IBM Instruments Inc.

Computer System Customer Setup

GC22-9193

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1.0 INTRODUCTION

This publication provides step-by-step instructions for unpacking, assembling, and connecting the various units of the Computer System. The configuration documented here includes the processor unit with a printer/plotter, an optional 8-inch dual diskette unit and a keyboard as shown in Figure 1-1. Because of the modular design of the Computer System, other configurations may vary.

The Computer System is shipped partially assembled. That is, the processor board, the keypad, and the printer/plotter are all included in the processor unit when you receive it. The display bridge mount, the CRT display itself, the keyboard, and the diskette unit are added to the processor unit in the field.

Features such as memory expansion or sensor boards ordered with the Computer System are already in the processor unit when you receive it. When these features are ordered as add-on items, they are shipped separately and instructions for adding them are included in that shipment.

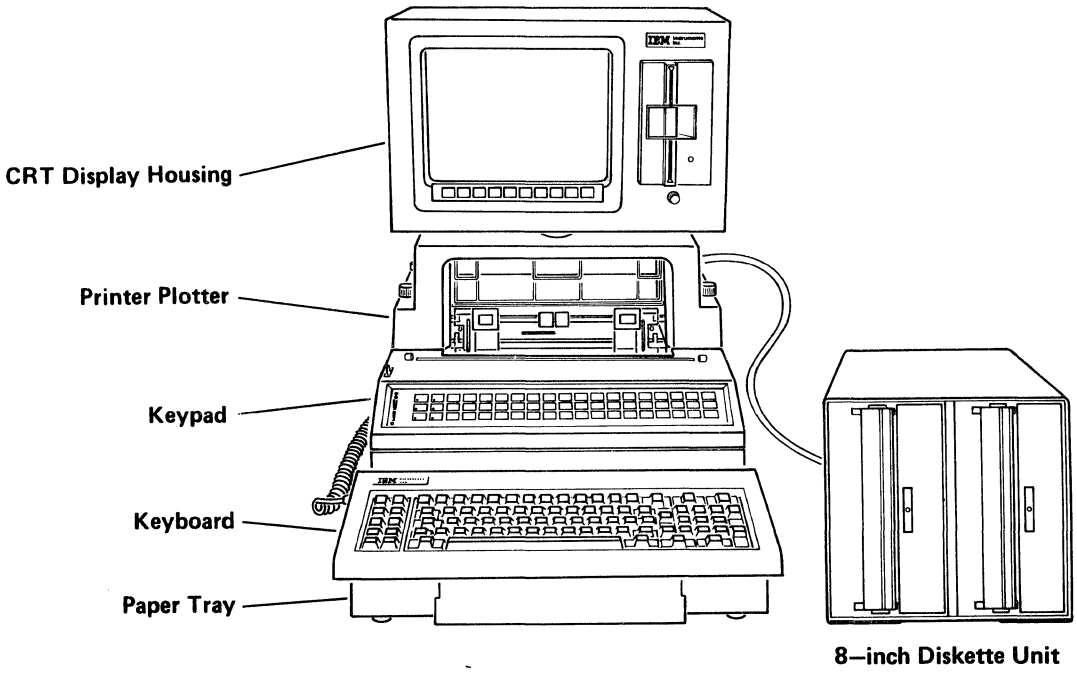


Figure 1-1. The IBM Instruments Computer System.

1.1 INSPECTION OF SHIPPED PARTS

You should unpack your Computer System as soon as possible after you receive it. A parts list is included in the shipment. This list shows the major assemblies that should be included with your system when it arrives. As you follow the unpacking instructions below, inspect these items for obvious damage (dents, bent panels, etc.) or missing parts. Report any damage to the carrier immediately and notify your IBM Instruments Inc. representative.

NOTE: The original shipping containers and packing materials should be retained and used to return any part of the Computer System to IBM Instruments, Inc.

1.2 UNPACKING THE PROCESSOR UNIT

NOTE: The processor unit weighs approximately 32 pounds (14.5 kg). You may wish to use two people for unpacking and assembly.

1. Open the shipping container and remove the packing material from around the processor unit.

2. Remove the unit from its packaging and move it to the area where it will be used. Be sure that there is enough work space to complete the assembly.

3. Inspect the unit for obvious physical damage.

4. Inspect the power cord, keyboard, keyboard cable, and paper tray for the printer/plotter for obvious physical damage. (Note: a package of wrap cables for use with diagnostics is included; check these cables for damage).

5. Check the packing material for overlooked parts, then move the packing material to an out of the way place.

1.3 UNPACKING THE DISPLAY UNIT

NOTE: The display unit weighs approximately 20 pounds (9.3 kg). You may wish to use two people for unpacking and assembly.

1. Open the shipping container and remove the packing material from around the display unit.

2. Remove the display from its packaging and locate it near the processor unit. The CRT display is glass, so be especially careful when handling it.

3. Remove the display bridge mount from the container.

4. Inspect the display unit and mount for obvious damage.

5. Check the packing material for overlooked parts, then remove the packing material to an out-of-the-way place.

1.4 UNPACKING THE DISKETTE UNIT

1. Open the shipping container and remove the packing material from around the diskette unit.

2. Remove the diskette unit from its packaging and locate it near the processor main housing.

3. Inspect the diskette unit for obvious damage.

4. Check the packing material for overlooked parts, then remove the packing material to an out-of-the-way place.

1.5 ASSEMBLING THE COMPONENTS

The components are now ready for assembly into a complete Computer System. The sequence is as follows:

- Attaching the bridge mount to the CRT display unit and connecting it to the processor unit
- Connecting the keyboard to the processor unit.
- Connecting the diskette unit to the processor unit.
- Connecting the power cables

Step-by-step instructions for each of these procedures follow.

1.6 ASSEMBLING THE COMPUTER SYSTEM

The bridge mount is used to support the display unit above the printer/plotter. (Computer Systems that are not equipped with printer/plotters have a lower mounting assembly without a paper bail. Installation for both types is similar). The mounting assemblies are held in place by four knurled thumb screws. These screws are captive in the bridge mount assembly and separate in the low mounting assembly. Figure 1-2 shows a Computer System with a printer/plotter and bridge mount assembly. To assemble it refer to the figure and proceed as the steps direct.

1. Turn the CRT display unit (A) upside down on a flat surface.

   Note: The threaded collar (C) shown in the inset of Figure 1-2 is attached to the CRT housing. This is shown this way for clarity only. Do not disconnect the collar from the CRT housing.

2. Place the gimbal mount of the bridge mount assembly (B) onto the threaded collar of the CRT display unit (C). Tighten the gimbal mount to the threaded collar as shown in the inset to Figure 1-2. This can be done by hand.

3. Turn the CRT display unit with the attached bridge mount assembly rightside up.

   Note: The bridge mount assembly must be placed over the tractor drive shaft (D) when mounting the unit on the processor main housing.

4. Attach the bridge mount assembly to the processor unit (E) with the four captive knurled thumb screws (F).

5. Thread the adjustment handle (G) into the gimbal mount until it is tightly seated. Adjust the CRT display for convenient use, then firmly tighten the gimbal mount using the adjustment handle, until the display is steady and cannot tip. Check the handle occasionally to ensure that it is tightly seated.

6. Connect the CRT display cable to the back of the processor unit by pushing the connector into position until it fits snugly; snap the spring retaining clips into position, and push the ground wire clip onto the grounding stud. (See Figure 1-3).

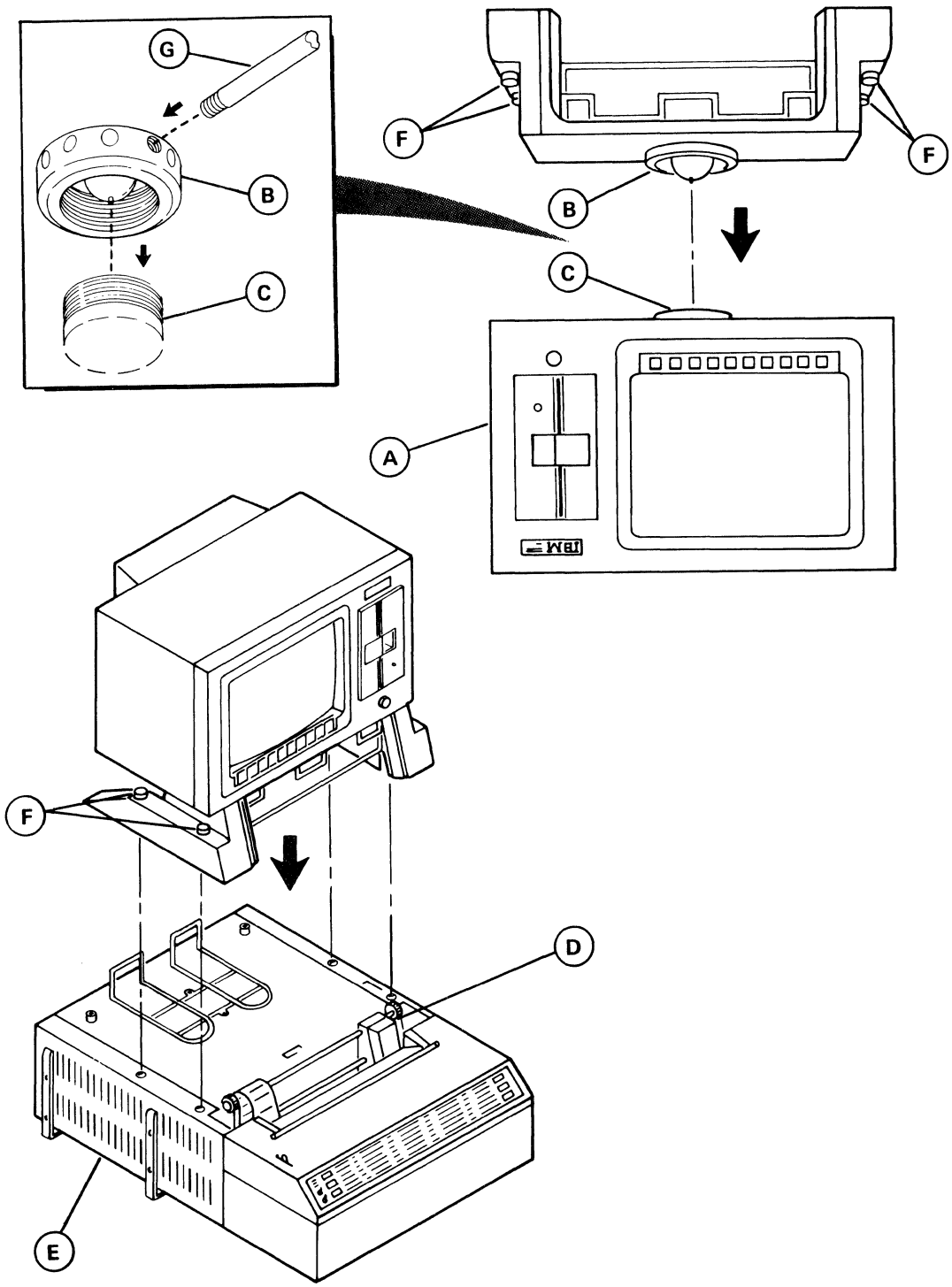


Figure 1-2. Assembly Diagram.

1.7 CONNECTING THE KEYBOARD TO THE PROCESSOR UNIT

The keyboard is a separate unit attached to the processor unit by a six-foot coiled cable. The keyboard can be positioned in any convenient location for use. To connect the keyboard proceed as follows:

1. Connect the keyboard cable to the back of the processor unit at the position indicated in Figure 1-3.

2. Position the keyboard on top of the paper tray or wherever it is convenient for the operator.

1.8 CONNECTING THE DISKETTE UNIT TO THE PROCESSOR UNIT

The diskette unit is completely self-contained and is connected to the processor unit by a 50-pin connecting cable assembly. To connect the diskette unit proceed as follows:

1. Remove the cardboard inserts from the connectors on the cable assembly.

2. Connect the diskette drive cable to the processor unit by pushing the connector into position up under the grounding clip and then straight forward until it is fully seated. Snap the spring retaining clips into position (See Figure 1-3).

3. Attach the diskette drive cable to the lower cable receptacle on the back of the drive cabinet by pushing the connector into position until it fits snugly and snapping the spring retaining clips into position. (See Figure 1-4). Both ends of the cable are the same, so either end can be attached.

   Note: If a second diskette unit is to be added this unit will be connected to the upper receptacle of the first diskette unit. In a series of diskette units, only the last unit should have a terminator in the terminator socket shown in Figure 1-4.

4. Remove the protective cardboard from around the door latch and the cardboard insert from the unit.

   NOTE: Do not apply power to the diskette units until the cardboard insert has been removed from the drive.

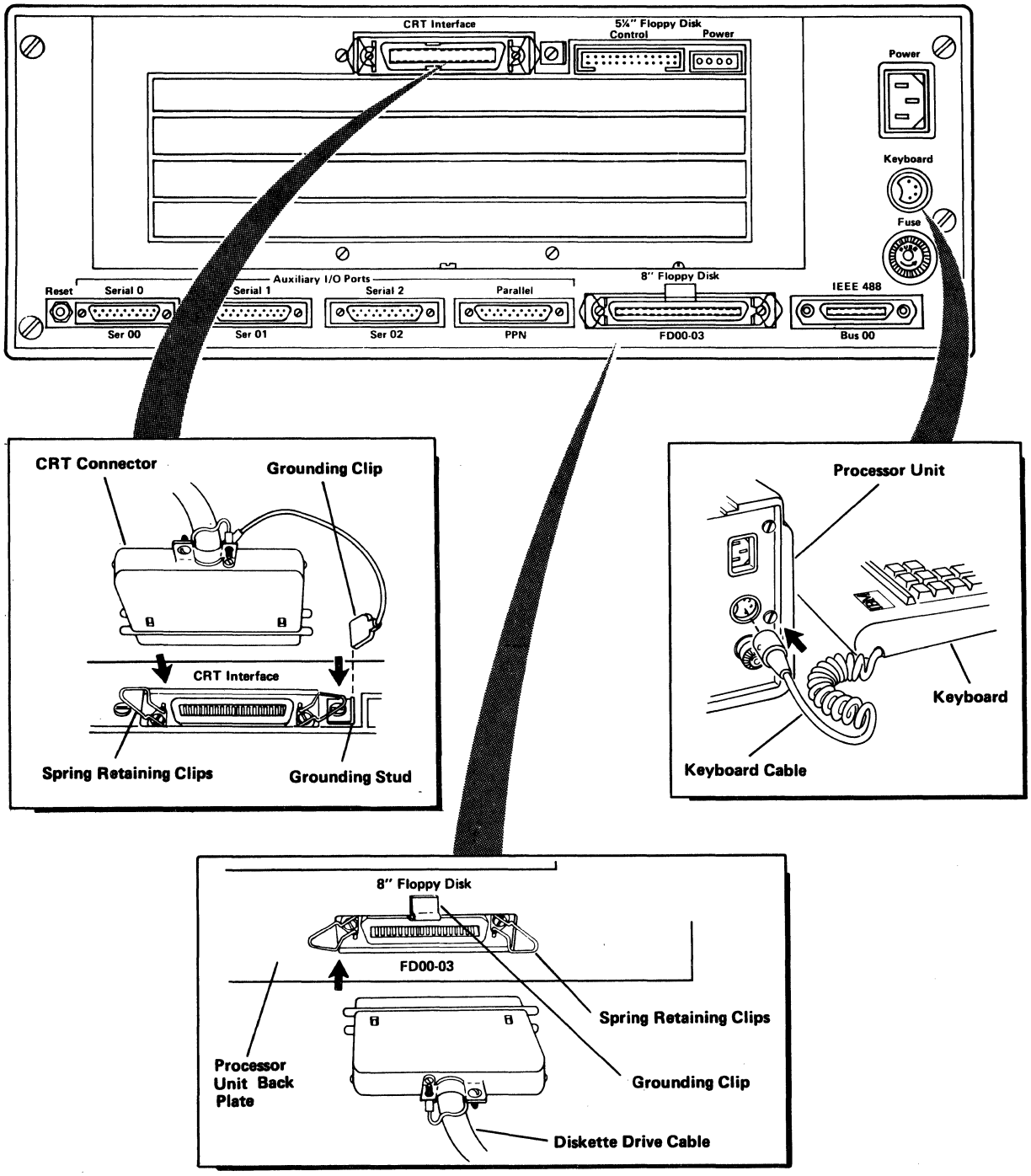


Figure 1-3. CRT Display, Keyboard and Diskette Unit Connections.

1.9 SETTING THE DISKETTE DRIVE SELECT SWITCHES

The diskette drive select switches are located on the back of the 8" drive cabinet, in the lower right hand corner as shown in Figure 1-4. The switches must be set to inform the system which drive will be drive 0 , which will be drive 1, and so on.

NOTE: If the system is equipped with a 5 1/4" diskette drive in the CRT display housing, that drive will be set to be drive 2.

The first four switches control the right drive in the cabinet (as viewed from the front) and the second four control the left. To set an address. turn the appropriate switch ON and all the other switches OFF. For example, to identify the left drive as drive 0 and the right drive to drive 1, set switches 2 and 5 ON and all other switches OFF as shown in Figure 1-4.

1.10 MAIN POWER CONNECTIONS

NOTE: Molded, three-wire detachable power cables are provided with the processor unit and 8-inch diskette unit. Ground circuit integrity is vital for safe operation of the equipment. Local facility wiring must provide grounded receptacles. Receptacles should be inspected to ensure that proper wiring and grounding conditions exist.

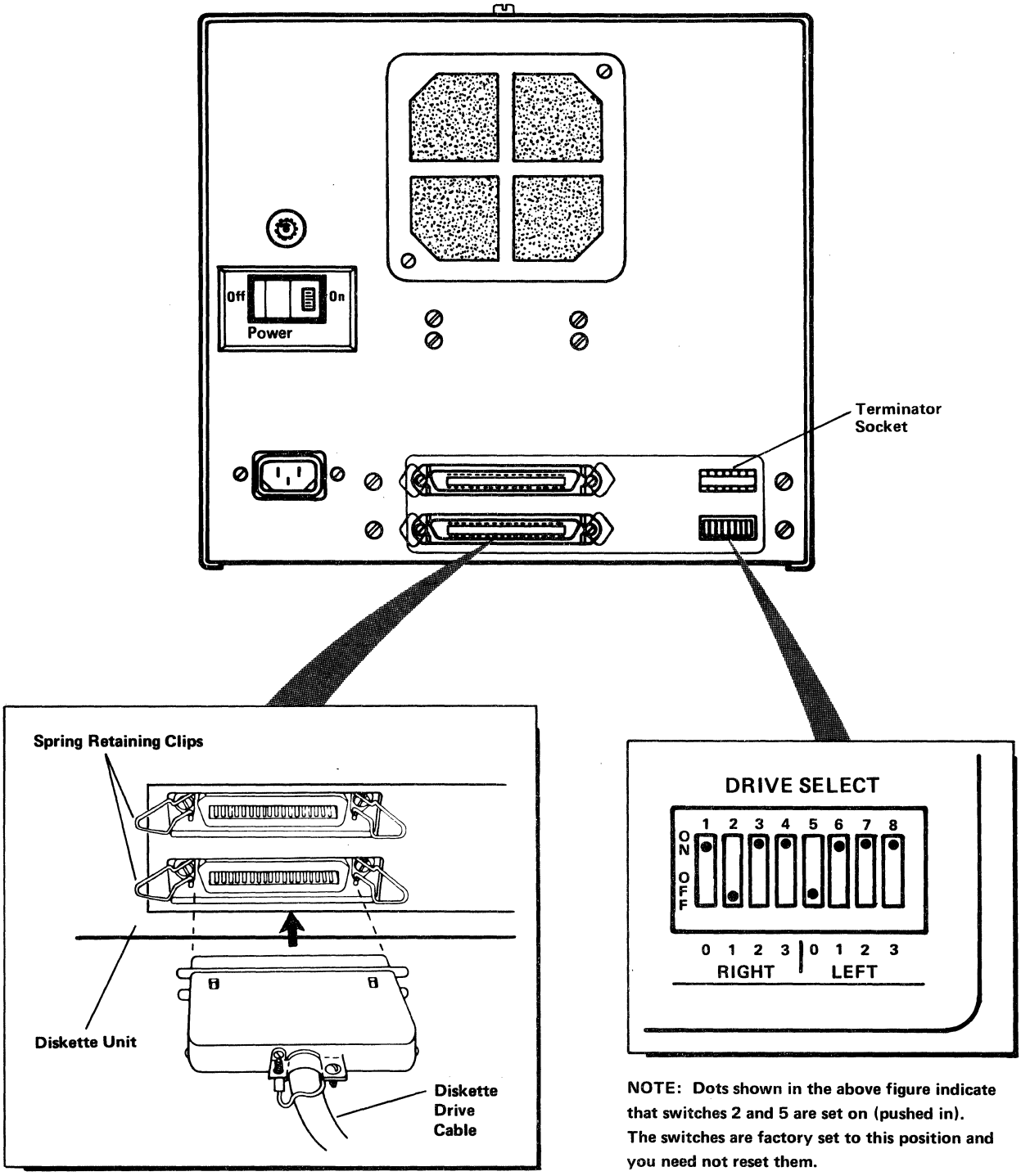
To connect the Computer System to main power, proceed as follows:

1. Ensure that the processor unit and diskette unit power switches are in the OFF position.

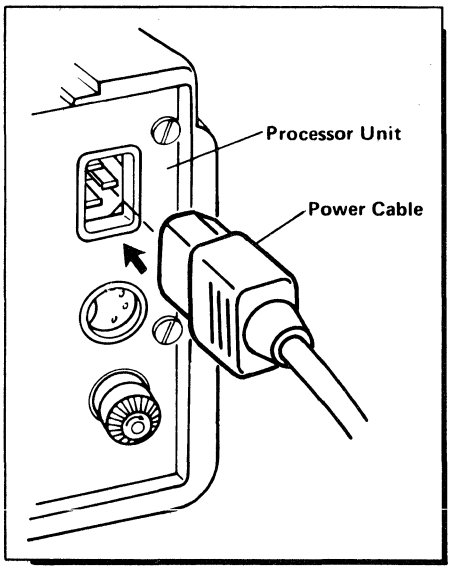
2. Connect the processor unit and diskette unit power cables to the receptacles at the rear of each unit (See Figure 1-5).

3. Connect the ends of the power cables to your facility's 120 volt receptacles. (See Figure 1-5).

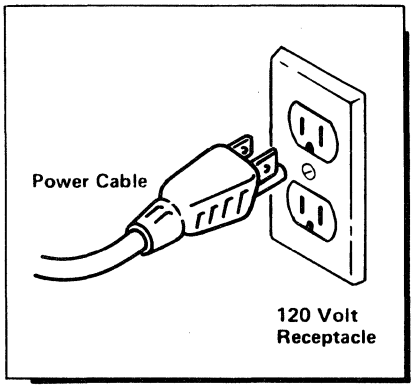
4. DO NOT SWITCH POWER ON NOW. Refer to Chapter 2 of IBM Instruments Computer System Operator's Manual, GC22-9186 for information on powering-on and operating units.



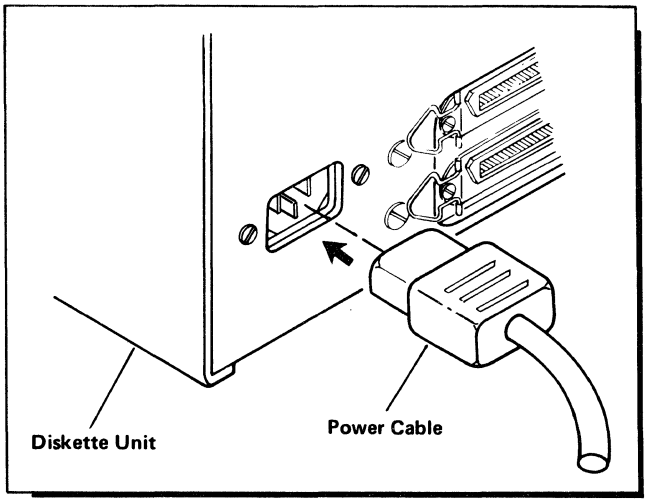
NOTE: Dots shown in the above figure indicate that switches 2 and 5 are set on (pushed in). The switches are factory set to this position and you need not reset them.



Processor Unit Power Connection



Wall Outlet



Diskette Power Connection

Figure 1-5. Power Connections.

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IBM Instruments Inc. would like to have your comments on the setup of your Computer System. Please answer the questions below and return this questionnaire.

YES NO

PUBLICATIONS

☐ ☐ Did you receive the Computer System Setup Instructions?

☐ ☐ Was the information clear and complete? If not, what was not?

_____

_____

_____

UNPACKING

☐ ☐ Did you encounter any difficulty unpacking the units?

☐ ☐ Were any parts missing or damaged? If so, which ones?

_____

ASSEMBLY

☐ ☐ Did you have any difficulty assembling the units of the Computer System? If you did, which units were difficult?

_____

_____

CONNECTIONS

☐ ☐ Did you have any difficulty connecting any peripheral units (keyboard, CRT, or diskette drive units) to the Computer System? If so, what was the difficulty?

_____

_____

POWER ON

☐ ☐ Did your system power on and operate successfully? If not what problems did you encounter?

_____

_____

SUGGESTIONS

☐ ☐ Do you have any suggestions that would make the setup of the Computer System easier?

_____

_____

COMPUTER SYSTEM SERIAL NUMBER: _____

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NAME OF PERSON WHO SET UP: _____ TEL# _____

TIME SPENT SETTING UP: _____

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