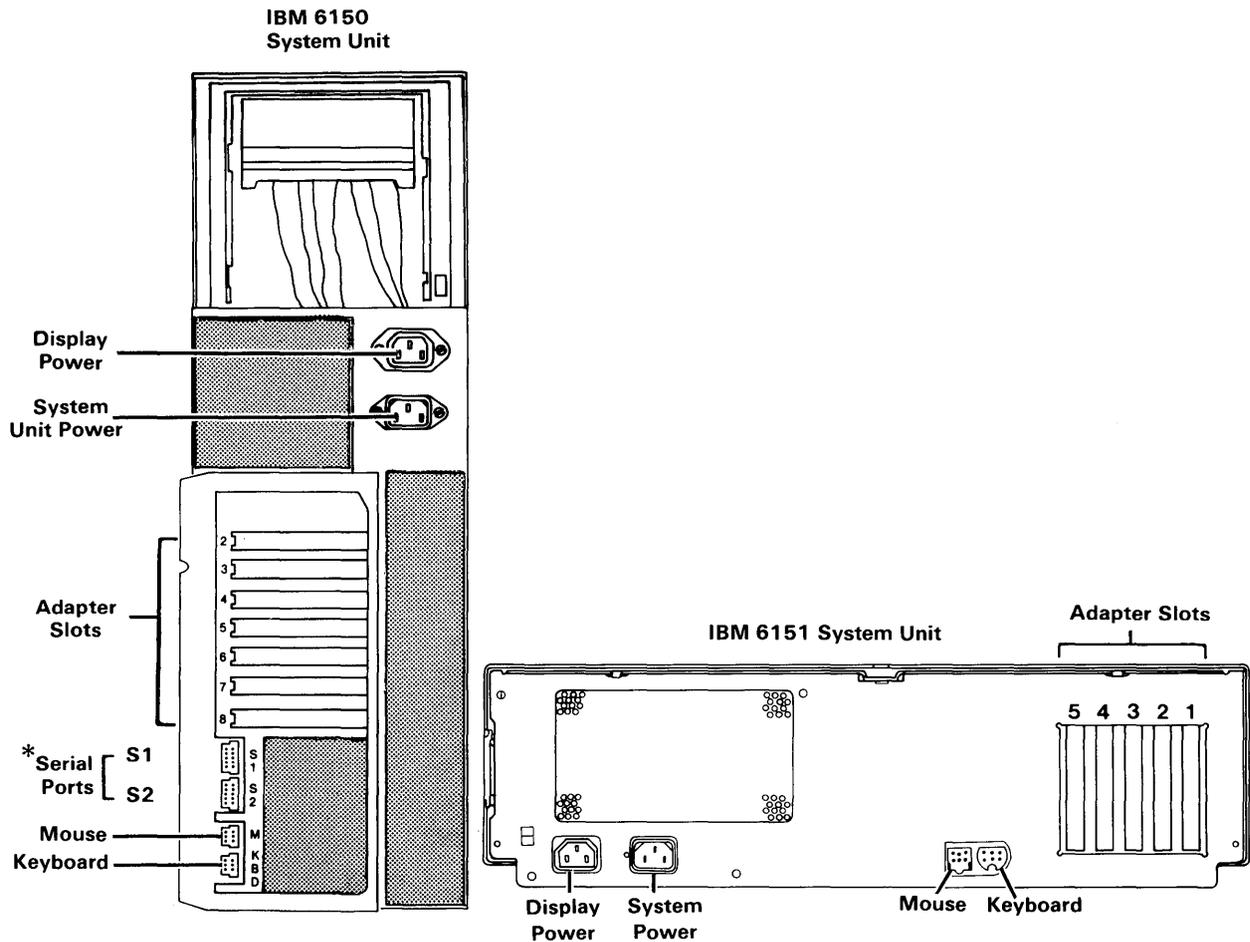
2. For IBM 6151 System Units, open the diskette drive lever, remove the shipping card (if one is present), and close the lever. The rear cover is in a box attached to the inside of the system unit carton. Do not put the rear cover on until told to do so.



System Unit Drawings

The following drawings show the system unit connectors and slots containing the adapters. All the connections you make will be to these connectors. Familiarize yourself with the system unit you have, and then go to task 5 to begin connecting devices to the system unit.

Turn off the power on all devices before you connect any device to the system unit.



Serial Ports S1 and S2

S1 and S2, on IBM 6150 System Units only, provide Direct Memory Access (DMA) data transmit capability, using RS232C interface. To minimize impact on overall system performance, use these ports first to connect the fastest serial output devices (printers and plotters) in your system configuration. Because S1 has higher DMA priority than S2, connect the highest speed device to S1.

Completing the System Cabling Record

Unfold the appropriate system cabling record (Figure A-1 on page A-3 or Figure A-2 on page A-5 in the appendix) and read all the instructions. As you connect each device to an adapter or port, write the name of the adapter, device, or devices in the correct boxes. Do not record where you connected the keyboard and mouse.

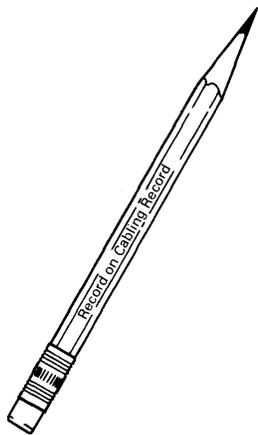
Please be careful when you complete this record, because you will need this information when you test the system (task 7 plus Section 3) and when you install the operating system programs (task 8).

Because each system unit can contain different adapters and different arrangements of the adapters, this book cannot tell you the exact location of many of the adapters. When the adapter must be in a particular slot, that slot is highlighted.

Some of the adapters can be installed in more than one slot. In this case, all the possible slots are highlighted.

Use the enlarged drawings to identify the adapters. Do not try to identify the locations of the adapters by looking only at the highlighted adapter slots.

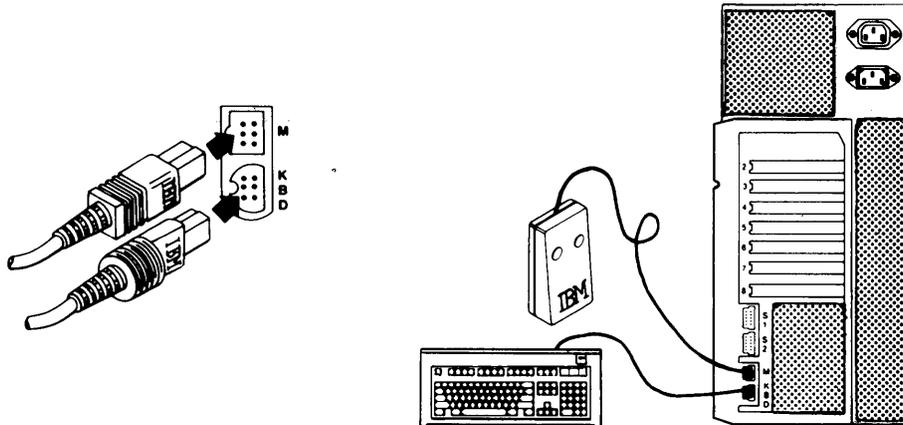
Stop here and go to task 6 on 1-8 on the check list.



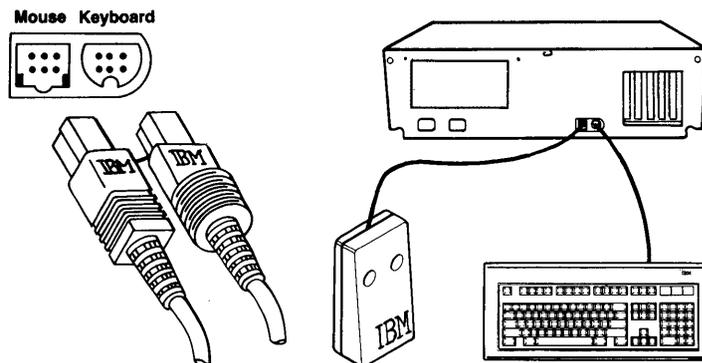
Input Devices

IBM RT PC Keyboard and IBM RT PC Mouse Connected to IBM 6150 System Unit

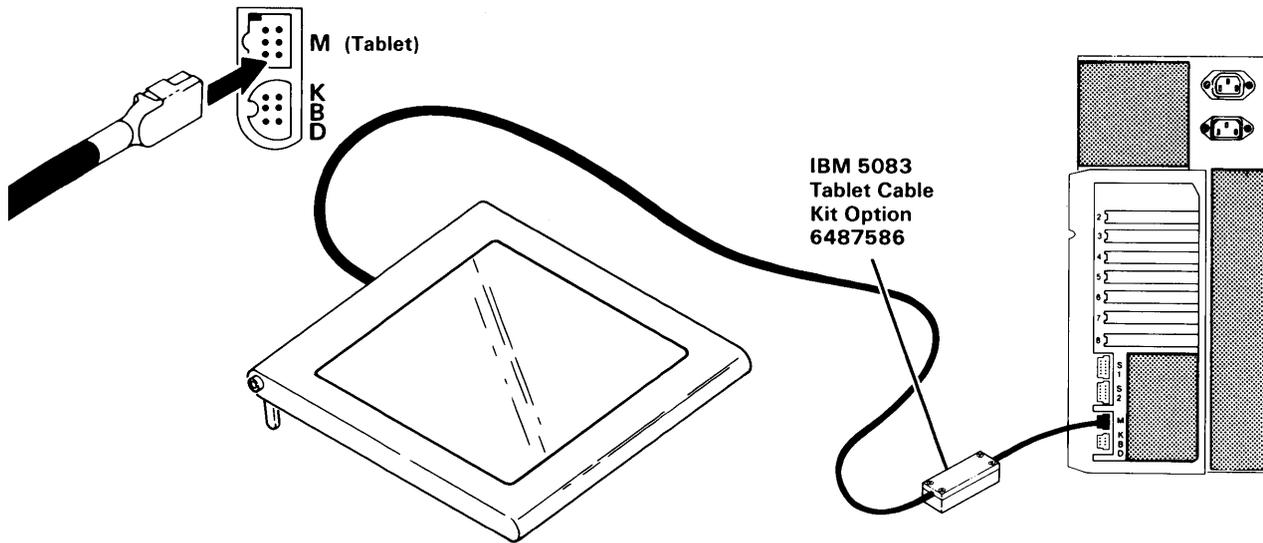
Note: Connect the keyboard before you connect the mouse.



IBM RT PC Keyboard and IBM RT PC Mouse Connected to IBM 6151 System Unit

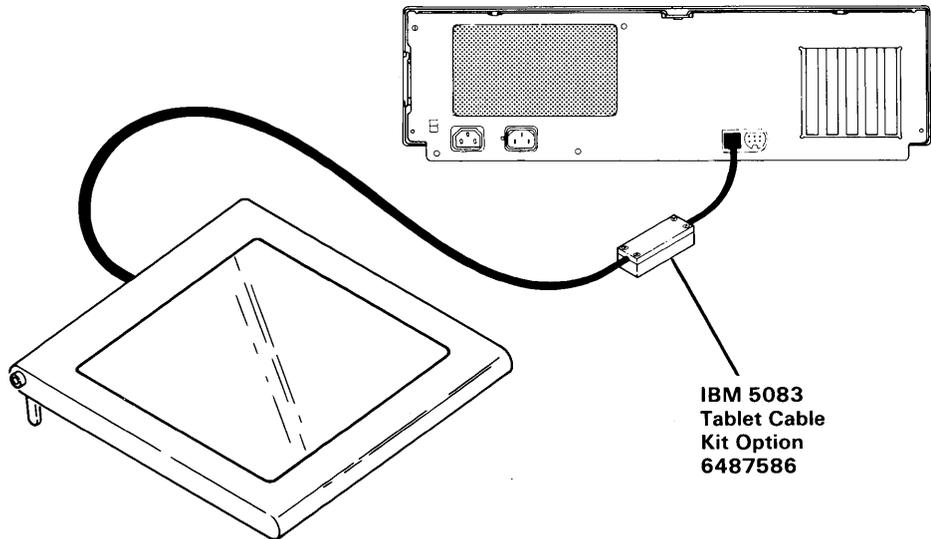
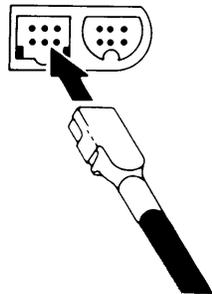


IBM 5083 Tablet (Model 11 or 12) Connected to IBM 6150 System Unit

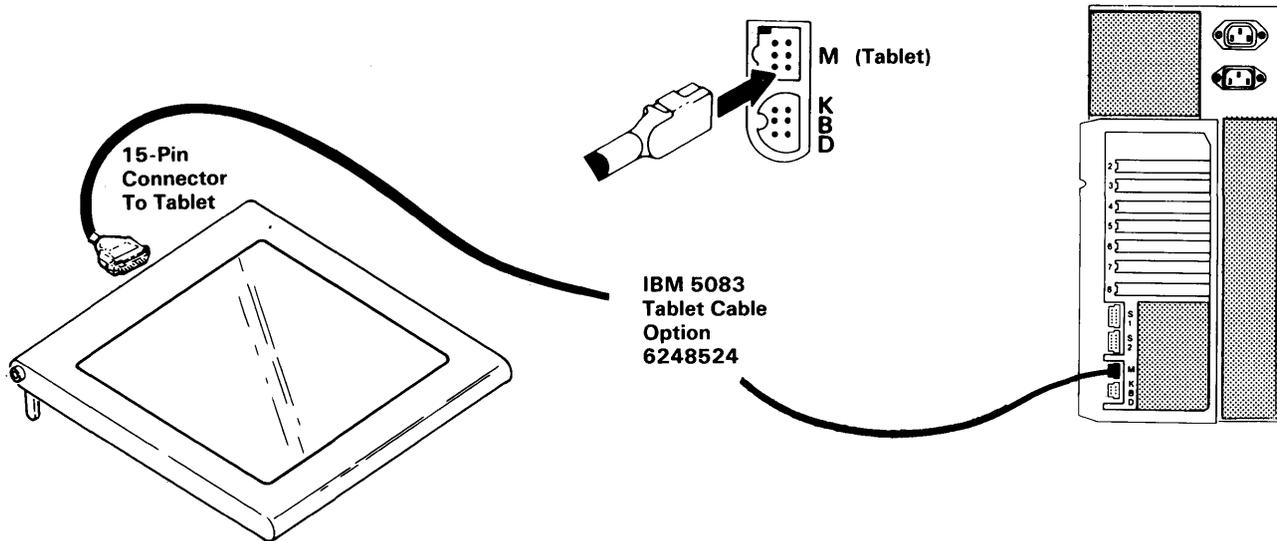


IBM 5083 Tablet (Model 11 or 12) Connected to IBM 6151 System Unit

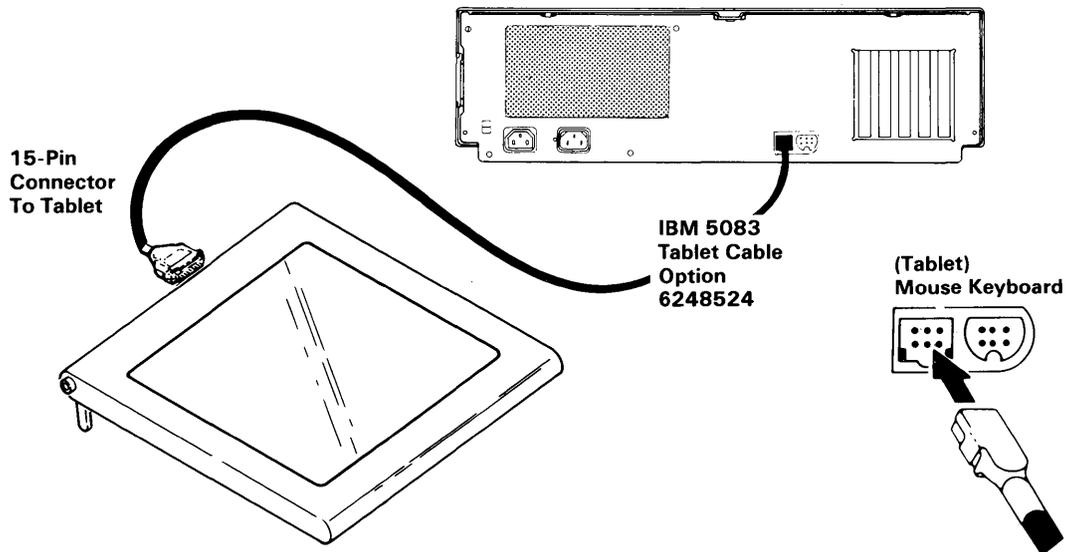
(Tablet)
Mouse Keyboard



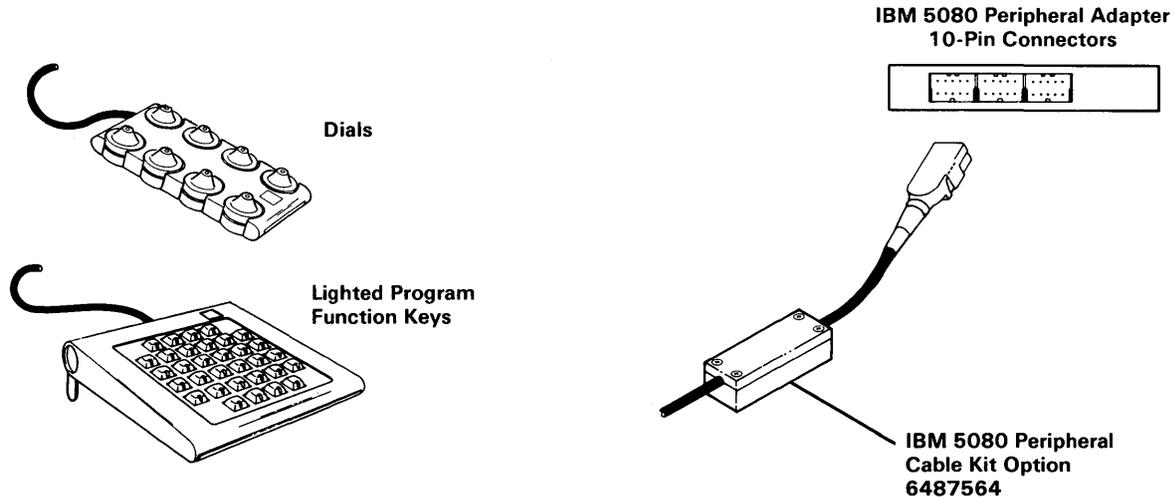
IBM 5083 Tablet (Model 11A or 12A) Connected to IBM 6150 System Unit



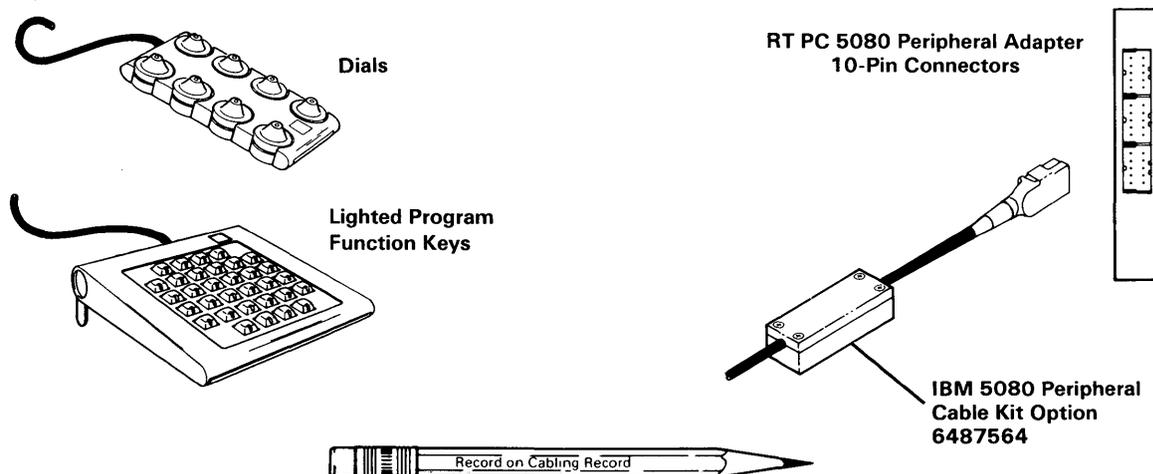
IBM 5083 Tablet (Model 11A or 12A) Connected to IBM 6151 System Unit



IBM 5080 Lighted Program Function Keyboard Feature and IBM 5080 Dials Feature Connected to IBM 6150 System Unit



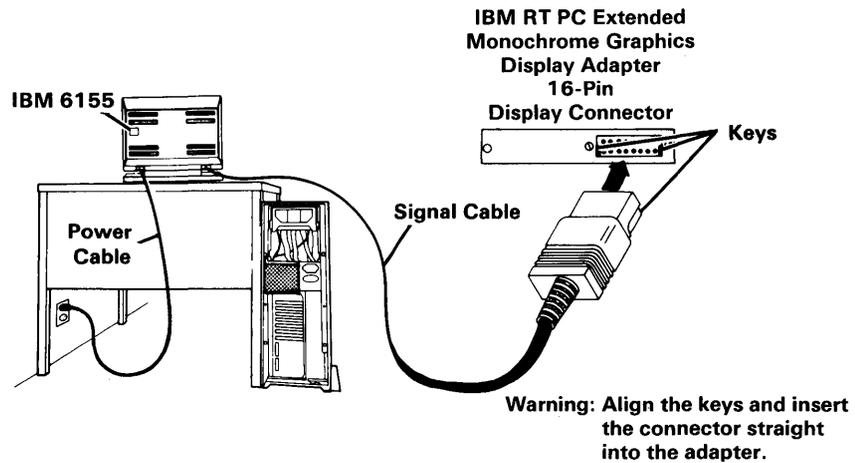
IBM 5080 Lighted Program Function Keyboard Feature and IBM 5080 Dials Feature Connected to IBM 6151 System Unit



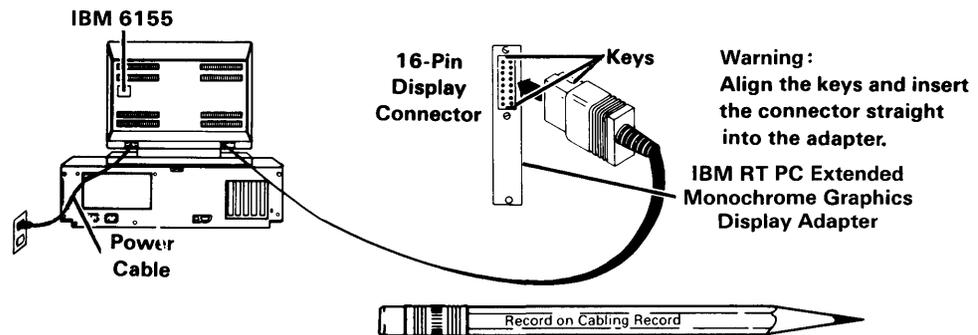
Displays (IBM 6155)

Connect this display to the 16-pin connector on the IBM RT PC Extended Monochrome Graphics Display Adapter. Connect the power cable to a grounded electrical outlet.

IBM 6155 Extended Monochrome Graphics Display Connected to IBM 6150 System Unit



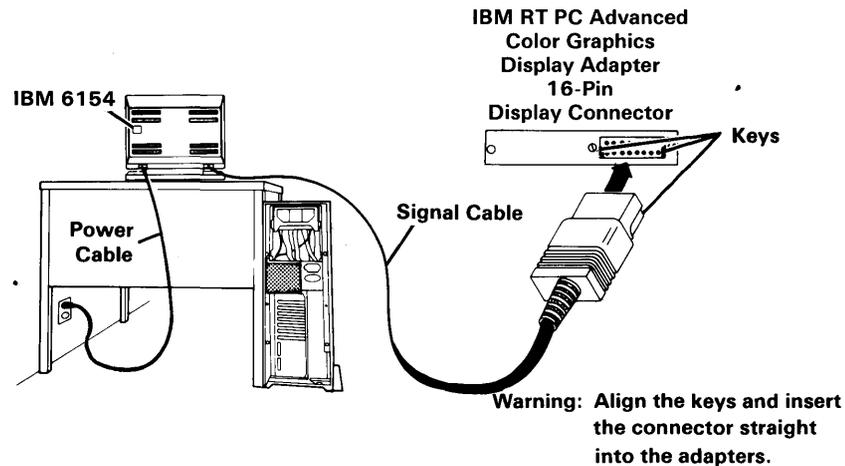
IBM 6155 Extended Monochrome Graphics Display Connected to IBM 6151 System Unit



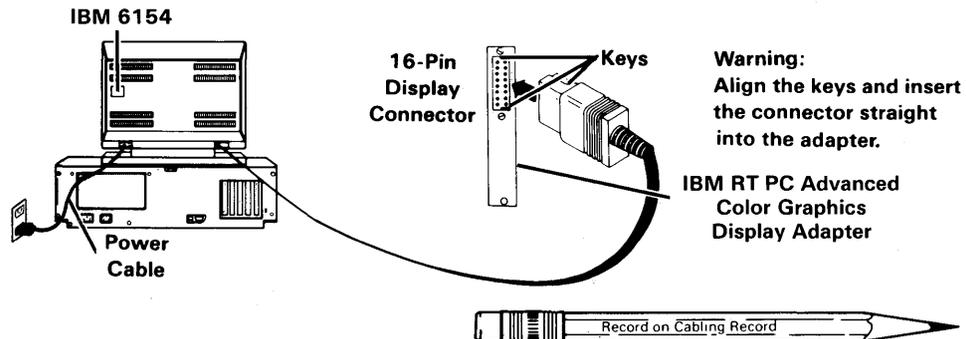
Displays (IBM 6154)

Connect this display to the 16-pin connector on the IBM RT PC Advanced Color Graphics Display Adapter. Connect the power cable to a grounded electrical outlet.

IBM 6154 Advanced Color Graphics Display Connected to IBM 6150 System Unit



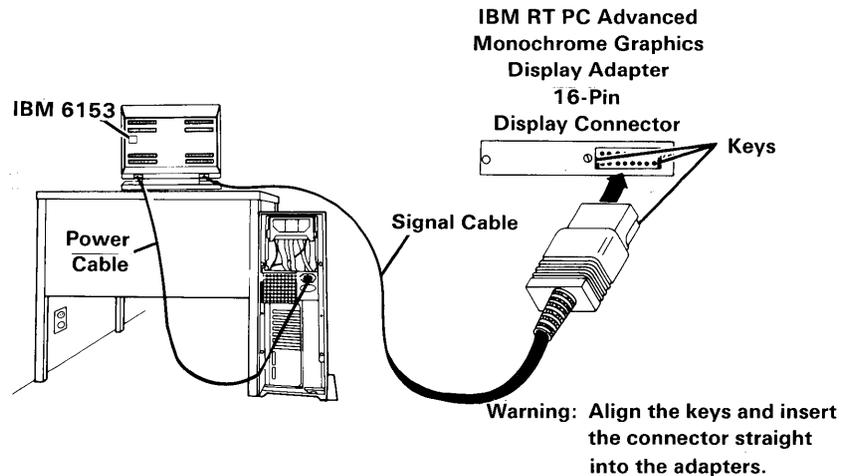
IBM 6154 Advanced Color Graphics Display Connected to IBM 6151 System Unit



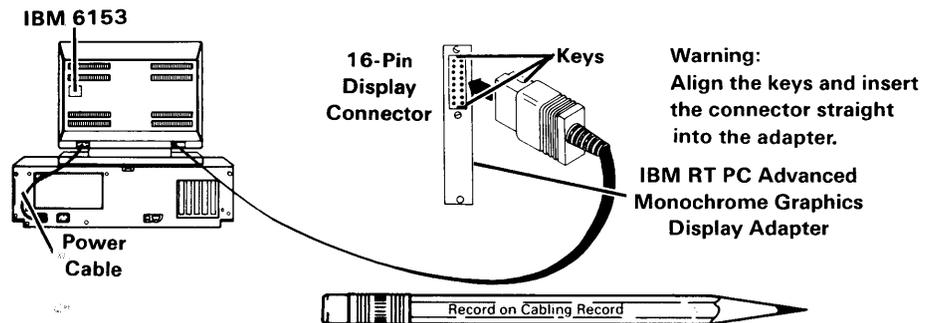
Displays (IBM 6153)

Connect this display to the 16-pin connector on the IBM RT PC Advanced Monochrome Graphics Display Adapter. Connect the power cable to the display power connector on the system unit. Do not confuse the Brightness Control on the front of the display with a power switch.

IBM 6153 Advanced Monochrome Graphics Display Connected to IBM 6150 System Unit



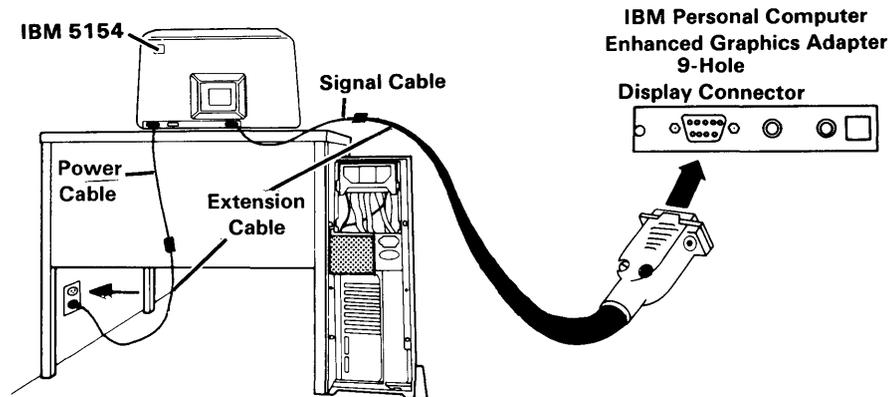
IBM 6153 Advanced Monochrome Graphics Display Connected to IBM 6151 System Unit



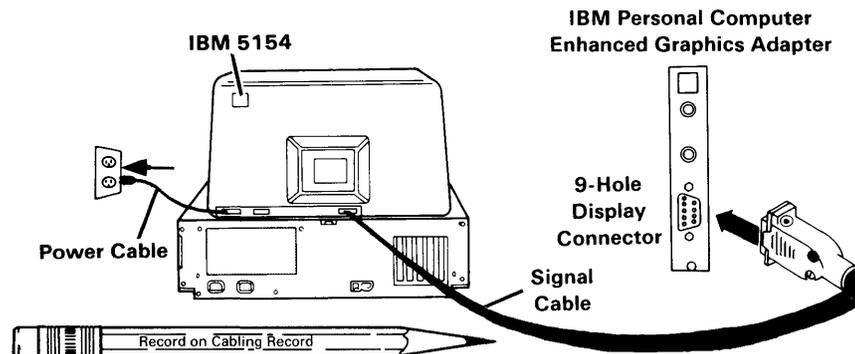
Displays (IBM 5154)

You can use commercially available extension cables to more easily reach IBM 6150 System Units. Connect this display to the 9-hole connector on the IBM PC Enhanced Graphics Adapter. Ensure that the display power switch is off. Connect the power cable to a grounded electrical outlet.

IBM 5154 Personal Computer Enhanced Color Display Connected to IBM 6150 System Unit



IBM 5154 Personal Computer Enhanced Color Display Connected to IBM 6151 System Unit

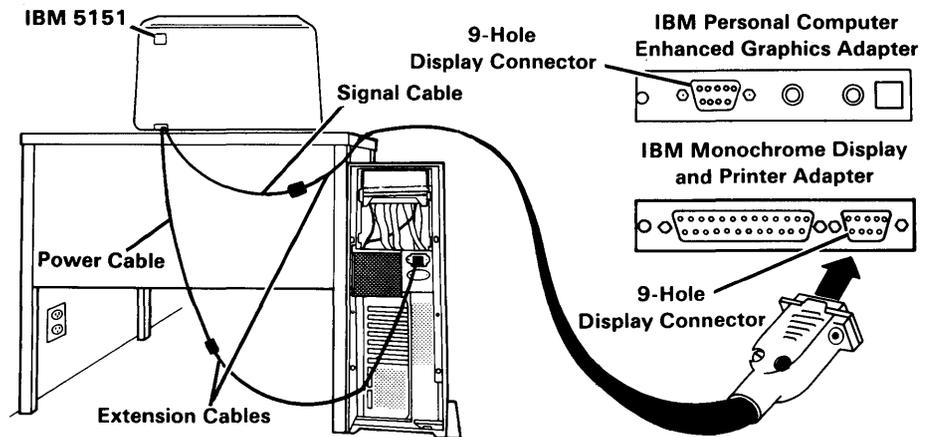


Displays (IBM 5151)

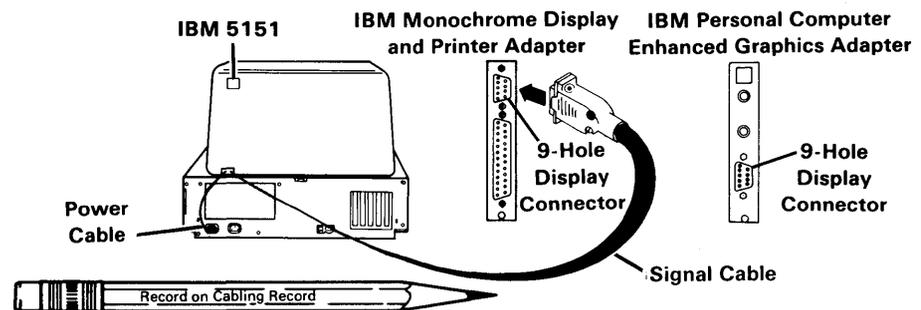
The IBM 5151 Personal Computer Display has no power switch. The system unit power switch turns this display on or off.

You can use commercially available extension cables to more easily reach IBM 6150 System Units. Connect this display to the small 9-hole connector on the IBM Monochrome Display and Printer Adapter or on the IBM PC Enhanced Graphics Adapter. Connect the power cable to the display power connector on the system unit.

IBM 5151 Personal Computer Display Connected to IBM 6150 System Unit



IBM 5151 Personal Computer Display Connected to IBM 6151 System Unit



Displays (IBM 5081)

- For color displays, connect the three color-coded connectors on the RGB video cable to matching input receptacles on the interactive display. Plug the other end of the RGB video cable into the 3-pin connector on the IBM Megapel Display Adapter.

Note: View-only displays may be connected to three color-coded output receptacles provided on the back of the interactive display.

Warning: Do not connect IBM 5081 displays to the convenience outlet on the back of the IBM RT PC; the system unit will be damaged.

Ensure that the display power switch is off. Then connect the power cable, first to the display and then to a *wall outlet*.

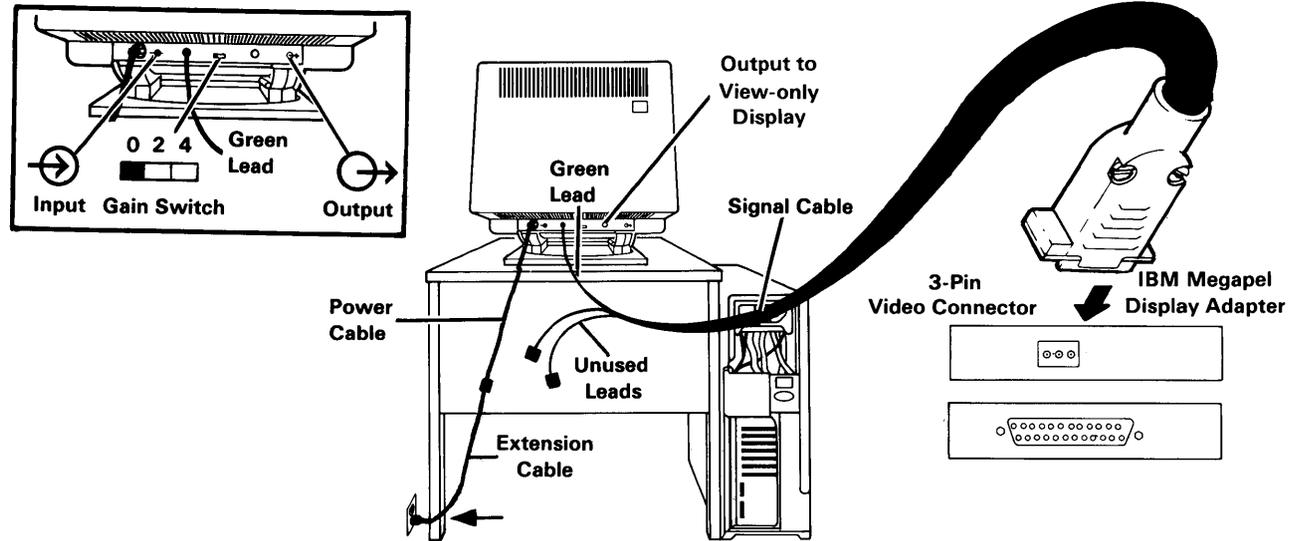
- The monochrome display uses only the green lead on the RGB video cable. This lead is connected to the matching input receptacle on the interactive display. Plug the other end of the RGB video cable into the 3-pin connector on the IBM Megapel Display Adapter.

Note: View-only displays may be connected to the green output receptacle provided on the back of the interactive display.

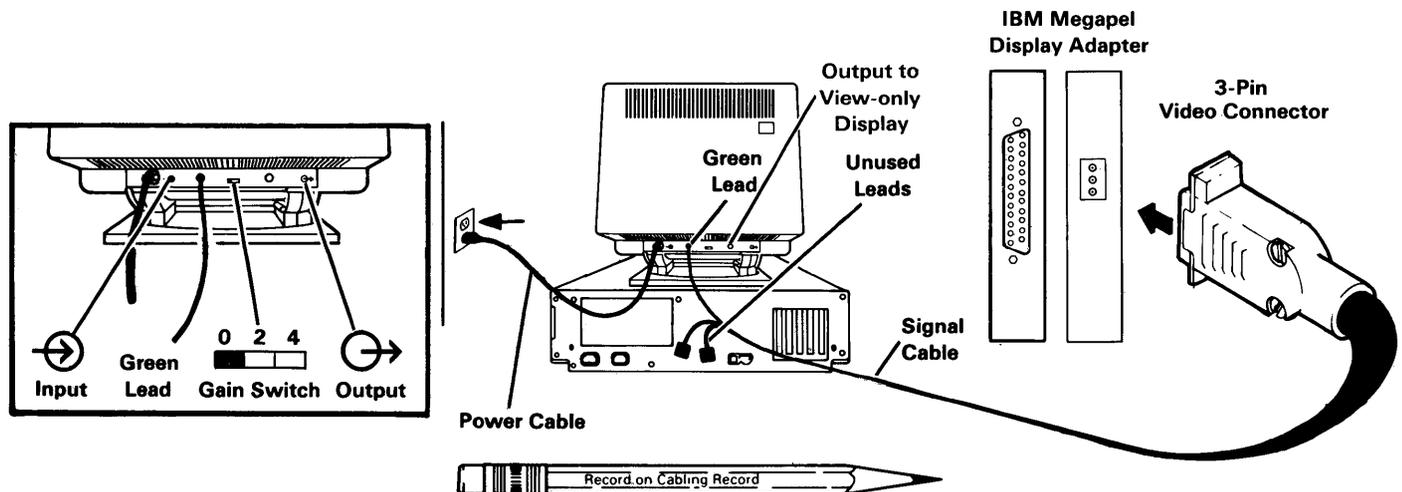
Warning: Do not connect IBM 5081 displays to the convenience outlet on the back of the IBM RT PC; the system unit will be damaged.

Ensure that the display power switch is off. Then connect the power cable to a *wall outlet*.

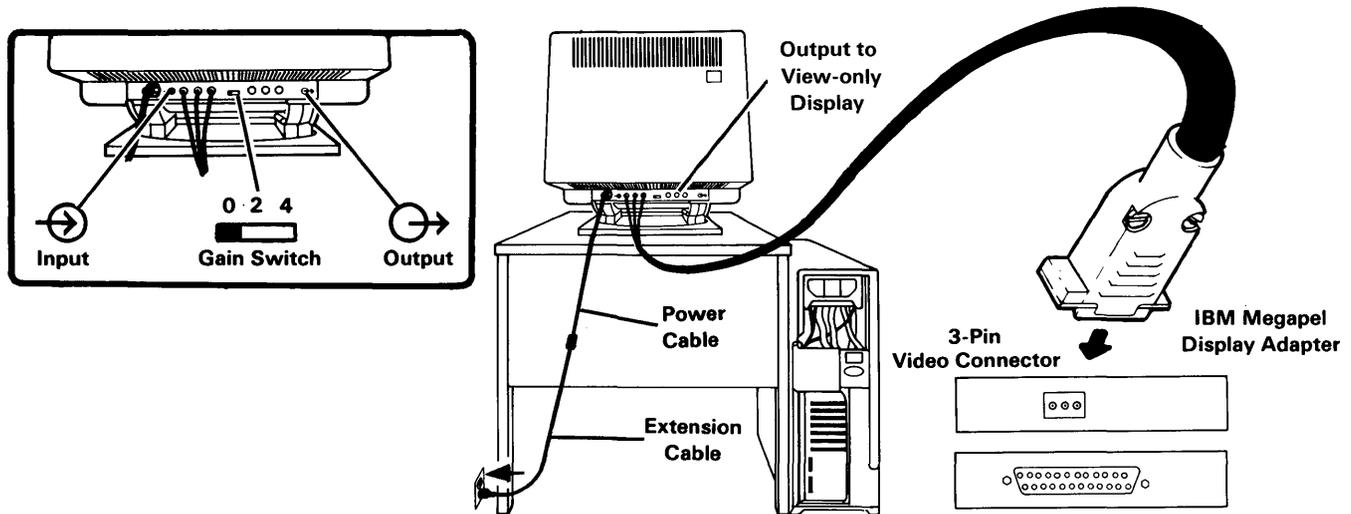
IBM 5081 Monochrome Display (Model 11) Connected to IBM 6150 System Unit



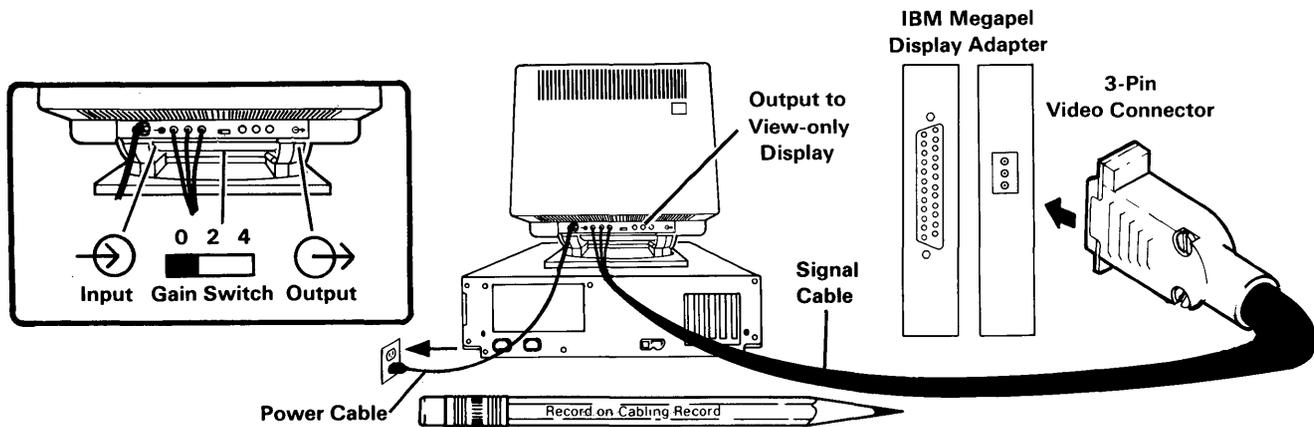
IBM 5081 Monochrome Display (Model 11) Connected to IBM 6151 System Unit



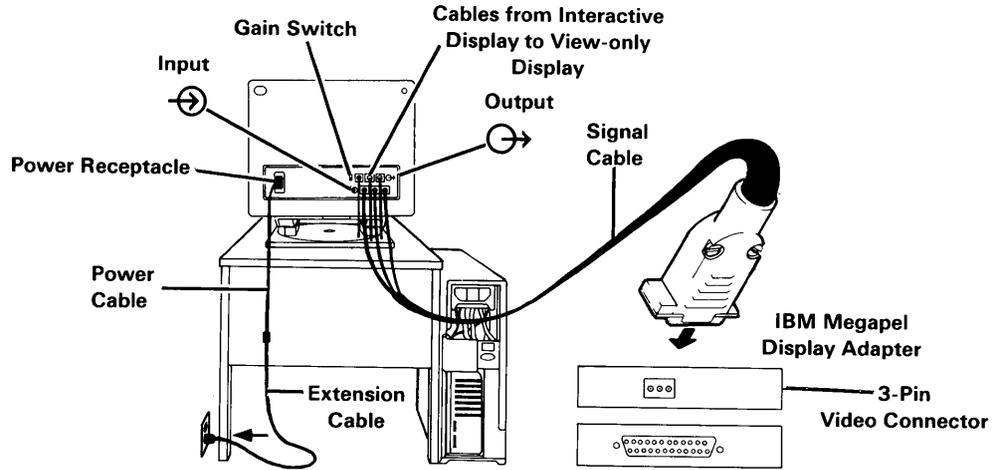
IBM 5081 Color Display (Model 12) Connected to IBM 6150 System Unit



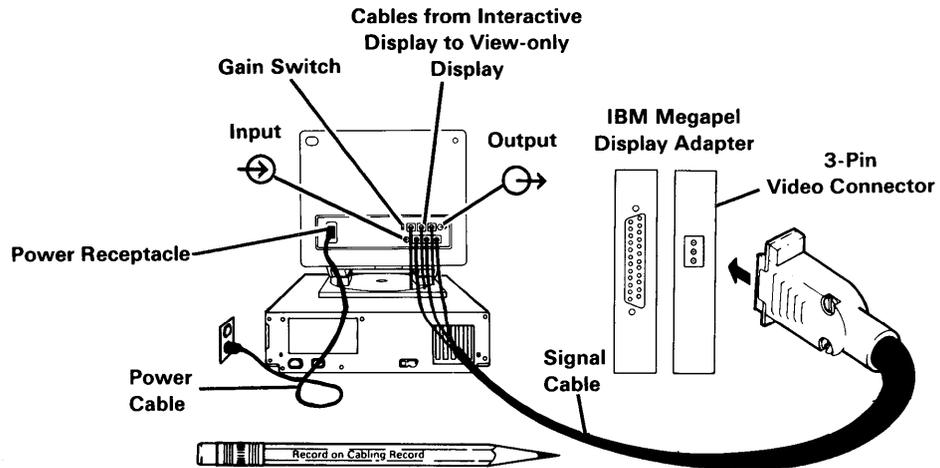
IBM 5081 Color Display (Model 12) Connected to IBM 6151 System Unit



IBM 5081 Color Display (Model 16 or 19) Connected to IBM 6150 System Unit



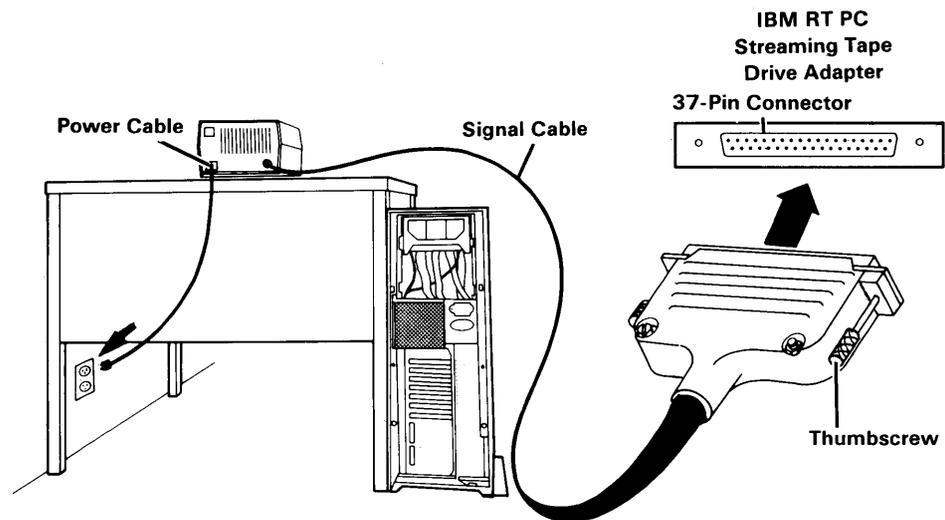
IBM 5081 Color Display (Model 16 or 19) Connected to IBM 6151 System Unit



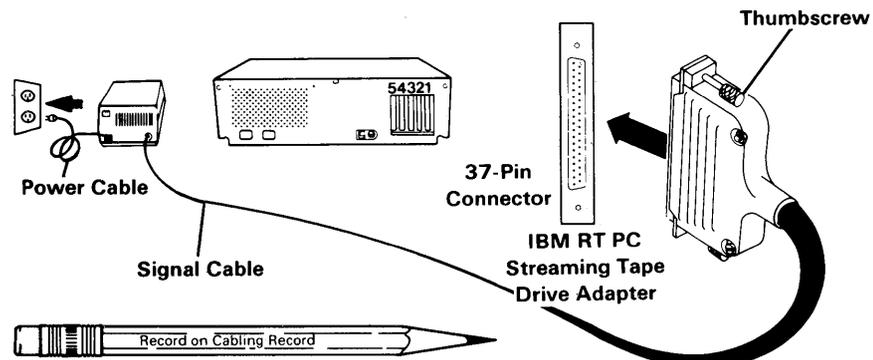
IBM 6157 Streaming Tape Drive

Connect this device to the IBM RT PC Streaming Tape Drive Adapter, the only 37-pin connector in the system. Connect the power cable to a grounded electrical outlet.

IBM 6157 Streaming Tape Drive Connected to IBM 6150 System Unit



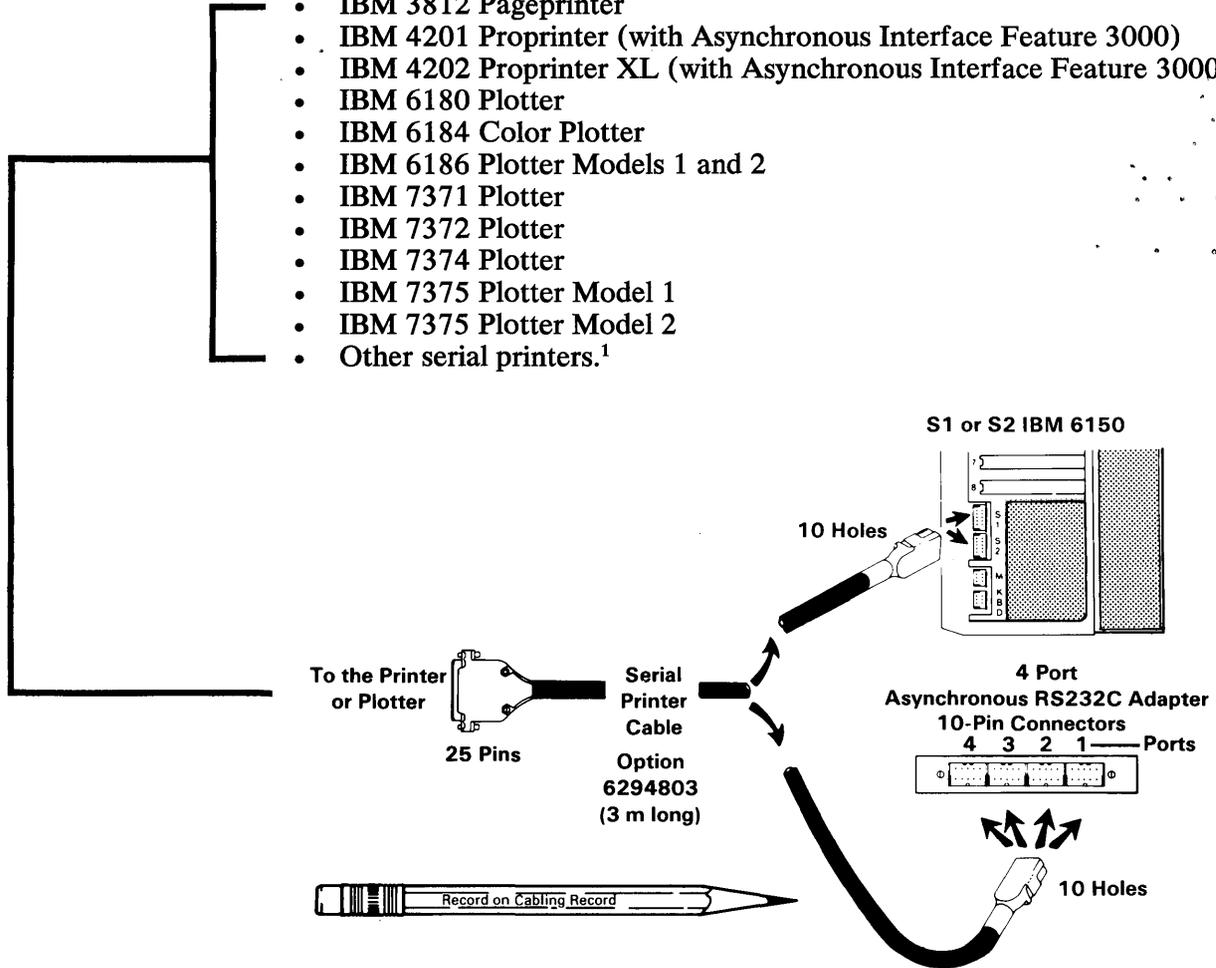
IBM 6157 Streaming Tape Drive Connected to IBM 6151 System Unit



Serial Printers and Plotters

Connecting:

- IBM 3812 Pageprinter
- IBM 4201 Proprinter (with Asynchronous Interface Feature 3000)
- IBM 4202 Proprinter XL (with Asynchronous Interface Feature 3000)
- IBM 6180 Plotter
- IBM 6184 Color Plotter
- IBM 6186 Plotter Models 1 and 2
- IBM 7371 Plotter
- IBM 7372 Plotter
- IBM 7374 Plotter
- IBM 7375 Plotter Model 1
- IBM 7375 Plotter Model 2
- Other serial printers.¹

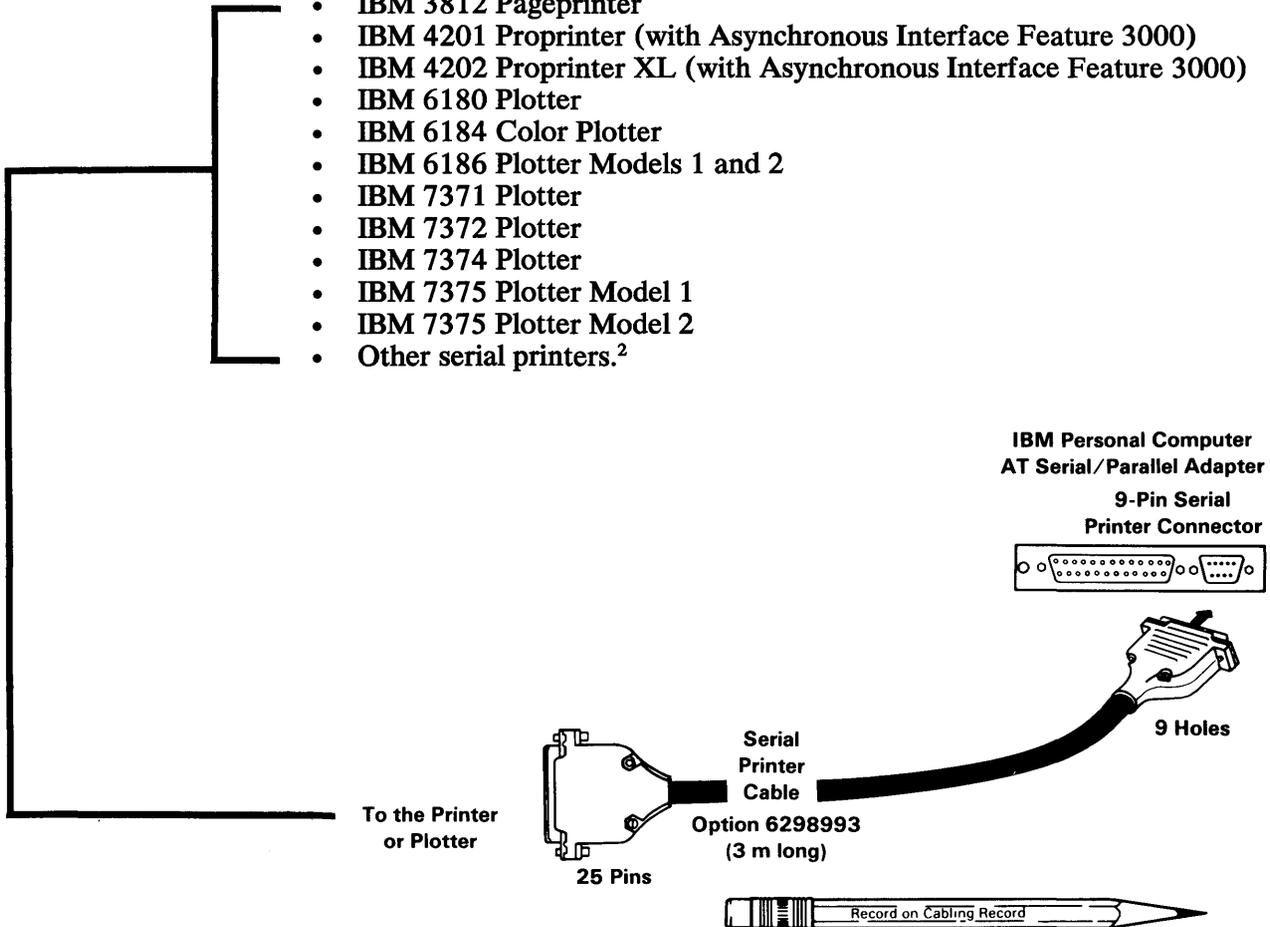


¹ To achieve optimum performance from high speed printers, connect printers to connector S1 of the IBM 6150. Use S2 for connecting any of the other devices listed.

Serial Printers and Plotters (Continued)

Connecting:

- IBM 3812 Pageprinter
- IBM 4201 Proprinter (with Asynchronous Interface Feature 3000)
- IBM 4202 Proprinter XL (with Asynchronous Interface Feature 3000)
- IBM 6180 Plotter
- IBM 6184 Color Plotter
- IBM 6186 Plotter Models 1 and 2
- IBM 7371 Plotter
- IBM 7372 Plotter
- IBM 7374 Plotter
- IBM 7375 Plotter Model 1
- IBM 7375 Plotter Model 2
- Other serial printers.²

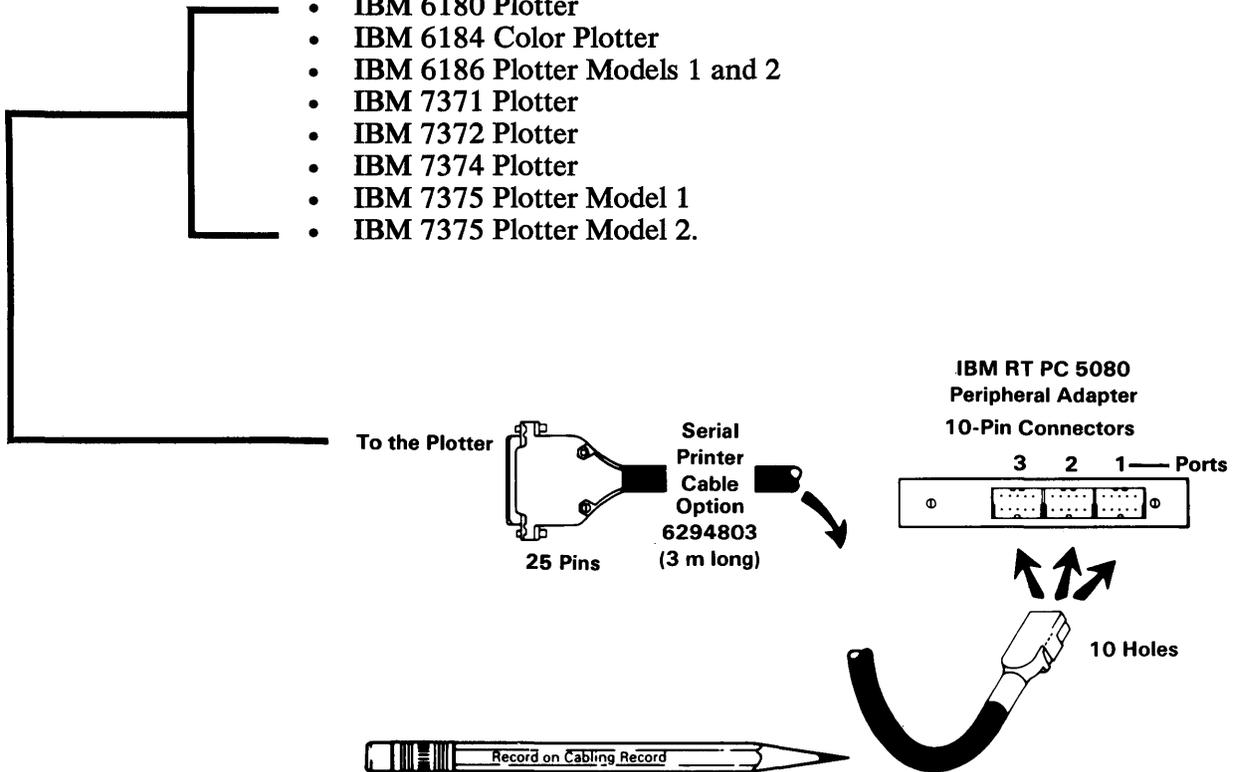


² To achieve optimum performance from high speed printers, connect printers to connector S1 of the IBM 6150. Use S2 for connecting any of the other devices listed.

Serial Plotters

Connecting:

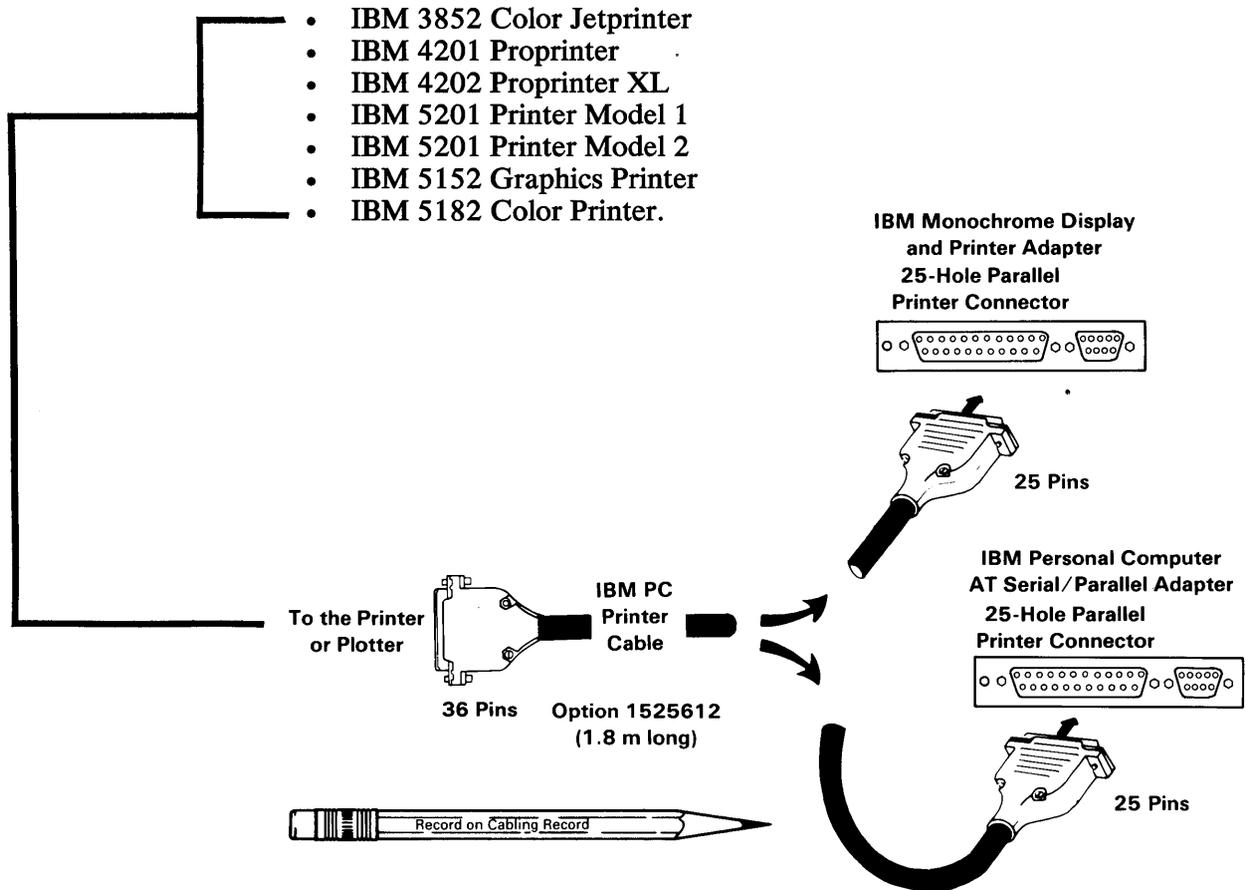
- IBM 6180 Plotter
- IBM 6184 Color Plotter
- IBM 6186 Plotter Models 1 and 2
- IBM 7371 Plotter
- IBM 7372 Plotter
- IBM 7374 Plotter
- IBM 7375 Plotter Model 1
- IBM 7375 Plotter Model 2.



This adapter and cable combination only supports plotters and XON-XOFF Pacing Protocol.

Parallel Printers

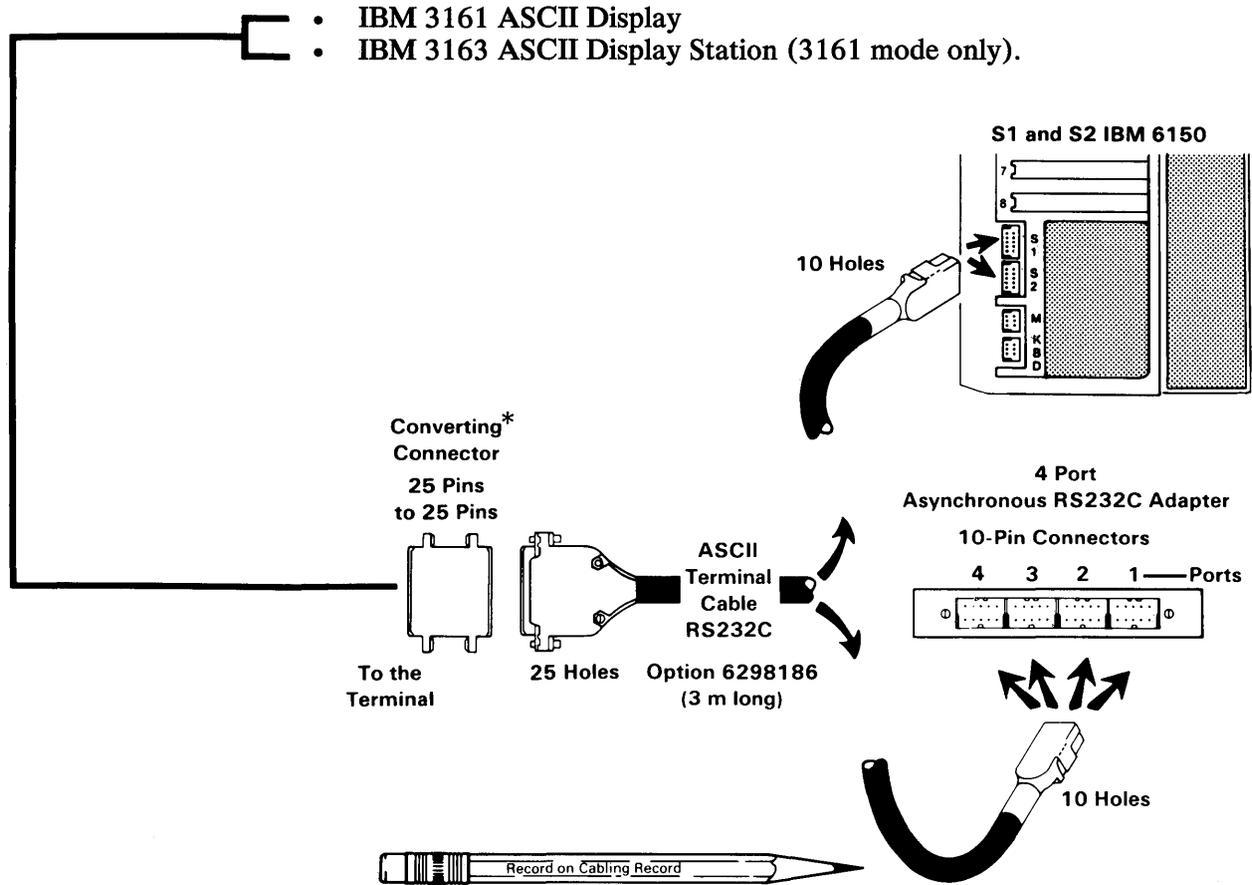
Connecting:



You can connect a total of two parallel devices to a system unit. If you have an IBM Monochrome Display and Printer Adapter and two Personal Computer AT Serial/Parallel Adapters installed in a system unit, connect the two parallel devices to the parallel ports on the Personal Computer AT Serial/Parallel Adapters.

Terminals and Work Stations (RS232C)

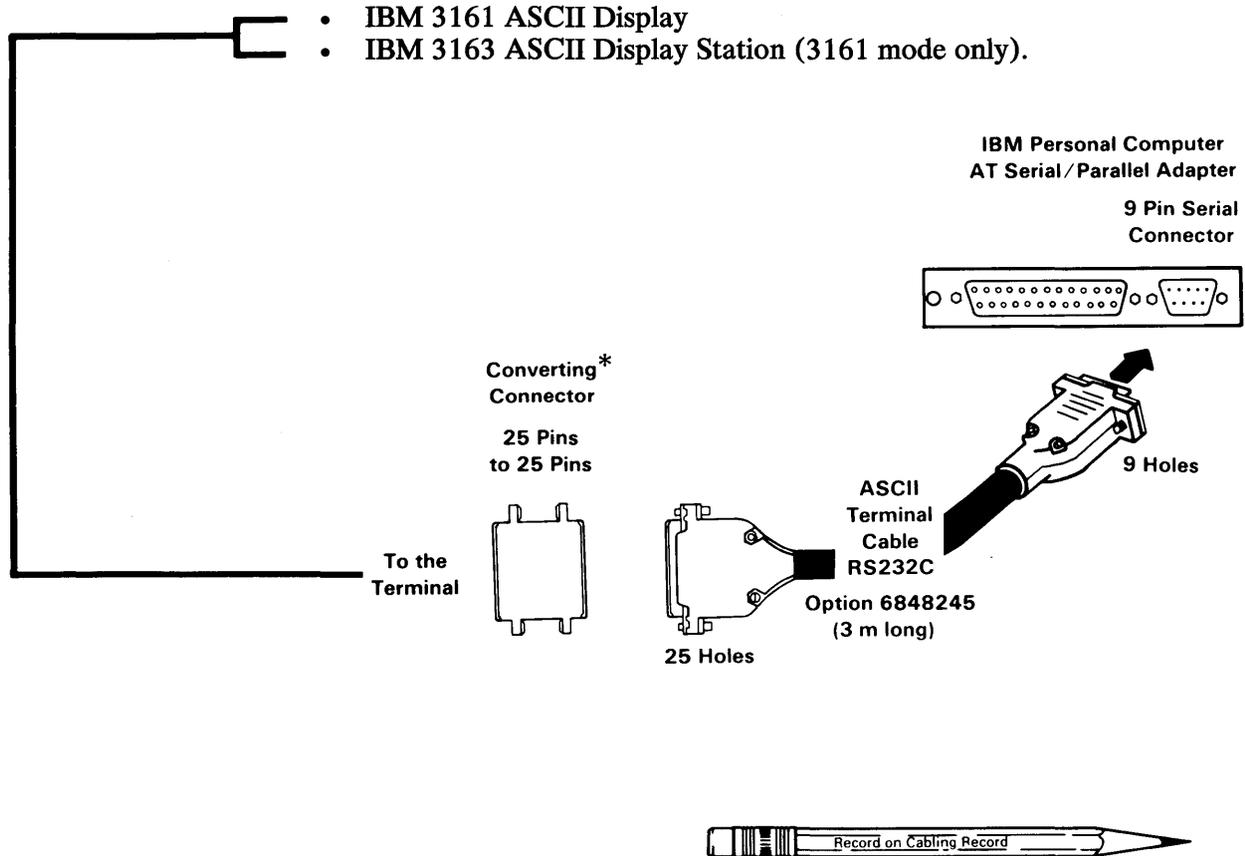
Connecting:



* Use a commercially available converting connector (such as Pryor Computer Supplies part 120-001 MM, Devoke Data Products part 6823-X Type M/M, or the equivalent) to make this connection.

Terminals and Work Stations (RS232C) (Continued)

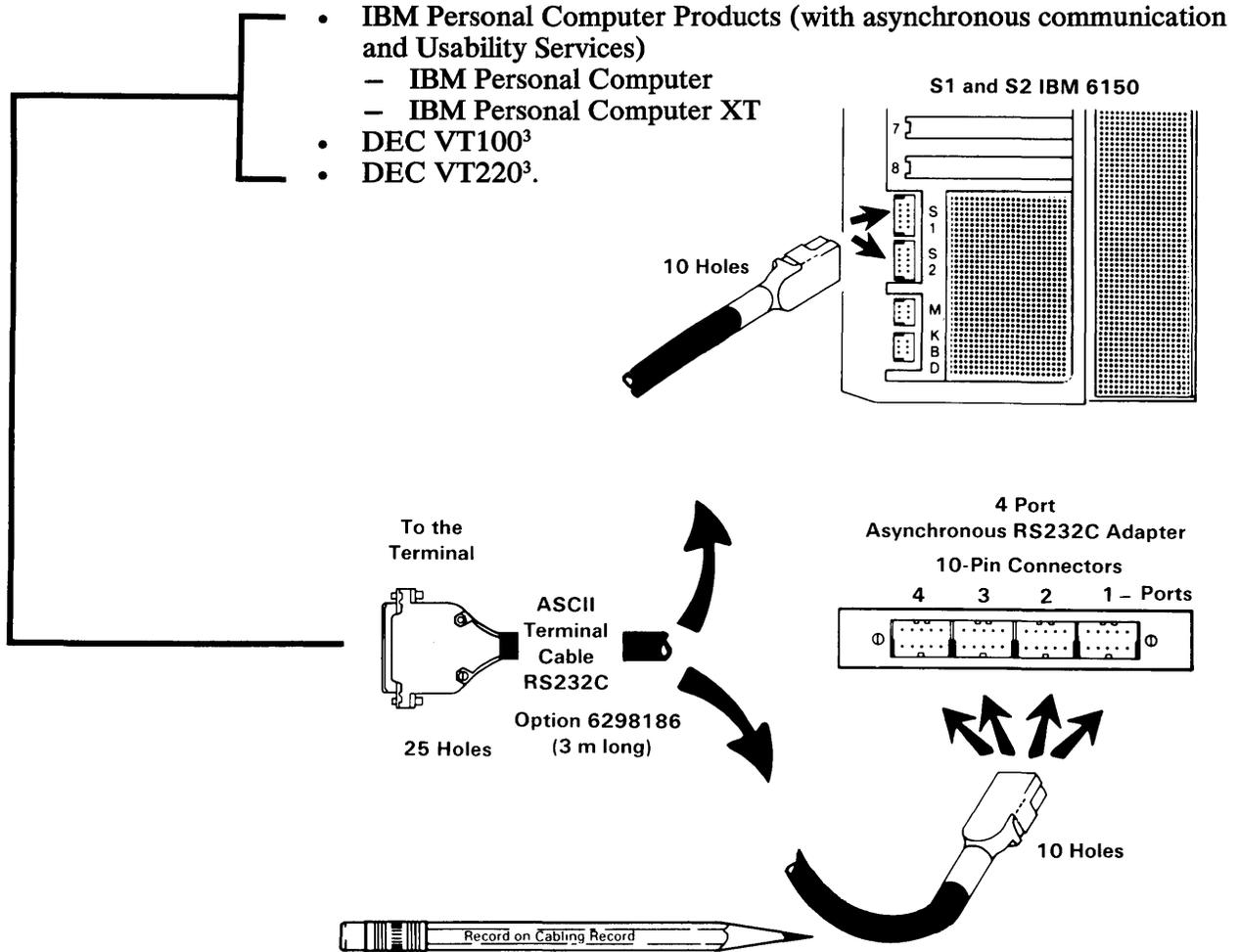
Connecting:



* Use a commercially available converting connector (such as Pryor Computer Supplies part 120-001 MM, Devoke Data Products part 6823-X Type M/M, or the equivalent) to make this connection.

Terminals and Work Stations (RS232C) (Continued)

Connecting:

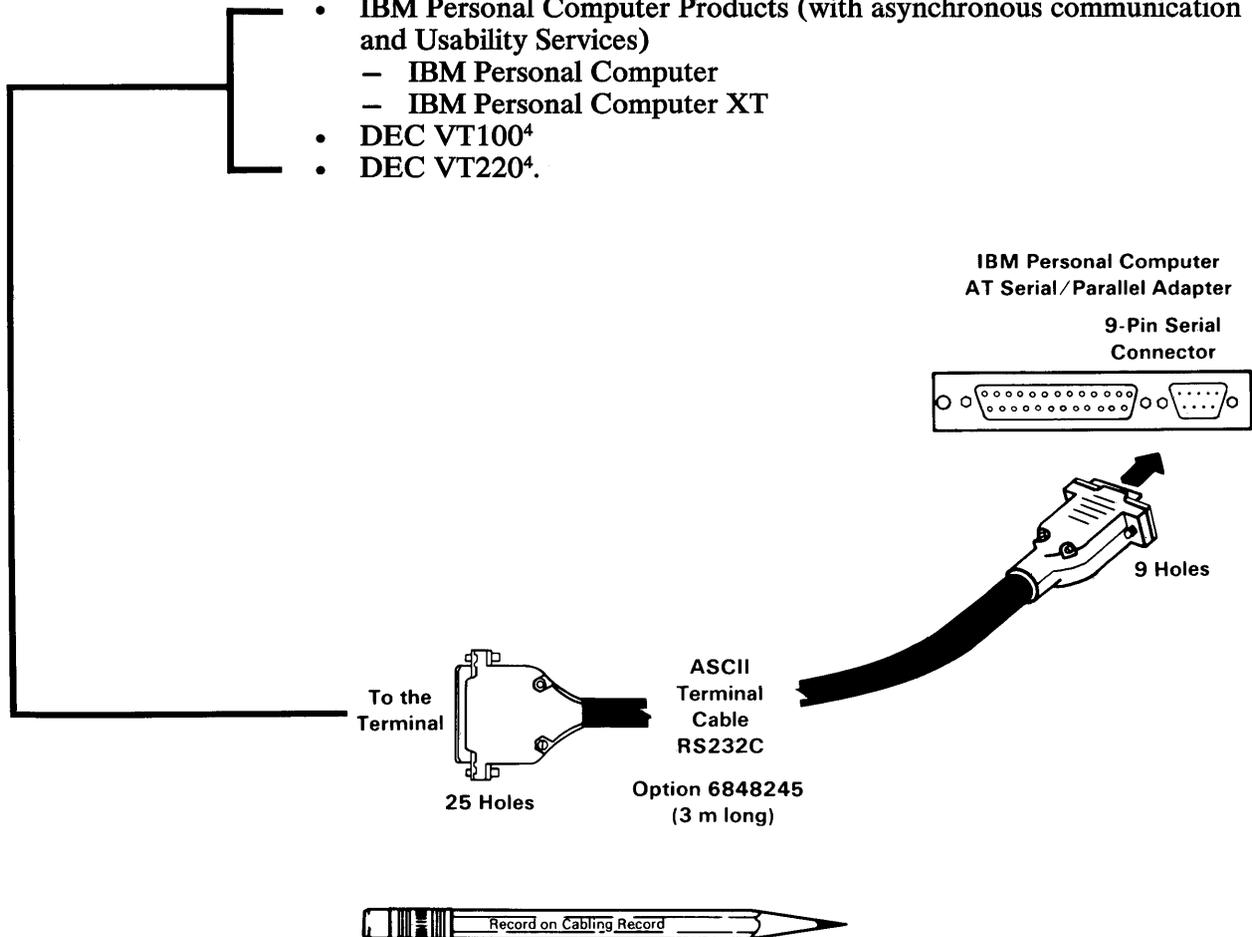


³ Registered trademarks of Digital Equipment Corporation.

Terminals and Work Stations (RS232C) (Continued)

Connecting:

- IBM Personal Computer Products (with asynchronous communication and Usability Services)
 - IBM Personal Computer
 - IBM Personal Computer XT
- DEC VT100⁴
- DEC VT220⁴

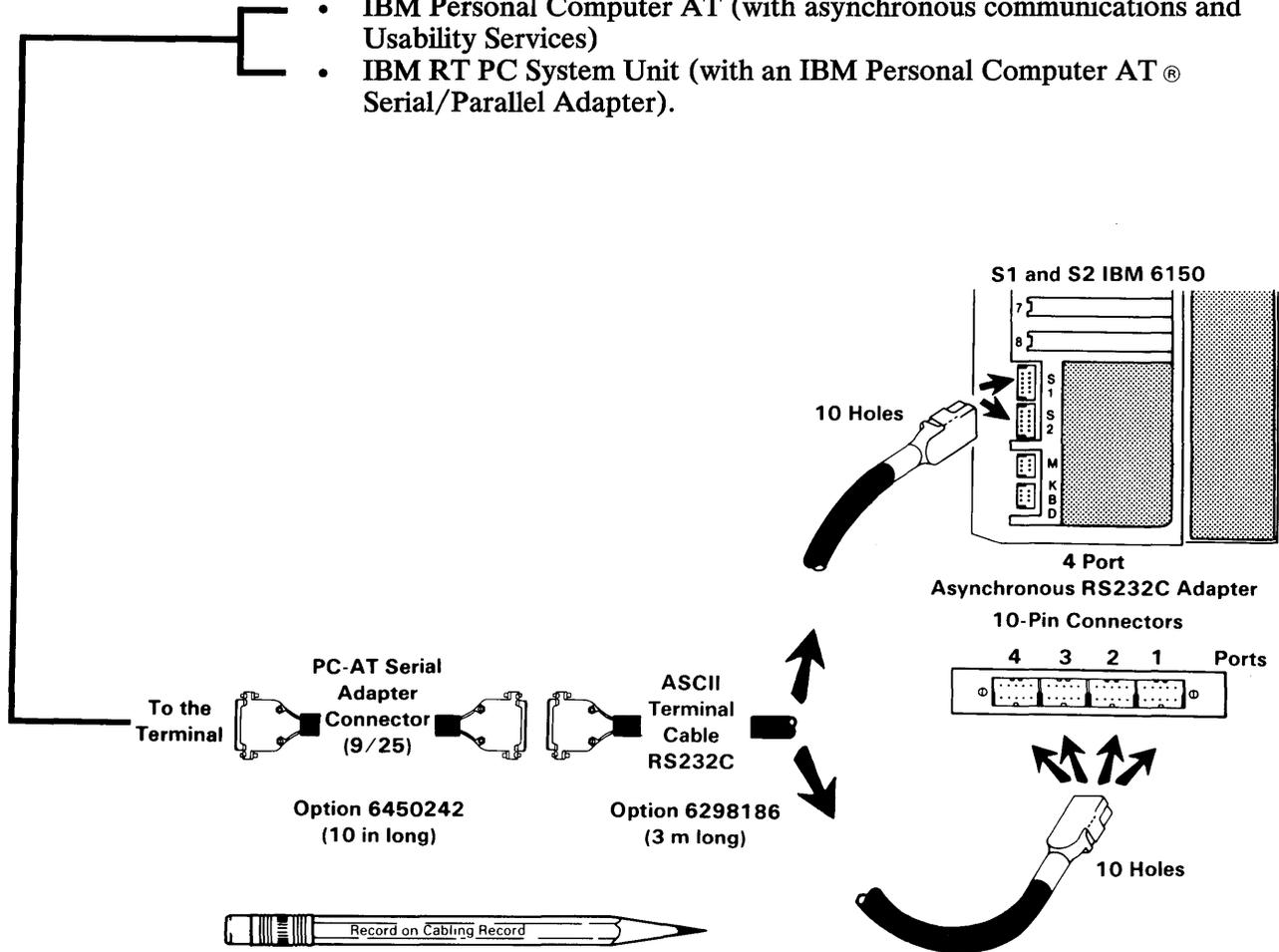


⁴ Registered trademarks of Digital Equipment Corporation.

Terminals and Work Stations (RS232C) (Continued)

Connecting:

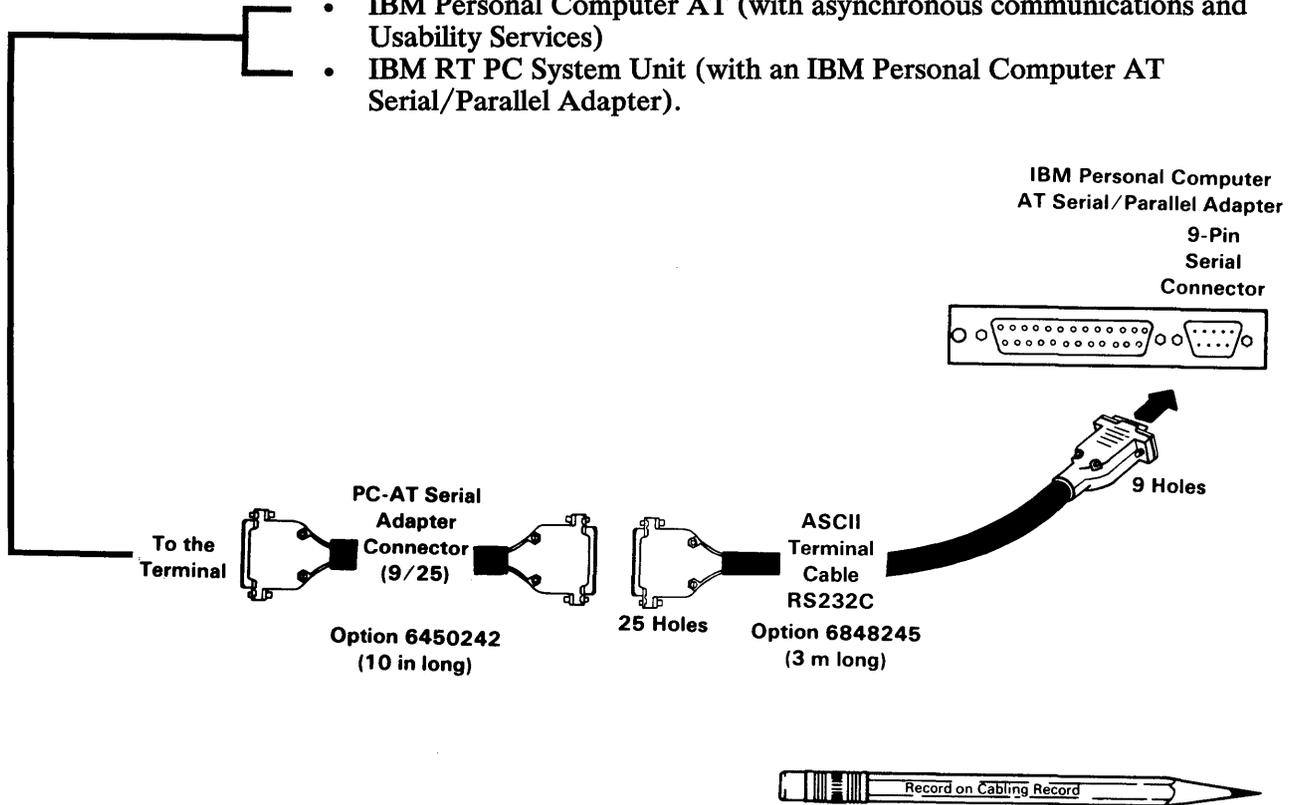
- IBM Personal Computer AT (with asynchronous communications and Usability Services)
- IBM RT PC System Unit (with an IBM Personal Computer AT[®] Serial/Parallel Adapter).



Terminals and Work Stations (RS232C) (Continued)

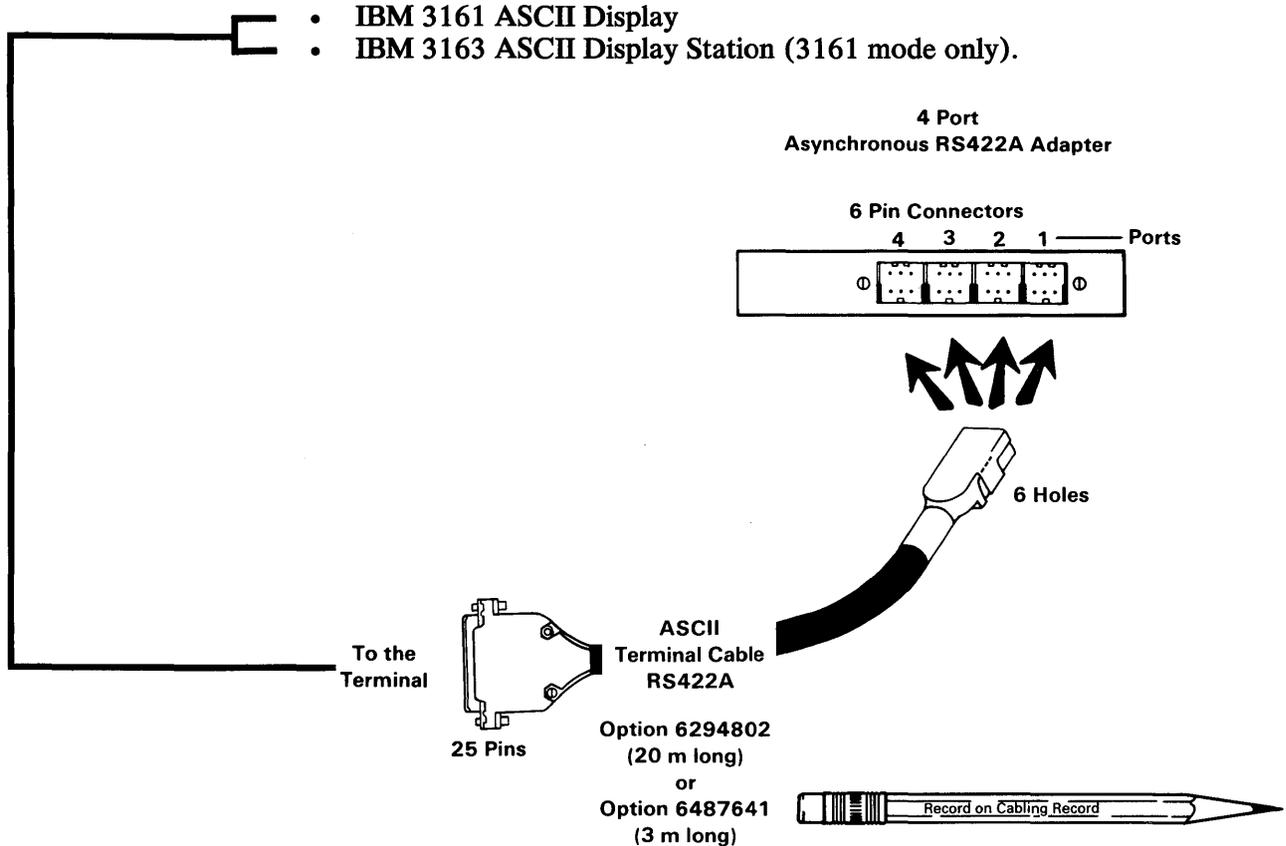
Connecting:

- IBM Personal Computer AT (with asynchronous communications and Usability Services)
- IBM RT PC System Unit (with an IBM Personal Computer AT Serial/Parallel Adapter).



Terminals and Work Stations (RS422A)

Connecting:

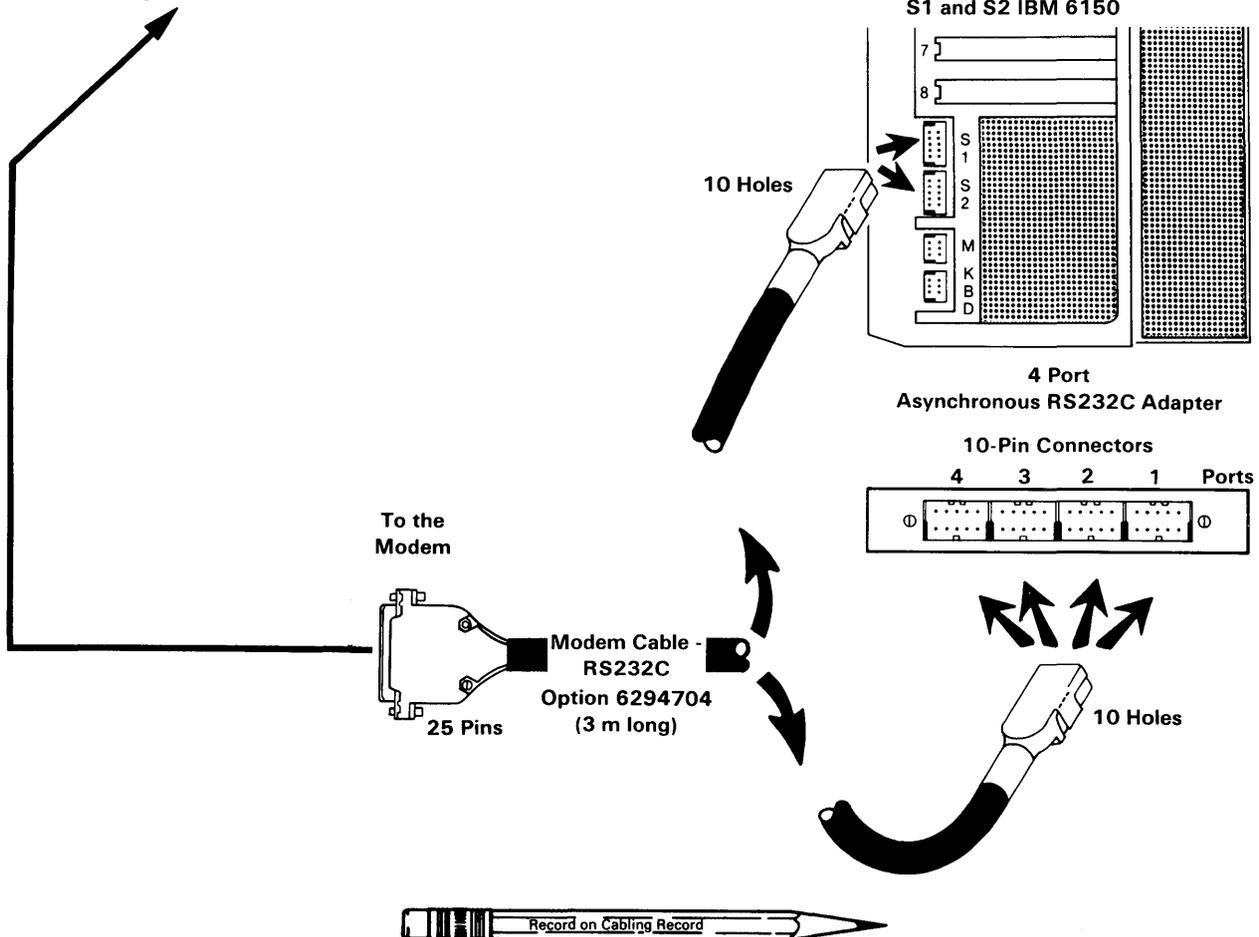


If the cables from the 4-Port Asynchronous RS422A Adapter to this terminal are longer than 122 m (399 ft), you must provide surge protection. Also, do not install these cables outdoors.

Modems and Autocall Units

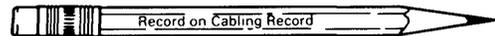
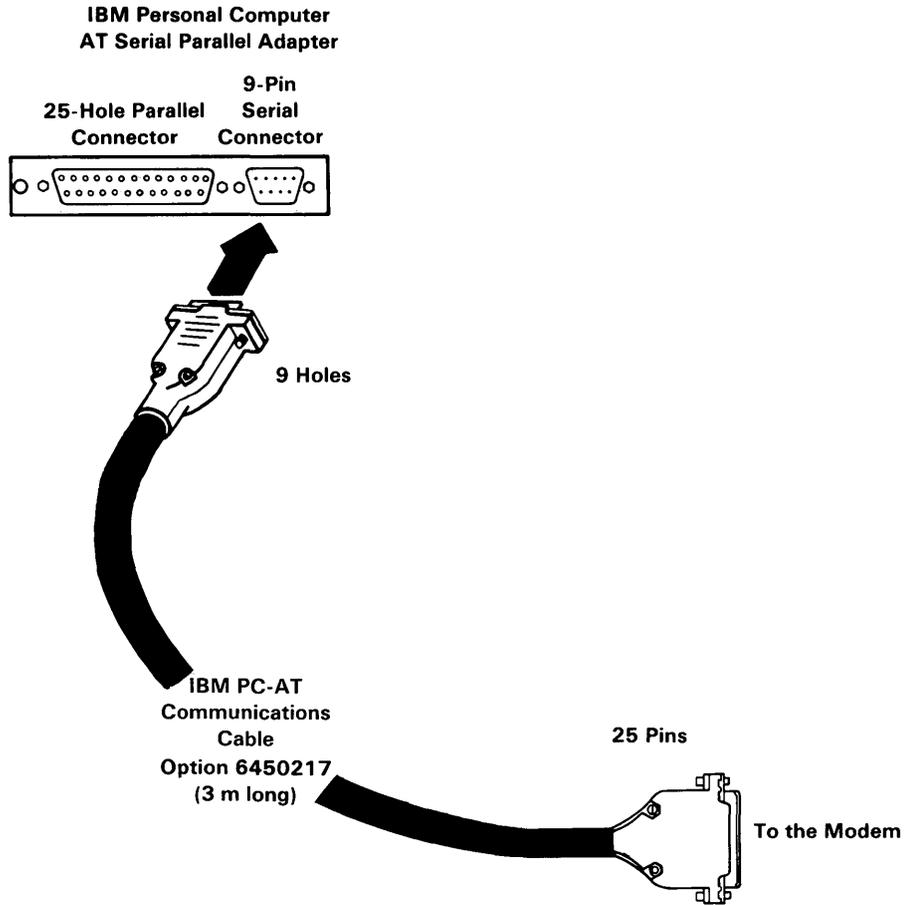
The RT PC is designed to support attachment of modems that comply with the International Telegraph and Telephone Consultative Committee recommendations V.24/V.28, as published in the report of the CCITT Seventh Plenary Assembly (Yellow Book), Geneva, 10-21 November 1980, and EIA RS232C (August 1969). Additionally, the RT PC is designed to support attachment of auto-dialer modems that conform to the Hayes AT command set, using asynchronous protocol.

Connecting: Modems



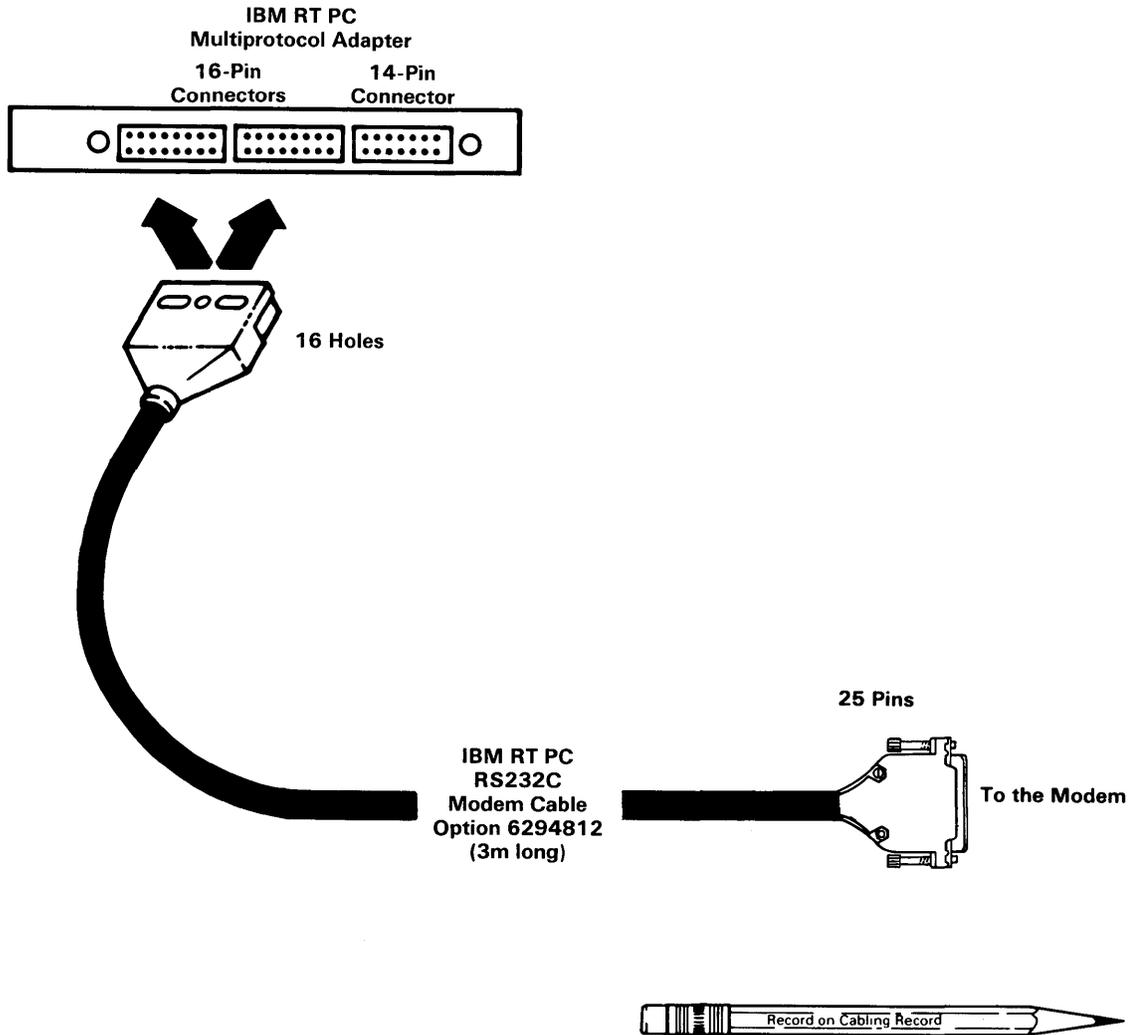
Modems and Autocall Units (Continued)

Connecting: Modems



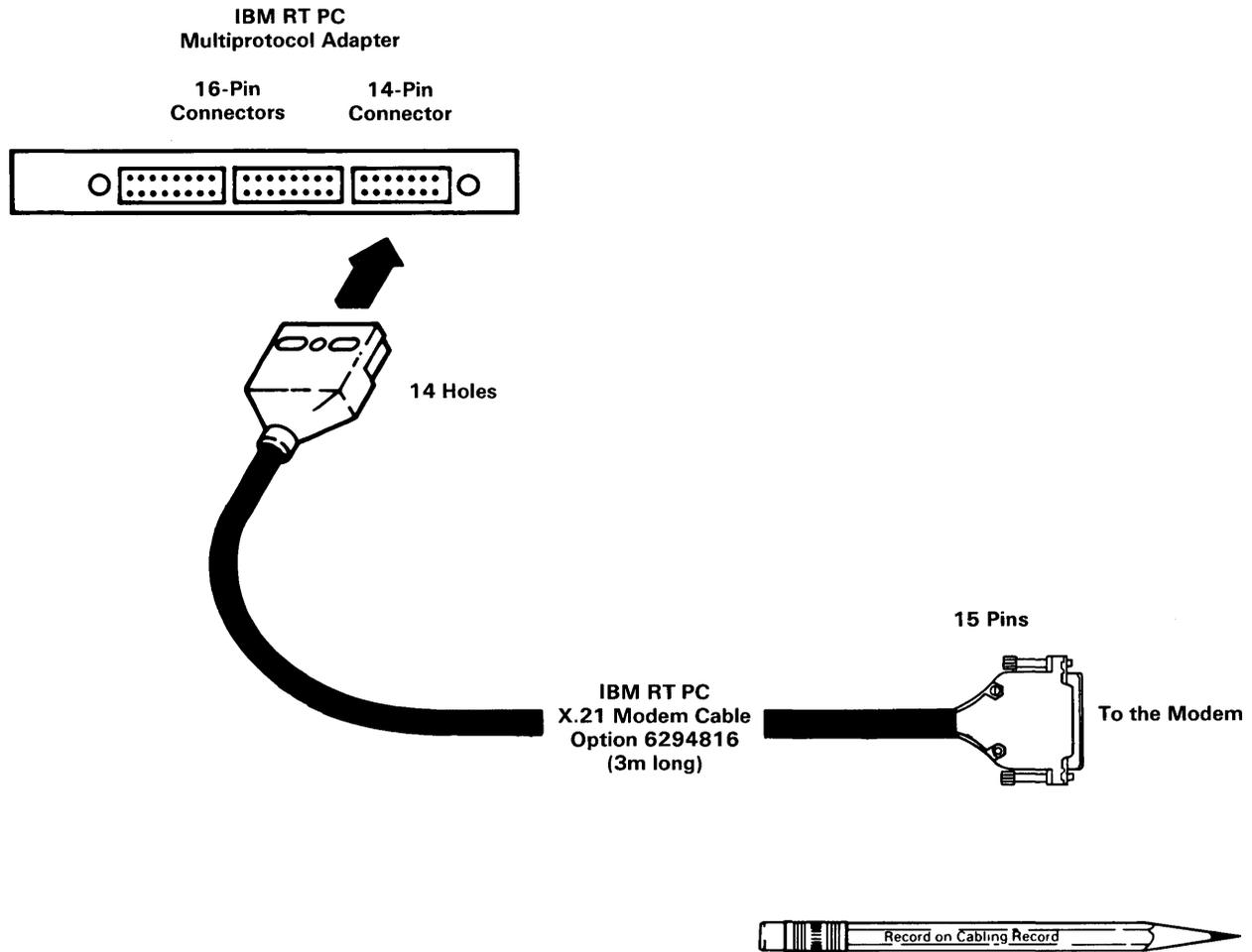
Modems and Autocall Units (Continued)

Connecting: Modems



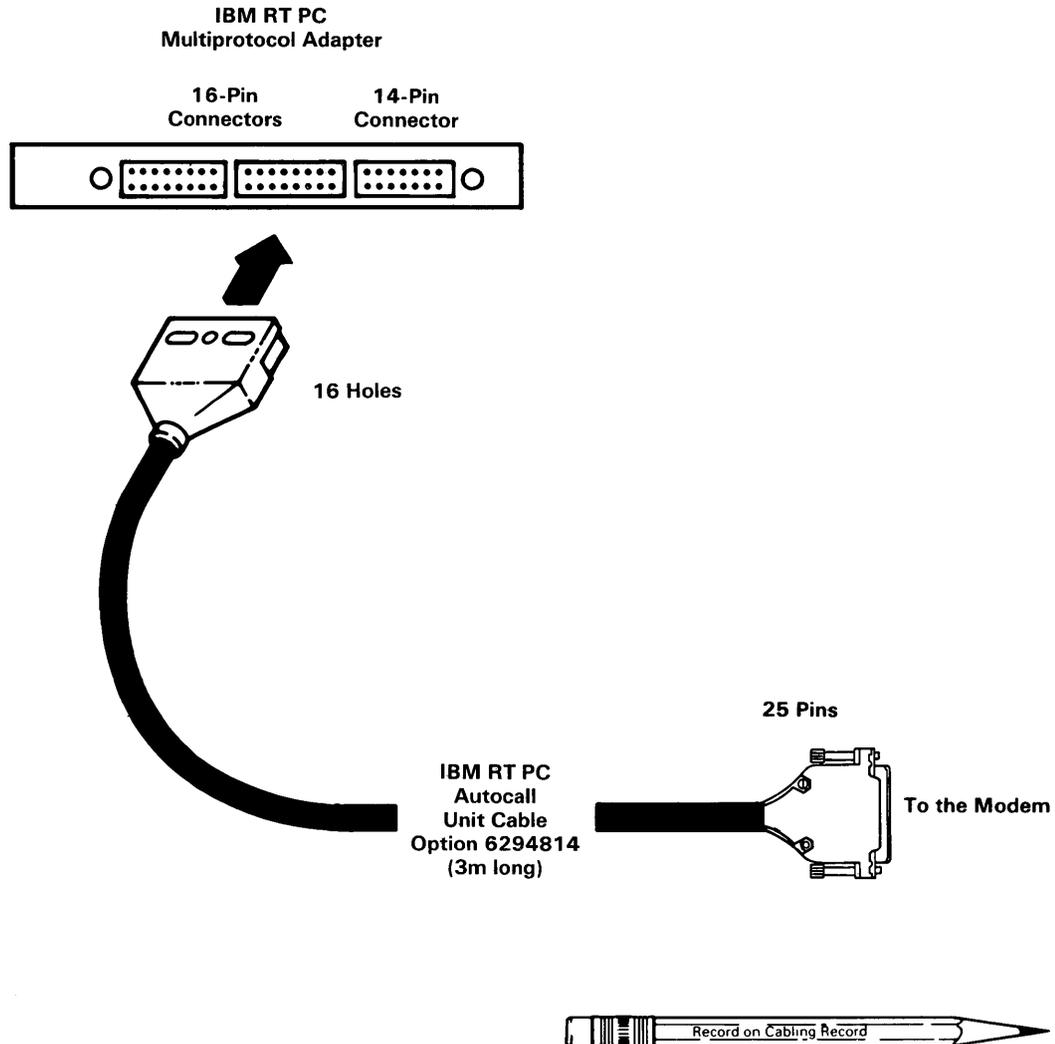
Modems and Autocall Units (Continued)

Connecting: Modems



Modems and Autocall Units (Continued)

Connecting: Autocall Unit



IBM Personal Computer Network

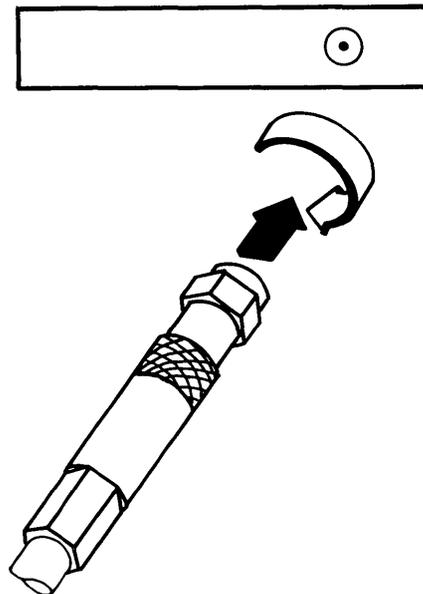
Connecting: IBM RT PC System Unit

You can connect this system to a network of communicating devices using the IBM PC Network Adapter and the appropriate IBM PC Network cable kit.

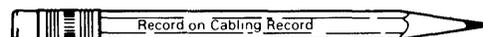
For more information, see *Setup Instructions for the IBM PC Network Transformer and Translation Unit*, *Setup Instructions for the IBM PC Base Expander*, and *Setup Instructions for the IBM PC Network Short, Medium and Long Distance Kits*.

Warning: Tighten the connector with only your fingers. Do not use a tool.

IBM PC Network Adapter



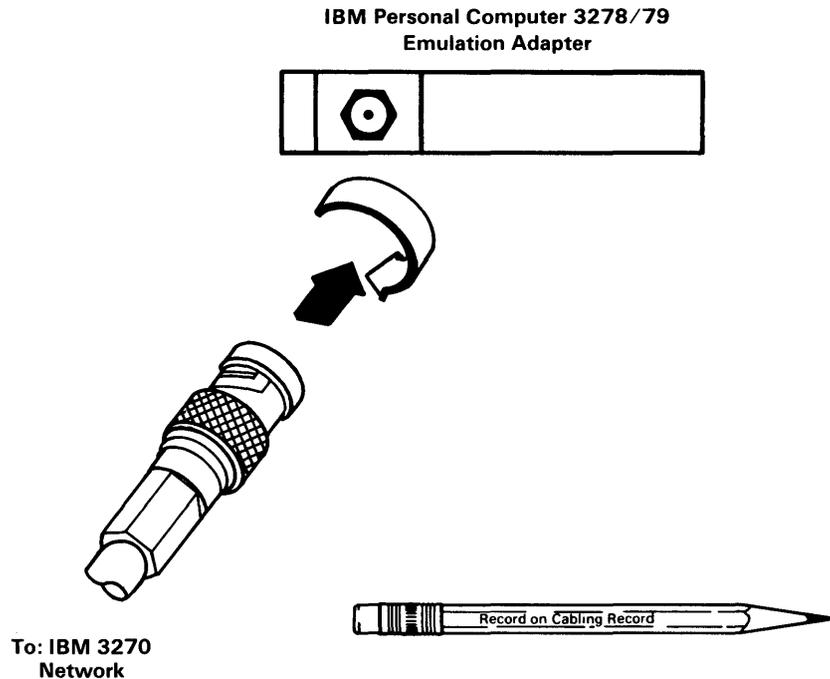
TO: IBM PC Network



IBM 3270 Network

Connecting: IBM RT PC System Unit

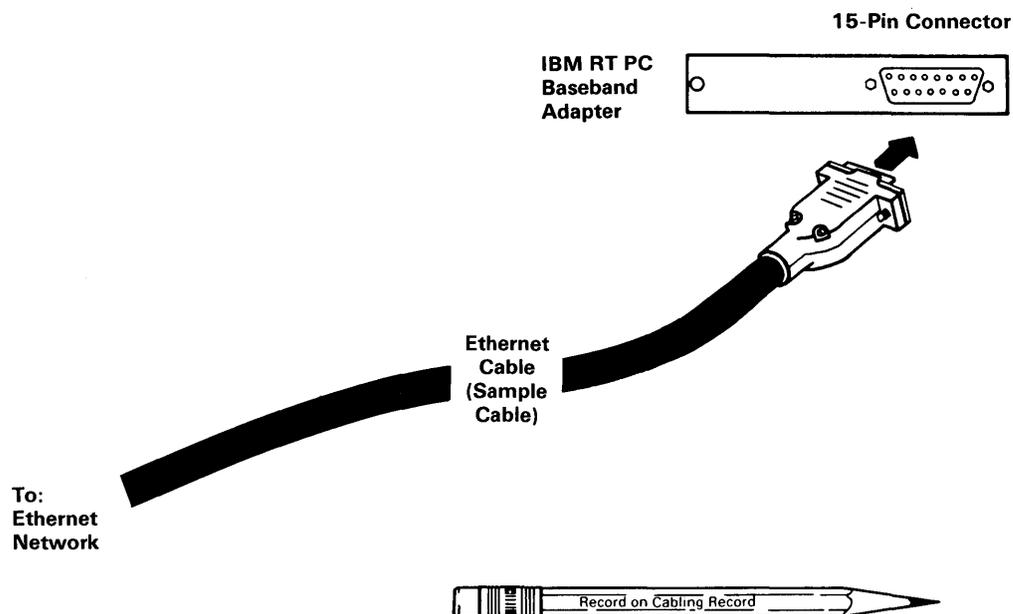
You can connect this system to an IBM 3270 network using the IBM Personal Computer 3278/79 Emulation Adapter and the appropriate coaxial cable as described in *IBM 3270 Information Display System Installation Manual - Physical Planning, GA27-2787-5*.



Ethernet Network

Connecting: IBM RT PC System Unit

You can connect the IBM RT PC system to an Ethernet⁵ network using the IBM RT PC Baseband Adapter. You should contact a qualified Ethernet installer for information on network installation. For planning information see the *IBM RT PC Baseband Adapter Hardware Technical Reference*.



⁵ Trademark of Xerox Corporation

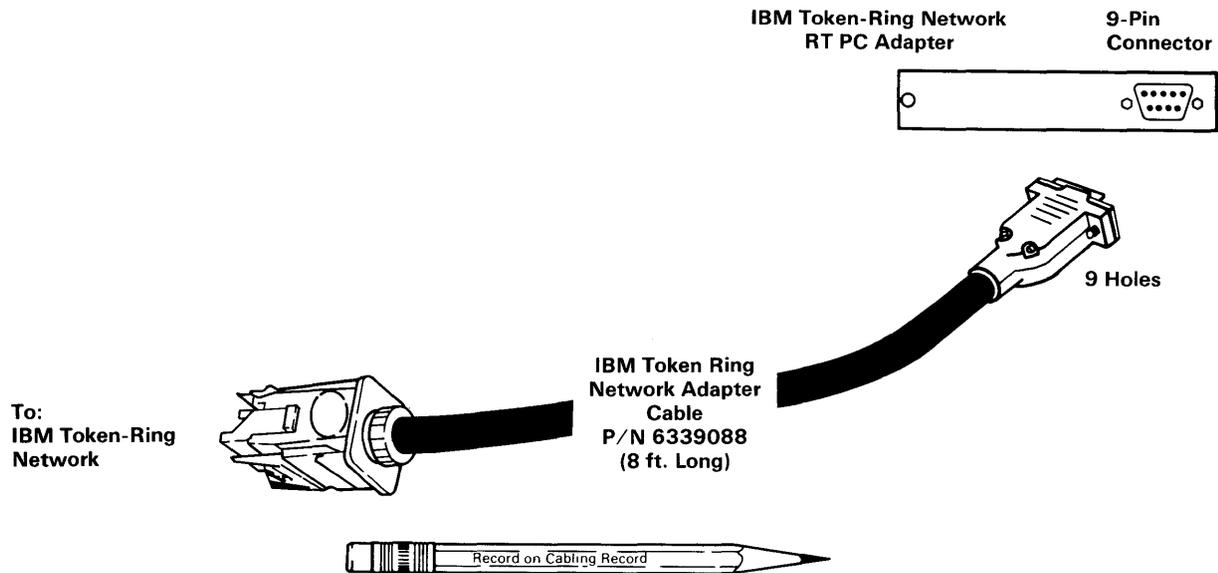
IBM Token-Ring Network

Connecting: IBM RT PC System Unit

You can connect this system to a network of communicating devices using the IBM Token-Ring Network RT PC Adapter and the appropriate IBM Token-Ring Network adapter cable.

If your system uses the IBM cabling system, connect the adapter cable as shown in the following figure.

If your system uses telephone, twisted-pair media, connect the Type 3 Media Filter to the IBM Token-Ring Network. See *IBM Token-Ring Network Telephone Twisted-Pair Media Guide, GA27-3714*.

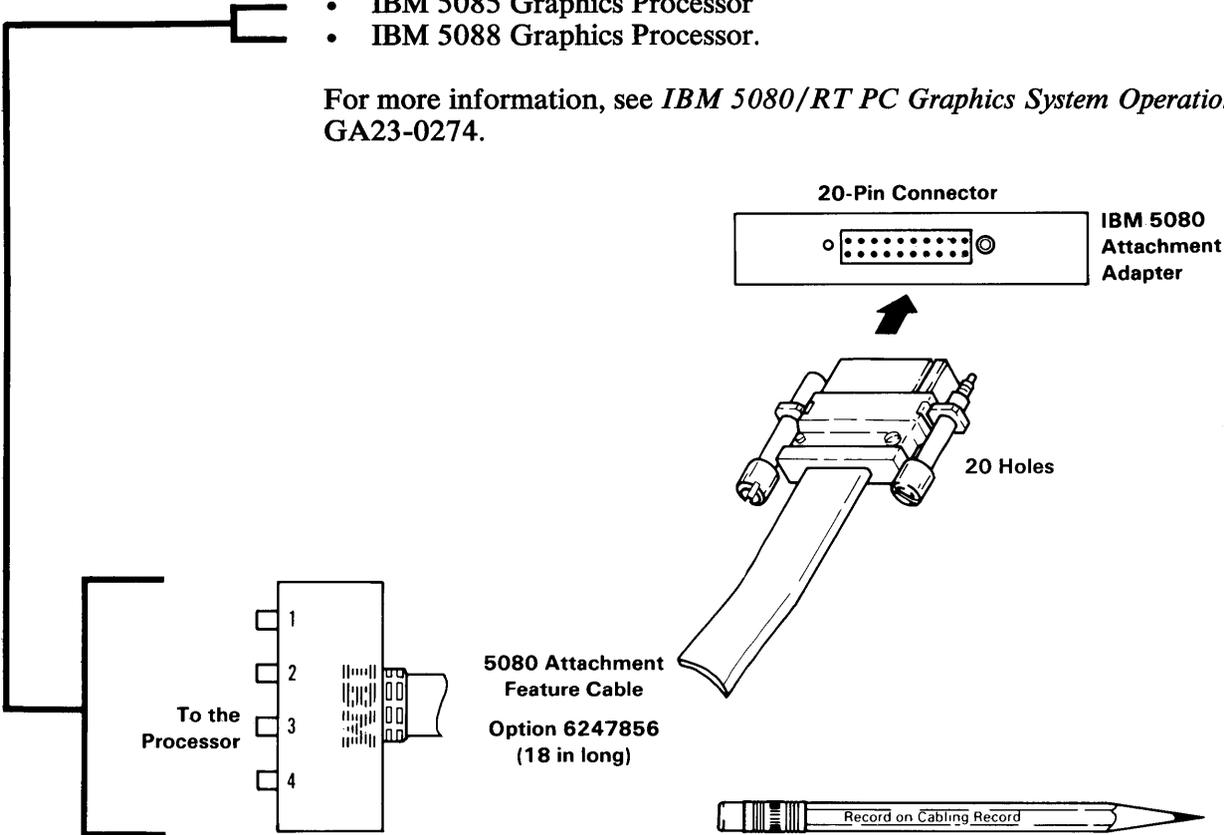


IBM 5080/IBM RT PC Graphics System

Connecting:

- IBM 5085 Graphics Processor
- IBM 5088 Graphics Processor.

For more information, see *IBM 5080/RT PC Graphics System Operation* GA23-0274.

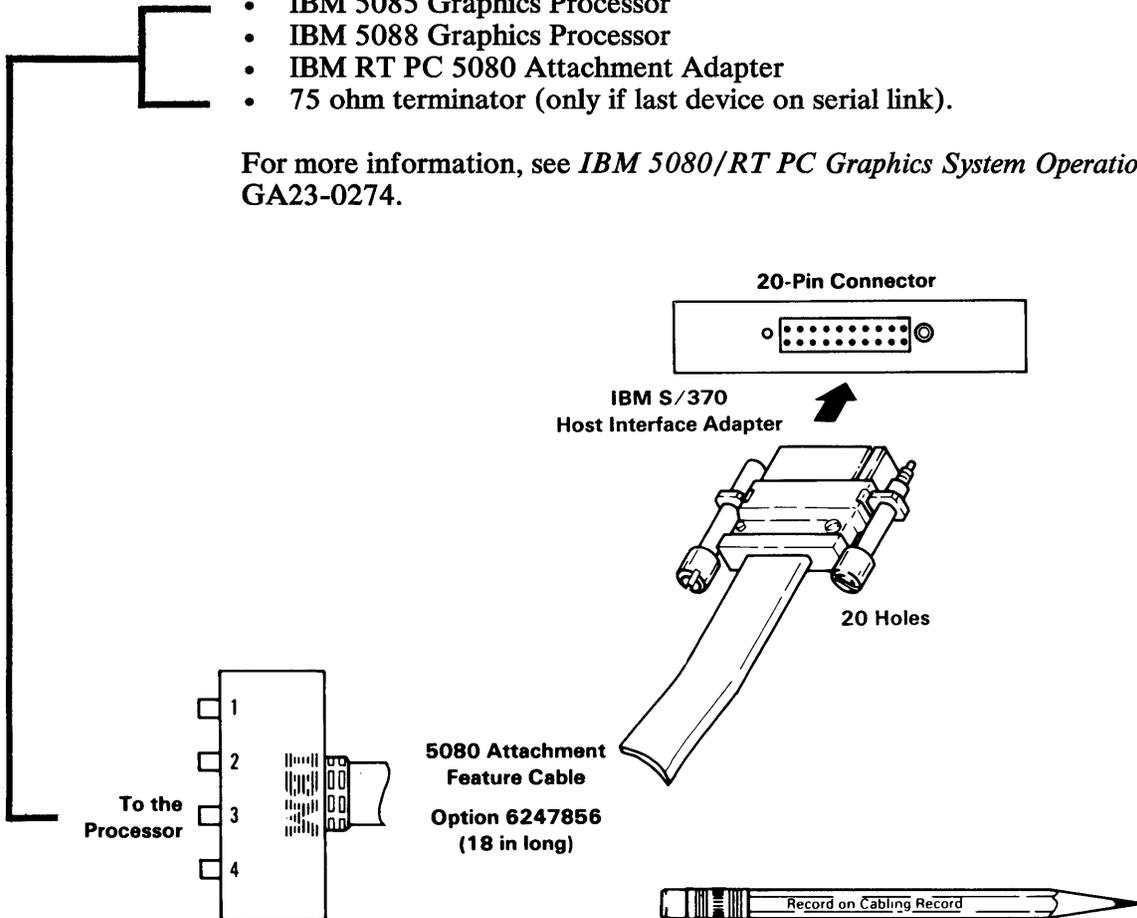


IBM S/370 Host Interface Adapter/IBM RT PC Graphics System

Connecting:

- IBM 5085 Graphics Processor
- IBM 5088 Graphics Processor
- IBM RT PC 5080 Attachment Adapter
- 75 ohm terminator (only if last device on serial link).

For more information, see *IBM 5080/RT PC Graphics System Operation*, GA23-0274.



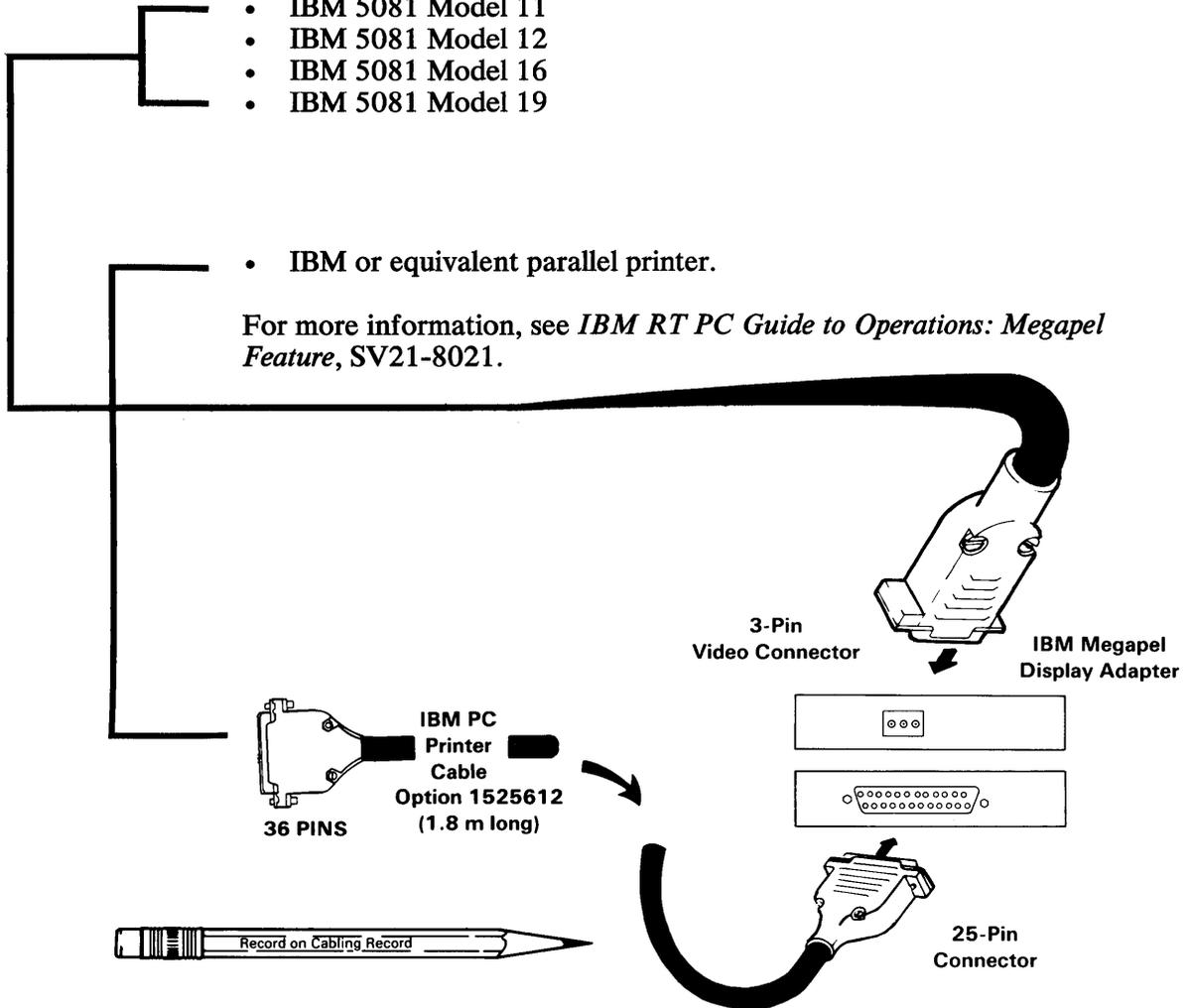
IBM Megapel Display Adapter

Connecting:

- IBM 5081 Model 11
- IBM 5081 Model 12
- IBM 5081 Model 16
- IBM 5081 Model 19

- IBM or equivalent parallel printer.

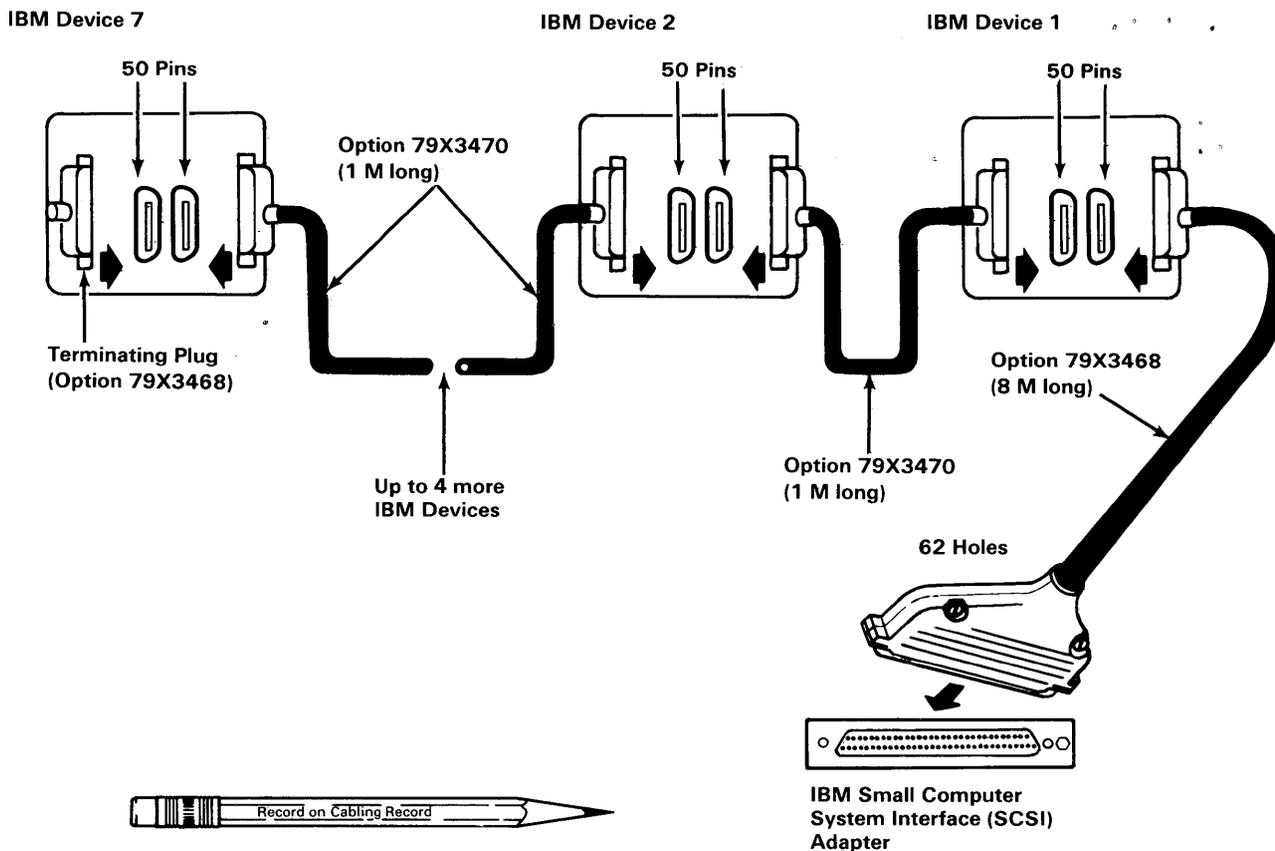
For more information, see *IBM RT PC Guide to Operations: Megapel Feature*, SV21-8021.



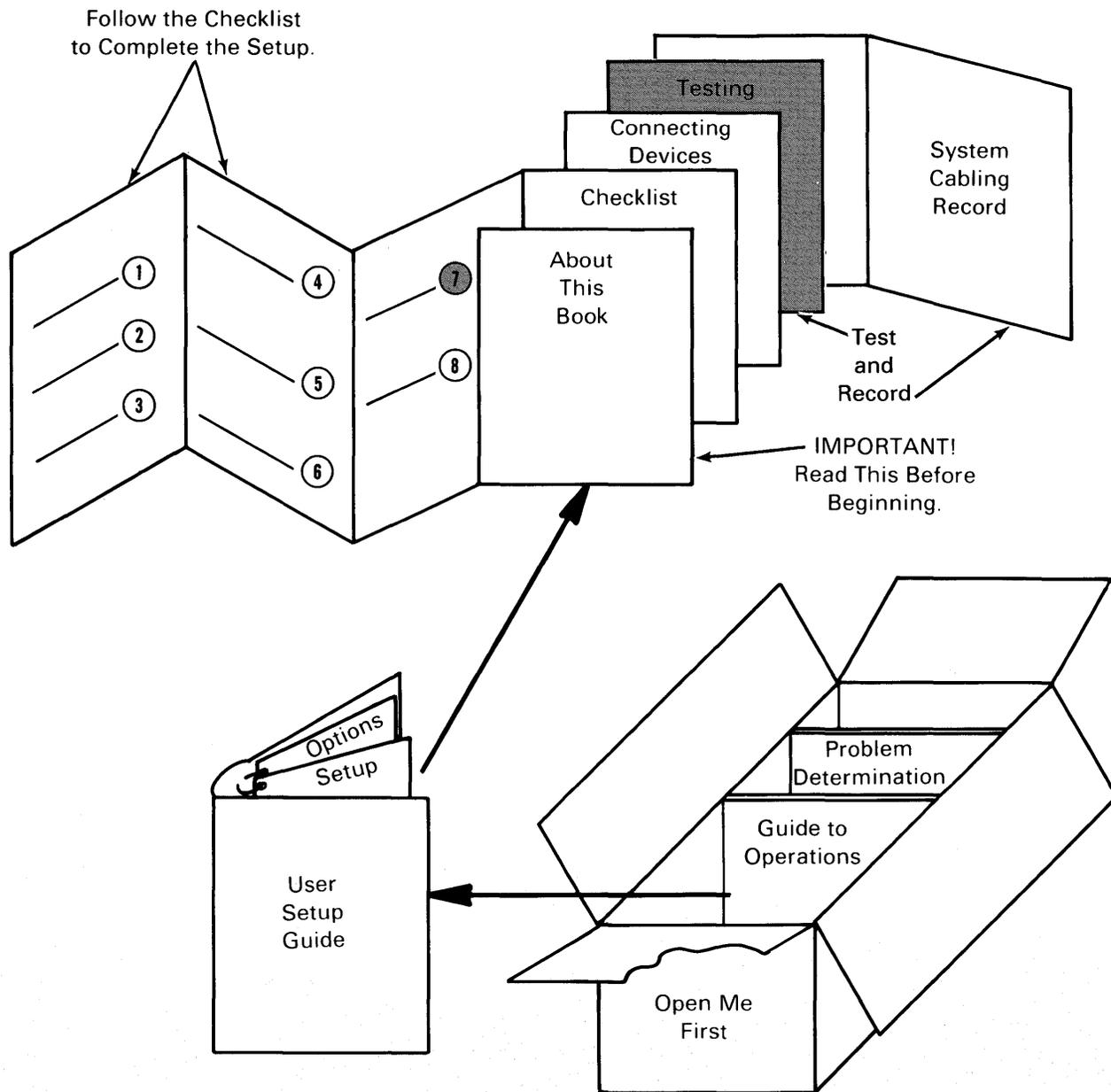
You have completed task 6. Return to the check list.

IBM RT PC Small Computer System Interface (SCSI) Adapter

Connecting: up to 7 devices



Section 3. Testing the System



Before You Start

Use this section with task 7. If the system has operational problems, go to *IBM RT PC Problem Determination Guide*.

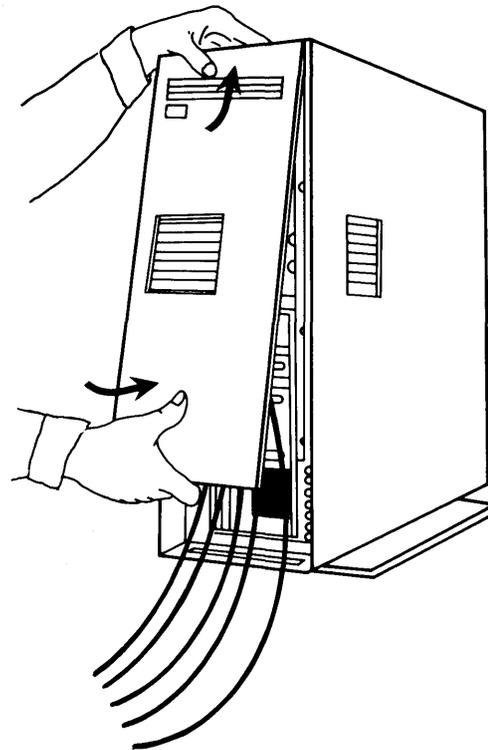
1. Ensure the power is off on *all* devices, including the system unit.
2. Connect the system unit power cable to the power connector on the rear of the system unit. Connect the power cable for each device to the power connector on the device.

CONTINUE TO THE NEXT PAGE

3. Install the rear cover.

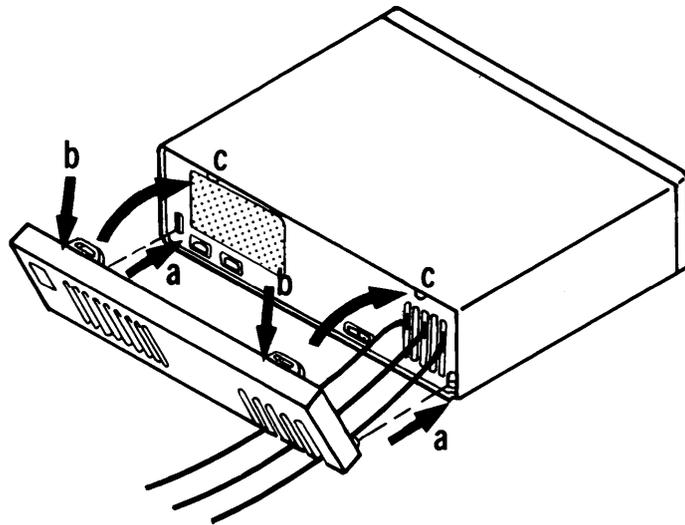
- On the IBM 6150 system unit, arrange the cables so that you can fit the rear cover in place.

Warning: Do not operate the IBM 6150 system unit for an extended period of time without the rear cover in place. It is recommended that 75 mm (3 inches) minimum clearance be provided between the IBM 6150 system unit cover louvers and adjacent walls or furniture to ensure adequate cooling.



- On the IBM 6151 system unit, do not remove the cables. Slide the cables into the slots in the cover.
 - a. Insert the lower hooks into the holes in the frame.
 - b. Push down on the back cover.
 - c. Insert the clips on the system unit into the loops on the cover.

Warning: It is recommended that 75 mm (3 inches) minimum clearance be provided between the IBM 6151 system unit cover louvers and adjacent walls or obstructions to ensure adequate cooling.



CONTINUE TO THE NEXT PAGE

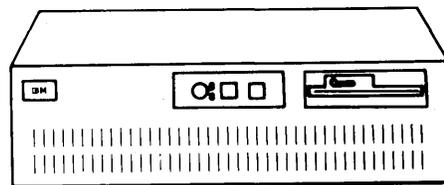
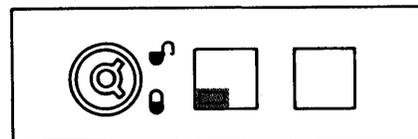
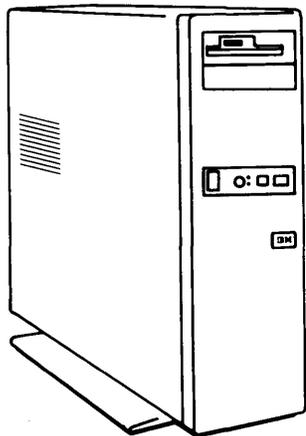
CAUTION

Devices have electrical cables and plugs designed for safety. Plug all devices only into grounded electrical outlets to avoid possible electrical shock.

4. Connect all the power cables to grounded electrical outlets.
5. Go to “Checking Out the System” on the next page.

Checking Out the System

1. Get Diagnostic Diskette 1 (DIAG-1) from the pocket in the back cover of *IBM RT PC Problem Determination Guide*.
2. Unlock the system unit by turning the key counterclockwise.
3. If the notch on the diskette is covered by a tab, remove the tab.
4. Open the diskette drive (the top drive in IBM 6150).
5. Turn the power switches on for all devices, including the system unit and immediately insert the diskette (label side up). Close the drive.
6. Is the green power-on light on?

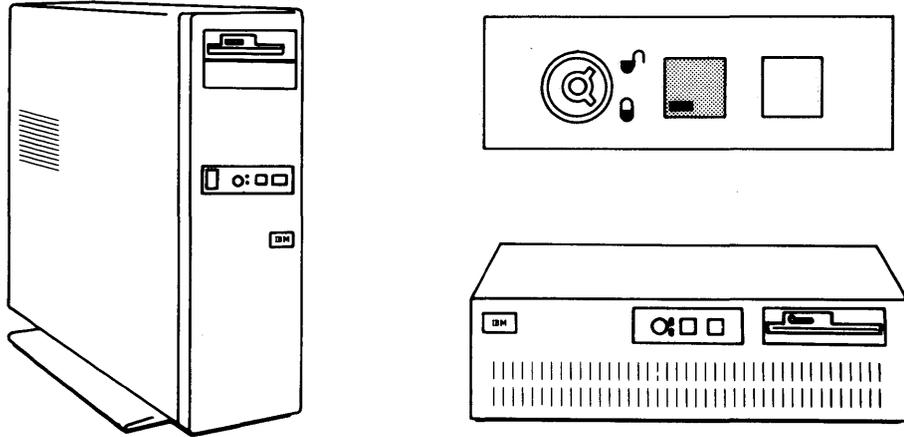


Yes. Go to the next step.

No. Check all the electrical cables and outlet.

7. After the light comes on, wait several minutes while numbers flash on and off on the two-digit display.

-
8. Is the red two-digit display blank (no numbers on it)?



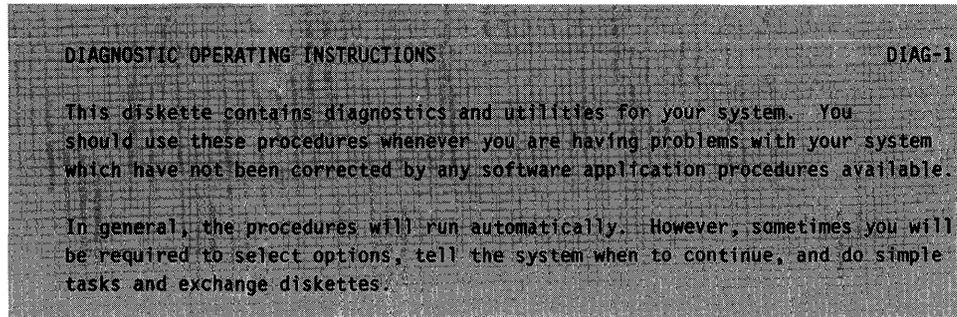
Yes. Go to the next step.

No. Go to *IBM RT PC Problem Determination Guide*.

-
9. Adjust the brightness and contrast controls on the display, if the display has these controls. If you need help operating the display, see *IBM RT PC Guide to Operations*.

Note: If your system is connected to a IBM 5085 Graphics Processor, the keyboard belongs to the 5081 Display at power on. If you have not switched the keyboard to your display using the **Alt** and **Sw Keybd** keys, see the *5080/RT PC Graphics System Operation*.

10. Do you see the following information on the display screen?



Yes. Go to the next step.

No. Go to *IBM RT PC Problem Determination Guide*.

11. Read the **DIAGNOSTIC OPERATING INSTRUCTIONS**.

Some of the key functions are listed below, in case you need them.

- **Enter** continues the procedure or performs an action.
- **End** stops a test or an action.
- **F10** returns to the previous menu and cancels any changes.
- **Escape** resets the procedures and returns to the Diagnostic Operating Instructions.
- **Page Down** lets you see information below that shown on the screen.
- **Page Up** lets you see information above that shown on the screen.
- **Backspace** lets you correct errors.

12. Press **Enter**.

13. Do you see the following information on the screen?

```
FUNCTION SELECTION

ID  ITEM
1  Diagnostic Routines
    This selection allows you to test your machine's hardware and
    determine if you have a hardware problem. Any problem will be indicated
    by a SRN (Service Request Number). The SRN will allow your service
    representative to quickly determine what parts are required to repair
```

Yes. Go to the next step.

No. Go to *IBM RT PC Problem Determination Guide*.

14. Use the 4 on the typewriter key area, not the numeric keypad. Press **Enter**. This process may take several minutes.

15. Do you see the **INSTALLED OPTIONS LIST**?

```
INSTALLED OPTIONS LIST DIAG-1

The following options are installed on your machine.

ADAPTER/DEVICE SLOT ADDRESS IRQ DMA
Processor and Memory Management Card A
2MB Memory Expansion Option C
```

Yes. Go to the next step.

No. Go to *IBM RT PC Problem Determination Guide*.

16. Compare the **INSTALLED OPTIONS LIST** with the system cabling record you completed while you connected devices to the system unit (task 6 plus Section 2). The slot numbers of the adapters on the system cabling record should be the same as the slot numbers of the adapters on the Installed Options List. Do the slot numbers match?

Yes. Go to the next step.

No. Call the person who installed the options and report that the two lists do not match.

17. If you have a 4-Port Asynchronous RS232C Adapter, 4-Port Asynchronous RS422 Adapter, or IBM Personal Computer AT Serial/Parallel Adapter installed, you need to note one additional piece of information on the system cabling record. Look at the adapter names on the screen and note the number after the name. Write this number in the ID column on the system cabling record. The information on your screen will look similar to the following:



ADAPTER/DEVICE	SLOT
Personal Computer AT Serial/Parallel Adapter	
Personal Computer AT Serial/Parallel Adapter	
4-Port Asynchronous RS232C Adapter	
4-Port Asynchronous RS232C Adapter	
4-Port Asynchronous RS422 Adapter	
4-Port Asynchronous RS422 Adapter	

The numbers immediately after the adapter names mean that the *primary* (1) Serial/Parallel Adapter is in slot 3, and the *alternate* (2) is in slot 6. The first 4-port adapter is in slot 2; the second, in slot 4; the third, in slot 7; and the fourth, in slot 8.

An X may appear after the adapter name if the switches on the adapter are set incorrectly.

18. Look at the adapter names on the screen. Write on the system cabling record the names of adapters you have not yet recorded. Write the names of only adapters in slot numbers 2 through 8 in IBM 6150 and slot 1 through 5 in IBM 6151. Do not worry about slots not listed on the cabling record. The completed system cabling record should match the information on the screen for these numbered adapter slots.

19. Remove the diagnostic diskette from the drive and return it to the pocket in the back cover of *IBM RT PC Problem Determination Guide*.

Appendix A. System Cabling Records

Purpose

The system cabling record provides a place to record the names of the devices and the adapter or port to which you connected each device. Carefully complete this record. You must have this information when you test the system (task 7 plus Section 3) and when you install the operating system.

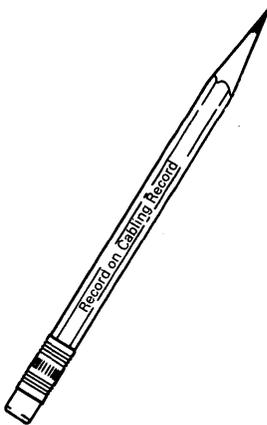
Using the System Cabling Record

Get the system cabling records from the separate package of forms. Study the appropriate sample record and then do the following:

1. Record the cabling information immediately after you cable each device to the system unit.
2. As you connect (cable) each device to an adapter, note the slot number the adapter is in. (as it is printed in Section 2) in the space corresponding to the slot where the adapter is installed.

If more than one adapter of the same type is installed, record the name as many times as necessary.

3. Record the name of each device on the line corresponding to the adapter connector (port) to which you made the connection.
 - Slots that can contain 4-port adapters have four lines for recording device names. Slots that can contain only adapters with two connectors or ports (for example, the IBM Personal Computer AT

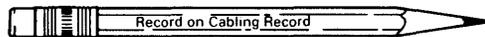


Serial/Parallel Adapter or the IBM Monochrome Display and Printer Adapter) have two lines for recording device names.

Disregard the extra lines on the form if the adapter has only one or two ports.

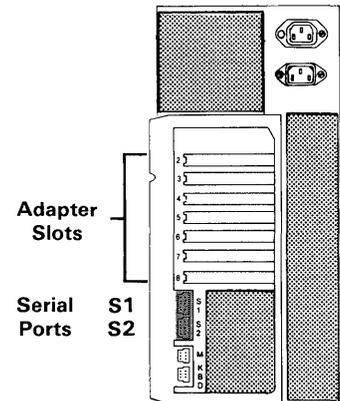
- Record only the devices you connect. Depending on your system, you might not write in all the spaces. Do not record where you connect the keyboard and mouse.
4. The ID column under Adapters is provided to distinguish between adapters of the same type. You will complete this part of the cabling record when you test the system in Section 3.

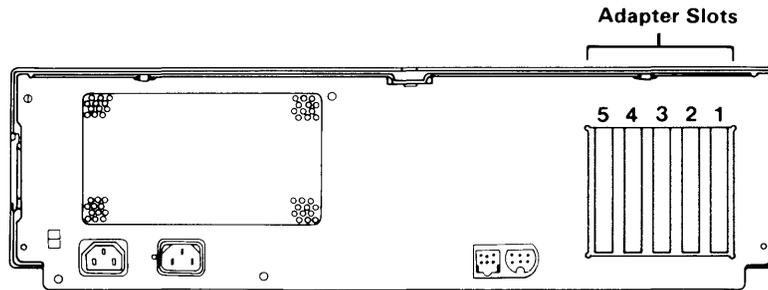
You must complete the System Cabling Record before you leave Section 2. The success of the system setup process depends on the information on this form.



Adapters			Devices
Name	ID	Connectors (Ports)	
Slot 2 Advanced Monochrome Display Adapter		1	Advanced Monochrome Display (6153)
		2	
		3	
		4	
Slot 3 PC AT Serial / Parallel Adapter	1	Serial Port 1	IBM 4201 Proprinter
		Parallel Port 2	IBM 5101 Writer
Slot 4 IBM PC Network Adapter		1	(Network)
		2	
		3	
		4	
Slot 5 IBM RTPC Streaming Tape Drive Adapter		1	IBM Streaming Tape Drive
		2	
		3	
		4	
Slot 6 PC AT Serial / Parallel Adapter	2	Serial Port 1	IBM 3163 ASCII Display Station
		Parallel Port 2	IBM 5182 Color Printer
Slot 7 4-Port Asynchronous Adapter 232C	1	1	IBM 3161 ASCII Display Station
		2	"
		3	"
		4	"
Slot 8 4-Port Asynchronous Adapter 422A	2	1	IBM 3161 ASCII Display Station
		2	"
		3	"
		4	"

S1	IBM 4201 Proprinter
S2	IBM 7371 Plotter





Adapters			Devices
Name	ID	Connectors (Ports)	
Slot 1 PC AT Serial Parallel Adapter	1	1 Serial	IBM 4201 Proprinter
		2 Parallel	IBM 5201 Printer
Slot 2 IBM Streaming Tape Drive Adapter		1	Streaming Tape Drive
		2	
		3	
		4	
Slot 3 4-Port Asynchronous Adapter 252C	1	1	IBM 3161 ASCII Display Station
		2	"
		3	"
		4	"
Slot 4 4-Port Asynchronous Adapter 422A	2	1	IBM 3163 ASCII Display Station
		2	"
		3	"
		4	"
Slot 5 Advanced Monochrome Display Adapter		1	Advanced Monochrome Display
		2	(6153)
		3	
		4	



IBM RT PC

Reader's Comment Form

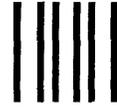
IBM RT PC User Setup Guide

SV21-8020-1

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For prompt resolution to questions regarding set up, operation, program support, and new program literature, contact the authorized IBM RT PC dealer in your area.

Comments:

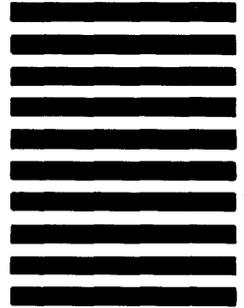


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Y N Is the purpose of this book clear?

Y N Is the table of contents helpful?

Y N Is the index complete?

Y N Are the chapter titles and other headings meaningful?

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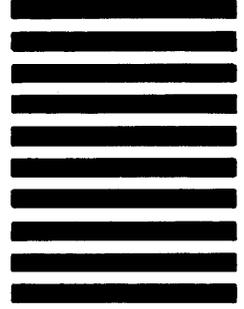
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