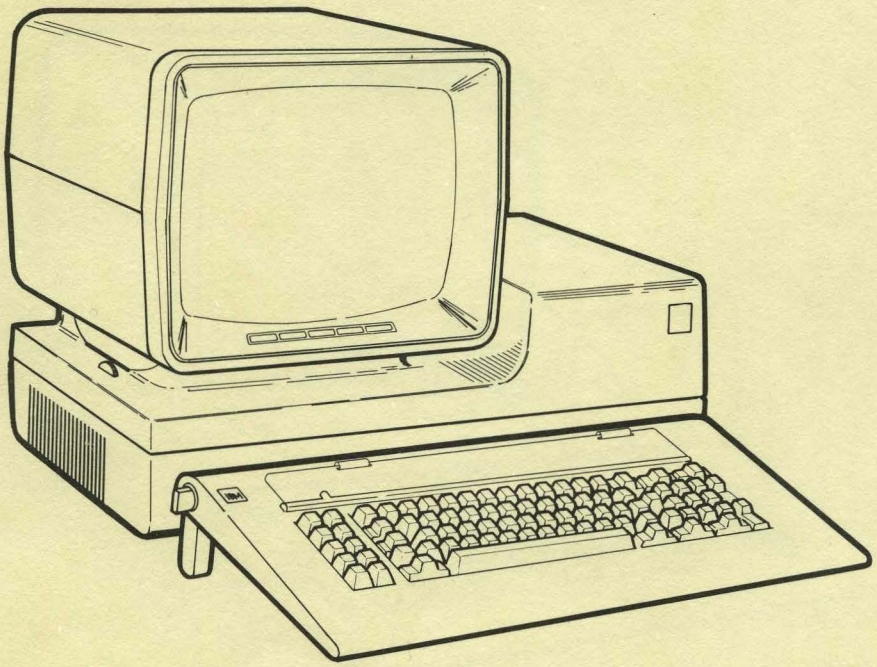
GA21-9408-0

File No. S5250/34/38-06

IBM 5291 Display Station Setup Procedure



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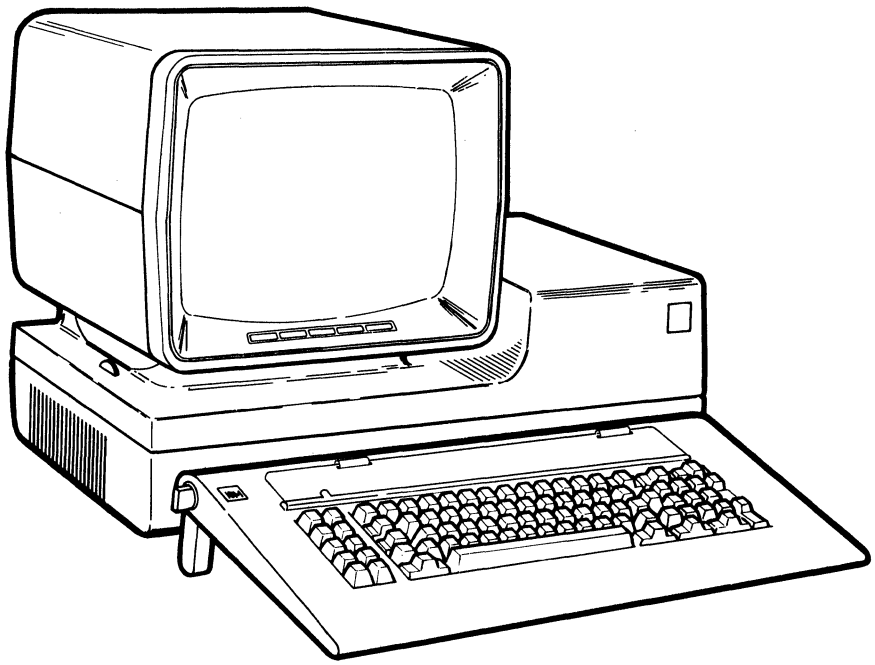

First Edition (December 1981)

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This manual describes the setup and checkout procedure for the IBM 5291 Display Station. By using this procedure, customers who buy the 5291 Display Station will be able to set up their own machine. No special skills or tools are required. This procedure should be used after your display station has been unpacked and placed where you intend to use it or whenever the display station is disconnected and relocated. When you have finished setting up the display station, save this manual.

This manual is divided into three sections and one appendix: the first section summarizes what should be done prior to setup; the second tells you how to set up and make the display station operative; the third tells you how to connect the display station to a system[1], a 5251 Model 2 or 12, or a work station[2]. Appendix A shows the location of the terminator switches.

Related Publications

- *IBM 5250 Information Display System Planning and Site Preparation Guide,* GA21-9337
- *IBM 5291 Display Station Operator's Guide,* GA21-9409
- *IBM 5250 Information Display System Introduction,* GA21-9246
- *IBM 5291 Keyboard Template,* GX21-9410

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[1]The term *system* refers to the controlling or highest level system in a configuration; some system publications might use the term *system unit.*

[2]The term *work station* refers to a display station or printer.

ELECTROMAGNETIC INTERFERENCE

United States Federal Communications Commission (FCC) rules require IBM to publish the following information, which applies to each unit (including modems and terminals) described in this manual (hereafter called *equipment*).

WARNING: *This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manuals, may cause interference to radio communications. It 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 take whatever measures may be required to correct the interference.*

Instructions Pursuant to FCC Part 15, Subpart J

1. This equipment should not be installed less than 30 meters (98.5 feet) from radio or television receivers or their receiving antennas.

2. This equipment should not receive its power from branch circuits that also power radio or television receivers.

If this equipment cannot comply with the above distance limitation:

1. Turn the equipment and the receiver on. If no interference is apparent, no further action need be taken.

2. If interference occurs, reorient or relocate the equipment, the receiver, or both.

3. If interference still occurs, contact your IBM representative.

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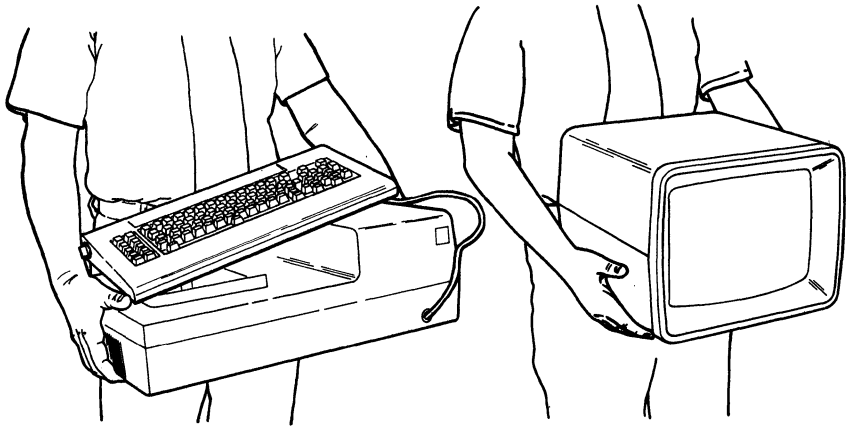
Section 1: What Should Be Done Prior to Setup

SAFETY PRECAUTION
Your 5291 Display Station (when assembled) weighs approximately 23 kilograms (51 pounds); NEVER LIFT IT BY YOURSELF.



BEFORE YOU START THE SETUP PROCEDURE

All of the following items should have already been completed. Check off ☑ all items that are complete.

☐ Grounded electrical outlets are installed.

SAFETY PRECAUTION
The power cord plug (when supplied) on your display station has been approved for use with this display station and meets the relevant testing laboratory/test-house standards. For your safety, the power cord plug must be connected to a properly wired and grounded outlet. An improperly wired outlet can place hazardous voltages on accessible metal parts of this display station. The customer is responsible for the outlet wiring.

☐ The system or the 5251 Model 2 or 12 Display Station to which you will be connecting your 5291 is set up.

☐ The cables that attach to your 5291 are placed where they will be connected.

☐ The cables that attach to your 5291 are labeled with a socket number.

Note: If the cable is not labeled, the information for labeling the cable can be found in the *IBM 5250 Planning and Site Preparation Guide,* GA21-9337.

(continued on next page)

- ☐ You have a floor plan identifying the location and address of each work station.

- ☐ The physical and electrical preparation for your 5291 comply with the requirements in the *IBM 5250 Planning and Site Preparation Guide,* GA21-9337.

- ☐ If your display station will be attached to a System/38 (either directly or through a 5251 Model 2 or 12), read the following consideration:

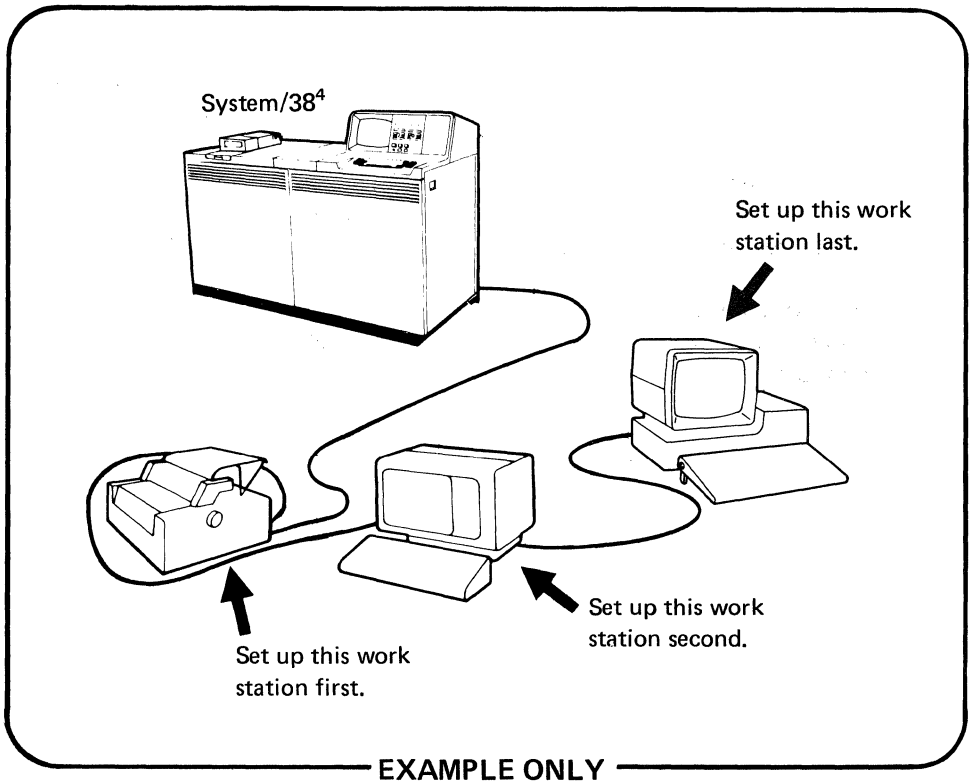
  If you are adding this display station to an existing work station or to an existing series of work stations, contact the person responsible for system operation. (Before you start setting up the display station, the person responsible for system operation must follow the instructions for adding a work station as described in the *IBM System/38 Guide to Program Product Installation and Device Configuration,* GC21-7775.)

If all of the above details have been completed, continue with this setup procedure. If you are unsure and cannot check off all of the above items, ask your planner[3].

[3]The planner is the person responsible for planning the setup of your display station.

SOME IMPORTANT POINTS TO REMEMBER ABOUT SETUP

- **When you have *more than one* work station (display station or a printer) to set up in a line and they will be connected together, always begin with the work station that will be connected directly to the system or 5251 Model 2 or 12.**



- **Do not attempt to set up more than one display station at a time, even though they look alike.**
- **When you start the setup procedure, read each step slowly and carefully. Be sure that you understand each step before completing it.**
- **It is unlikely that you will encounter any problems; but if you do, contact your planner. If you are the planner, contact your IBM sales or service representative.**

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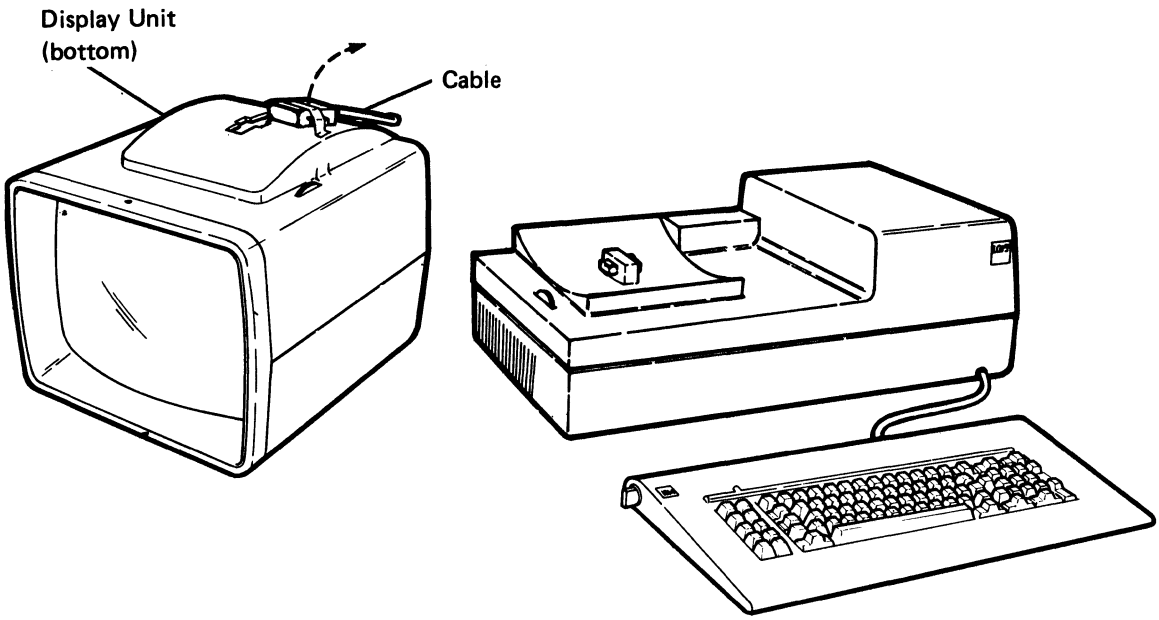
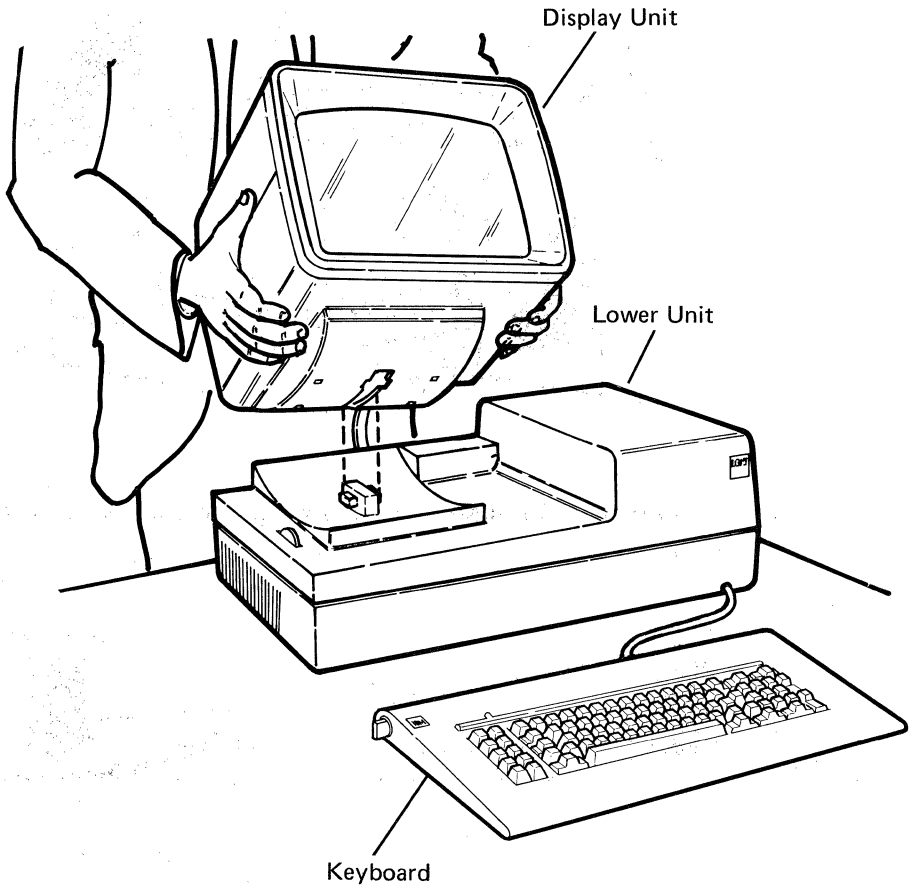
[4]This could be a system other than the System/38, or it could also be a 5251 Model 2 or 12 Display Station.

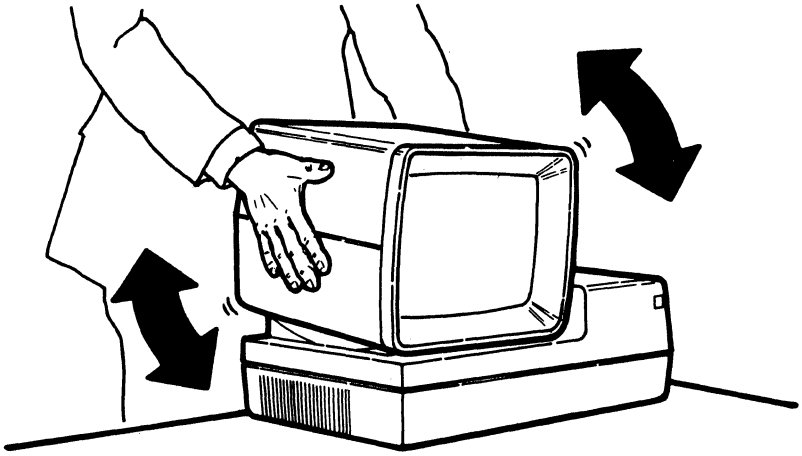
1. **Unfasten the cable from the bottom of the display unit and remove the packing material from the end of the cable.**



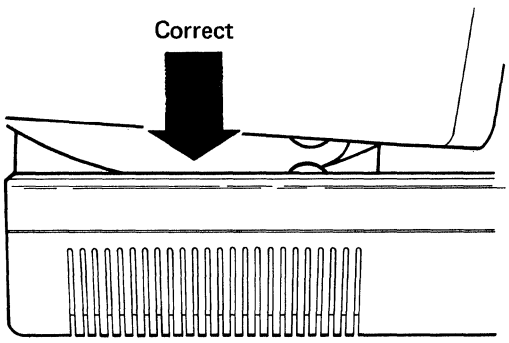
2. **Turn the display unit over; then align and slowly position it over the lower unit.**

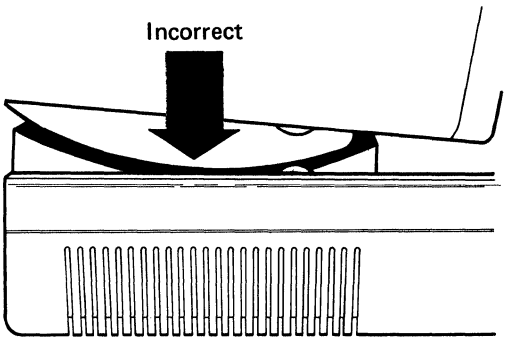


3. **Rock the display unit until it is properly seated.**

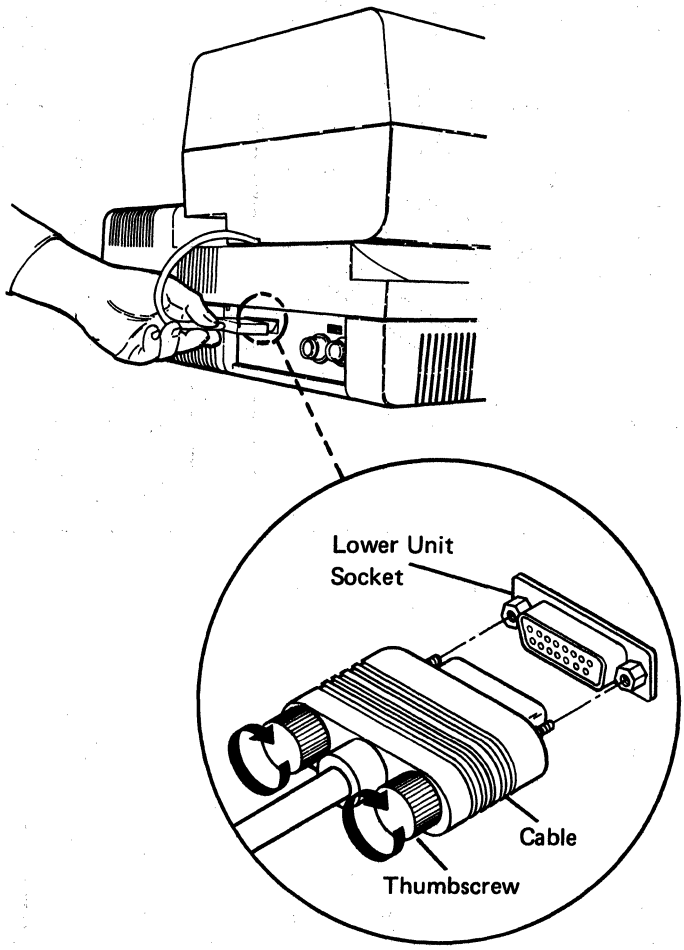


4. **Ensure that the display unit is properly seated onto the lower unit.**

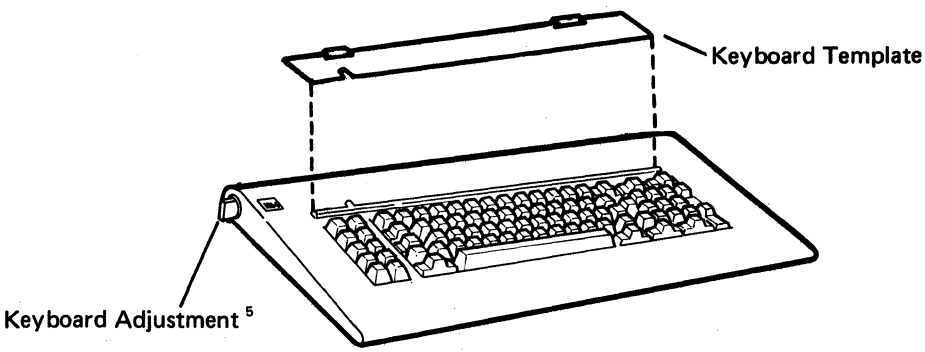




5. **Align and push the display unit cable into the lower unit socket; then, turn the thumbscrews clockwise until tight.**

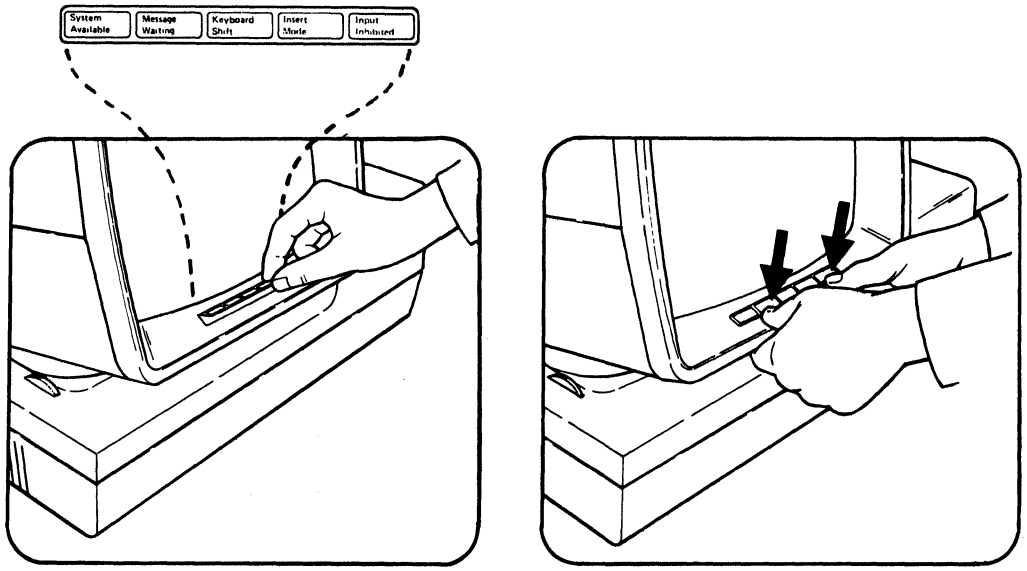


6. **Position the keyboard template on the keyboard.** (The template is in the clear plastic envelope that was packed on top of the display station.)

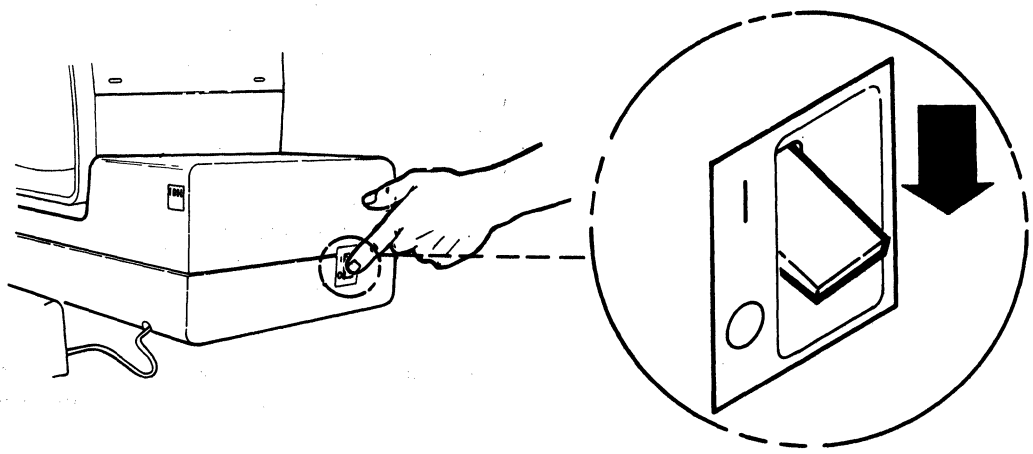


[5]The procedure for adjusting the keyboard angle is in the *IBM 5291 Display Station Operator's Guide*, GA21-9409.

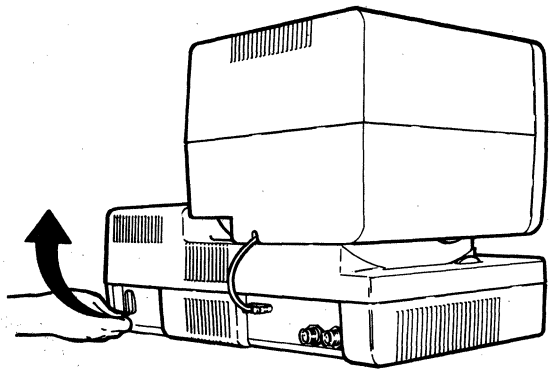
7. **Position the status line label as shown below.** (The status line label is in the clear plastic envelope that was packed on top of the display station.)



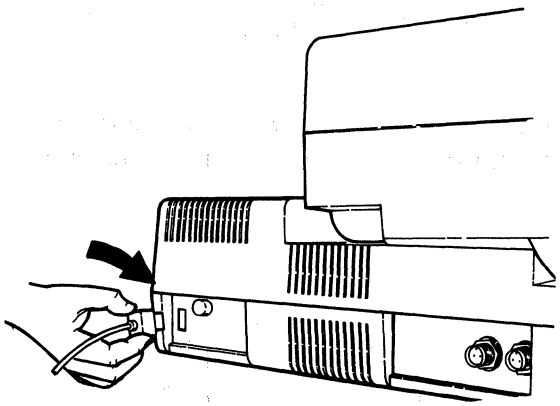
8. **Set the Power switch to O (Off).**



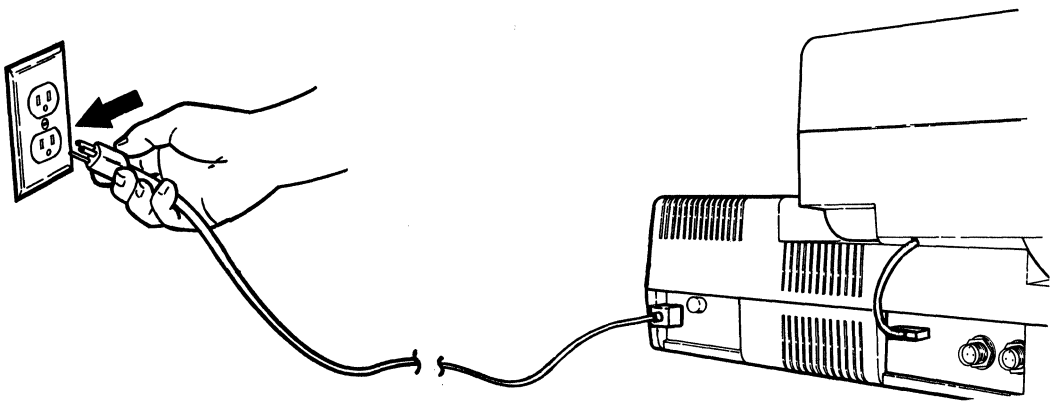
9. **Remove the plastic covering from the lower unit (as shown).**



10. **Plug the end of the power cord (as shown) into the lower unit.**

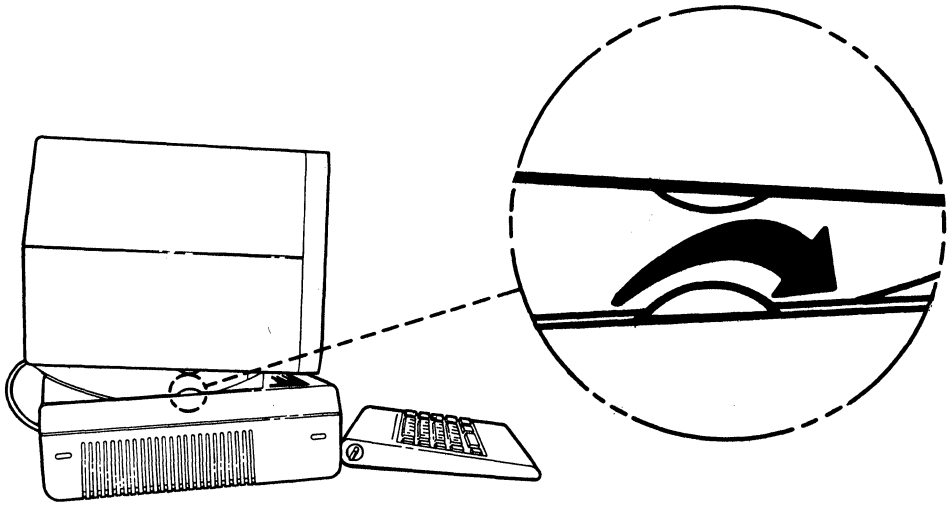


11. **Plug the other end of the power cord into a grounded electrical outlet.**

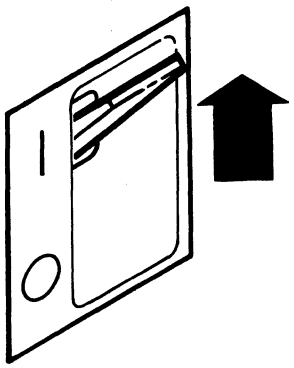


12. Turn the Alarm control toward the keyboard.

Note: Make sure that there are no objects resting on the keyboard.

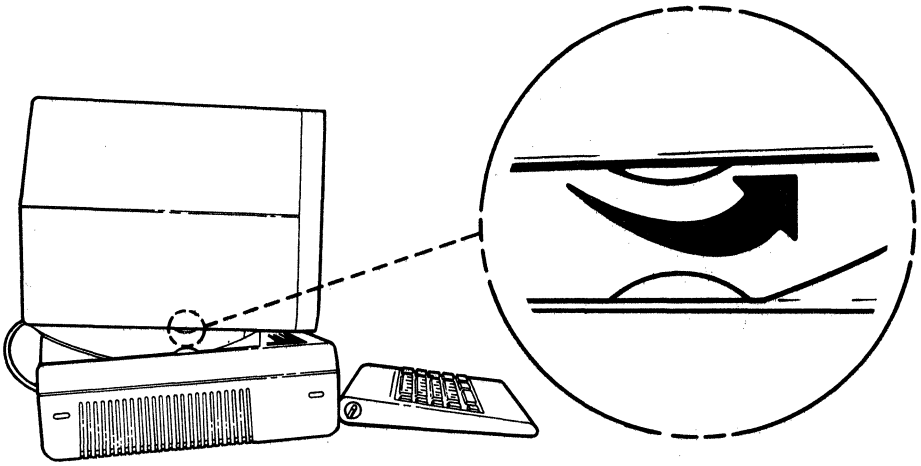


13. Set the Power switch to On. Wait a few seconds; you should hear the alarm[6], which means that the lower unit is working properly.



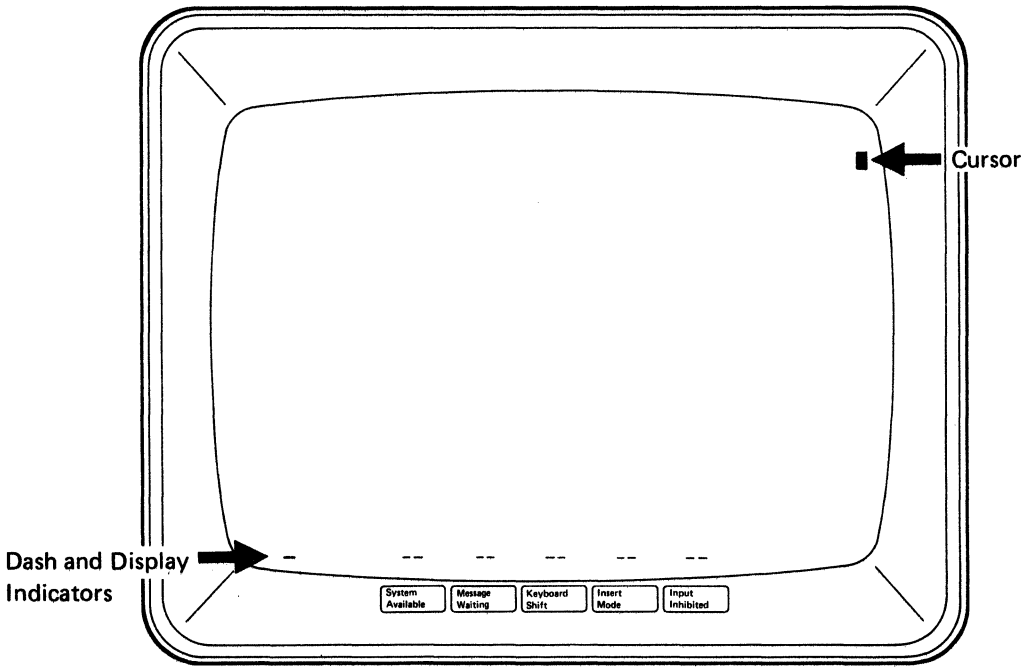
[6]If the alarm was too loud, turn the Alarm control slightly away from the keyboard to decrease its volume.

14. Turn the Brightness control all the way toward the keyboard.



15. Allow 20 seconds for the display station to warm up. When the dash (-), five display indicators (--), and cursor (▮) appear on the display screen, adjust the Brightness control until the display is at a comfortable brightness. Go to Section 3, ***Connecting the Display Station.***

If you did not hear the alarm when you set the Power switch to On or if the conditions did not appear, go to step 16 on the next page.

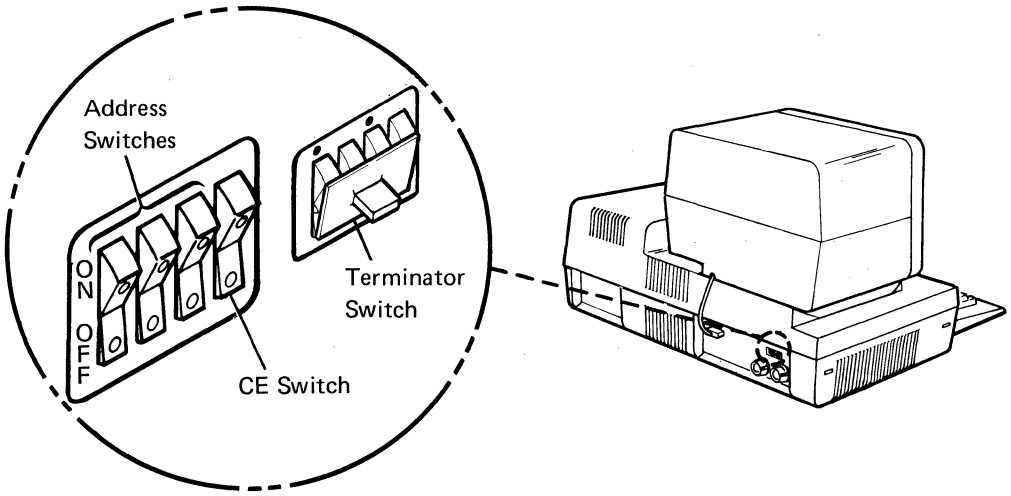


16. Complete the following steps:

a. Set the Power switch to Off.

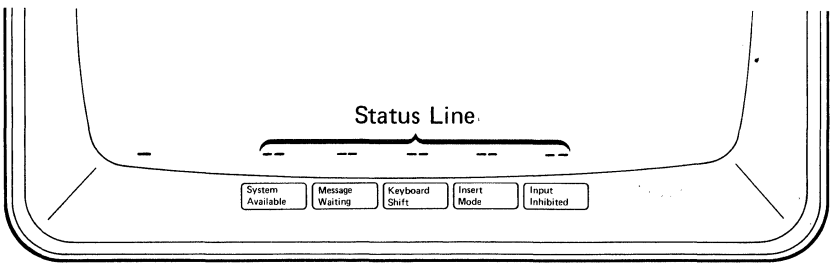
b. Complete the following checklist:

- ☐ The power cord is properly connected to the display station.
- ☐ There is power to the electrical outlet.
- ☐ The Alarm and Brightness controls are turned toward the keyboard (steps 12 and 14).
- ☐ The display unit cable is fastened securely to the lower unit socket (step 5).
- ☐ The Address and CE switches are set as shown in the following illustration:



c. Set the Power switch to On.

Note: If numbers or letters appear on either side of the status line, use the keyboard template to determine the problem.

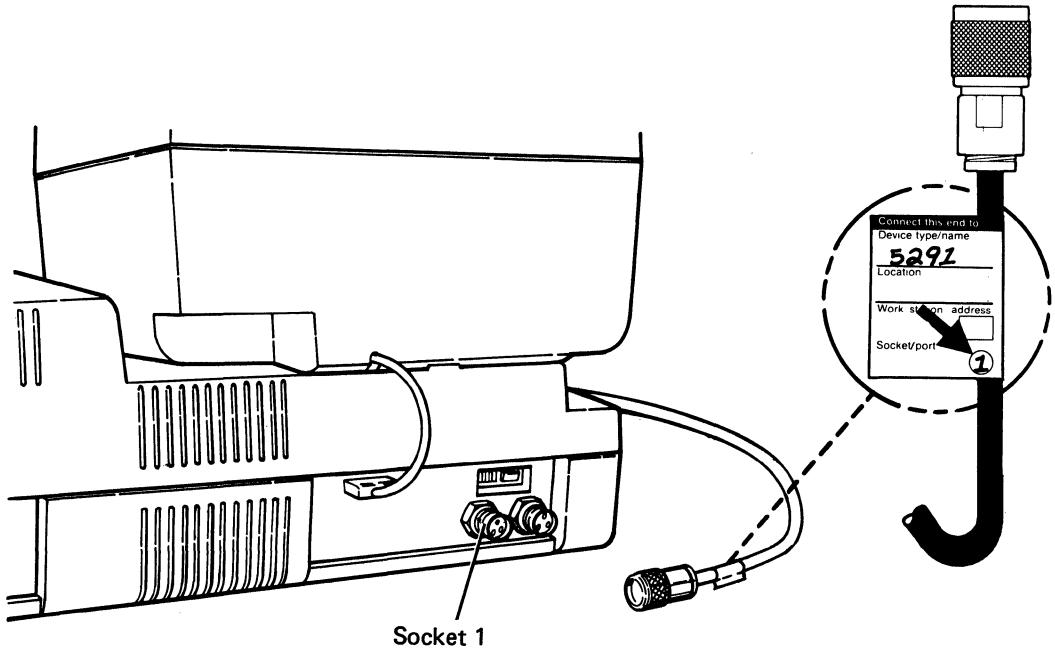


If after completing the above steps and checks you still do not see the dash (-), display indicators (--), and cursor (▮) appear, contact your service representative and report the problem.

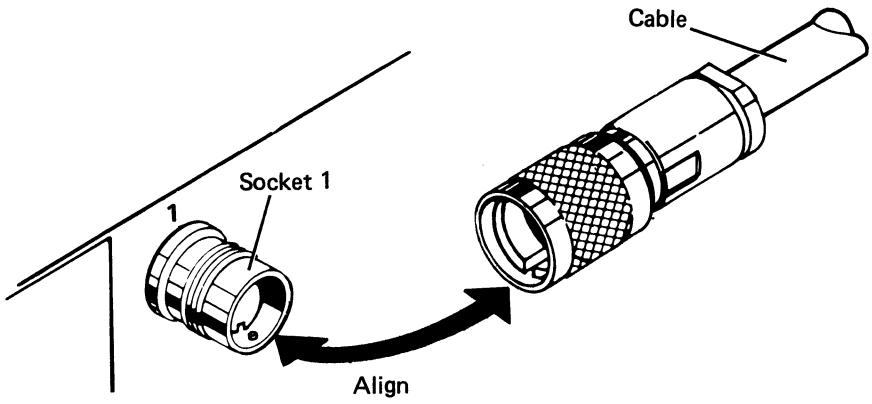
CONNECTING THE CABLES

1. **Set the Power switch to Off.**

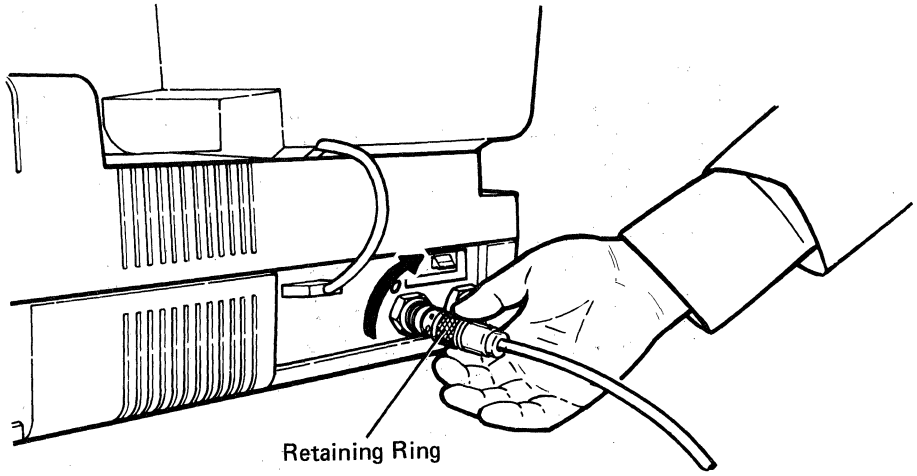
2. **Find the cable that connects to socket 1.**



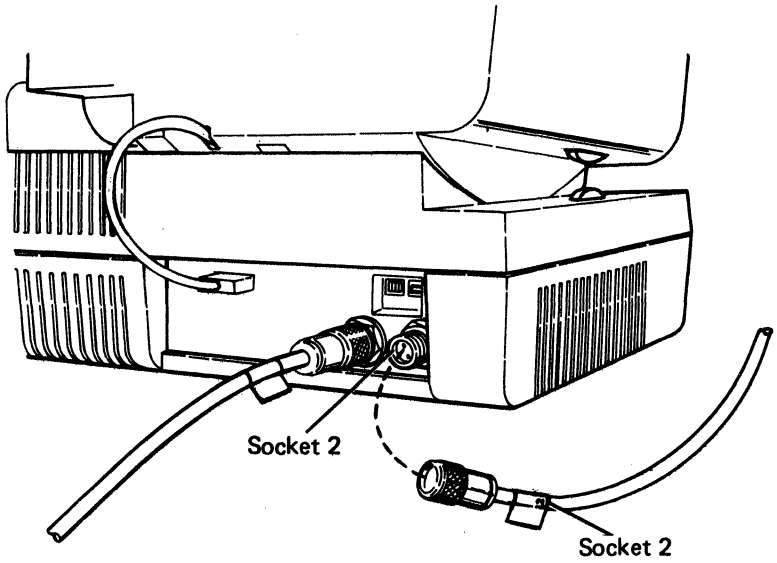
3. **Align and push the cable into socket 1.**



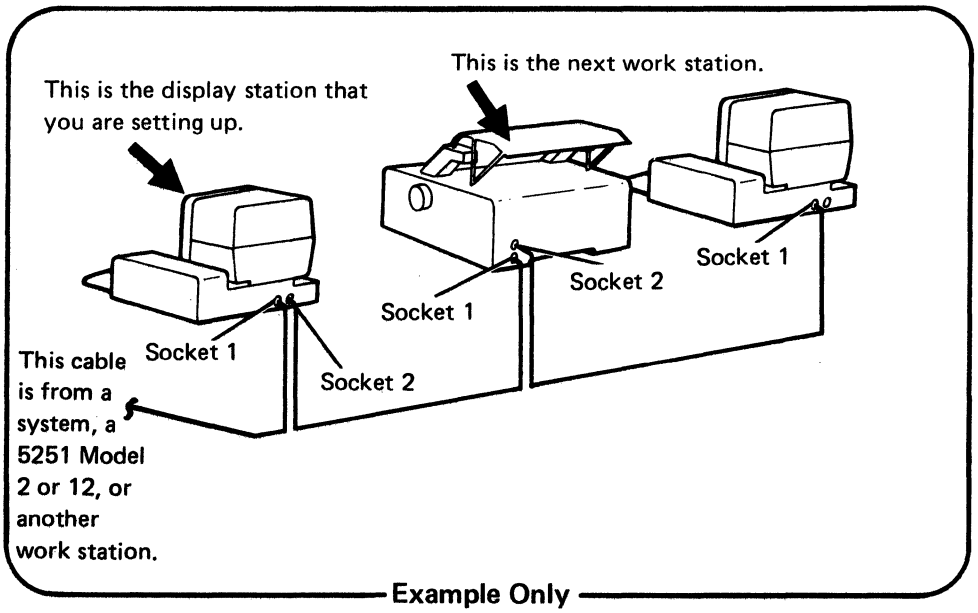
4. **Turn the retaining ring clockwise until it is tight.**



5. If you have a second cable, connect it to socket 2.

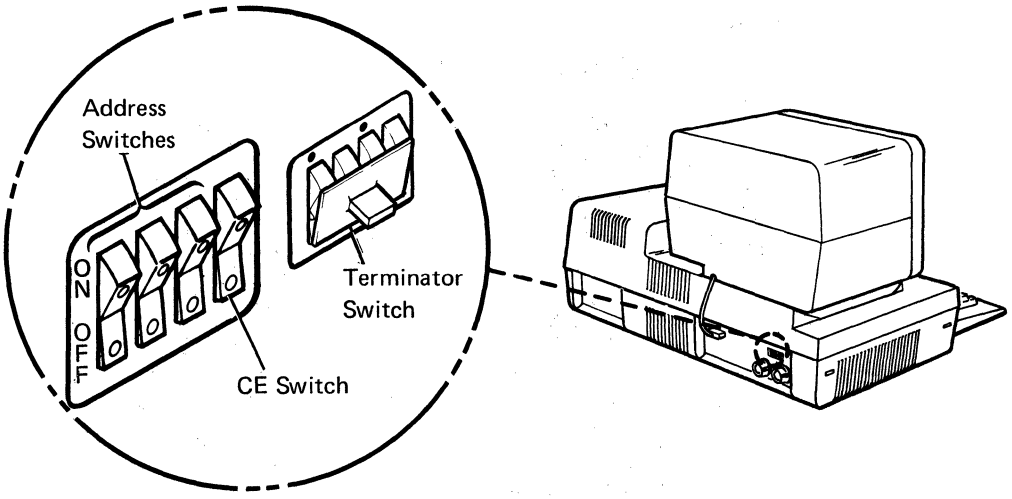


Note: A cable connected to *socket 2* must always go to *socket 1* on the next work station.



SETTING THE ADDRESS, CE, AND TERMINATOR SWITCHES

Set the switches by doing the following six steps.

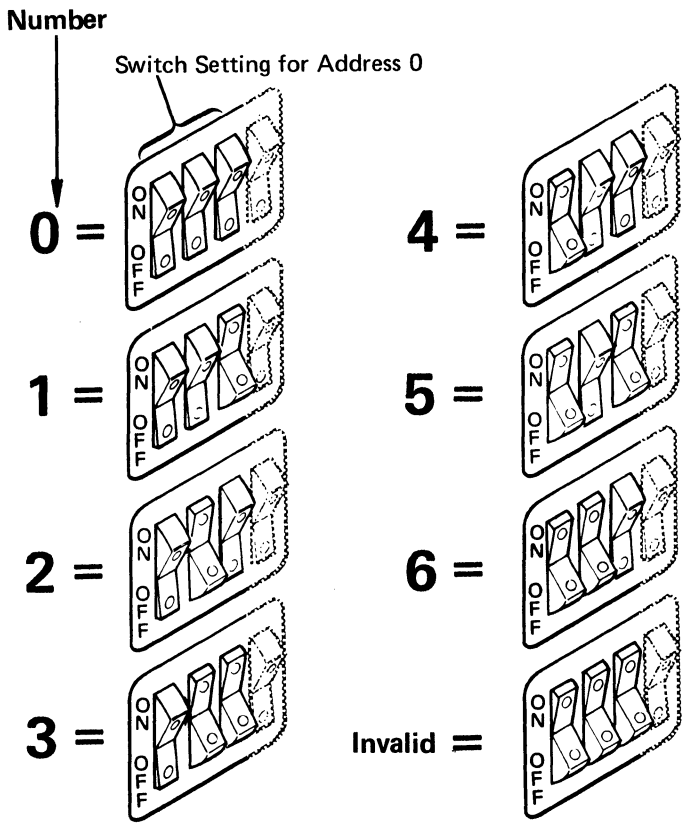


1. **Get the address from the floor plan, from the label attached to the cable, or ask your planner. The *address* for the display station that you are setting up is a *number* (0 through 6).**

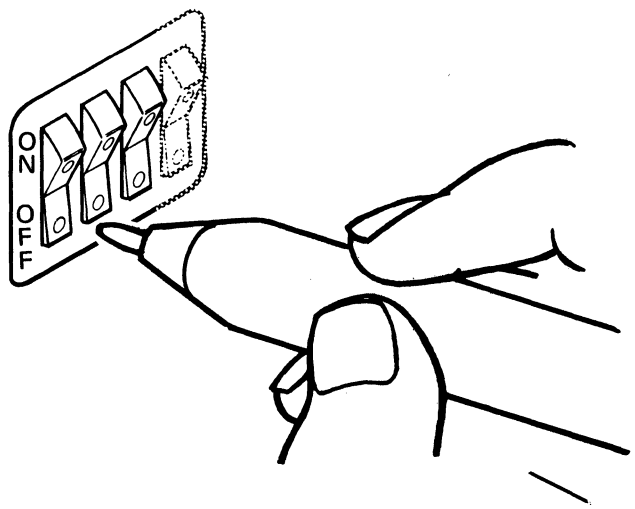
   Note: The *address* for each work station *must be different* when work stations are *connected together*. If the address has not been determined, information on how to determine this address can be found in the following guides:

   - For *local work station addresses*, see the host system planning and installation/modification guides.
   - For *remote work station addresses*, see the *IBM 5250 Planning and Site Preparation Guide*, GA21-9337.

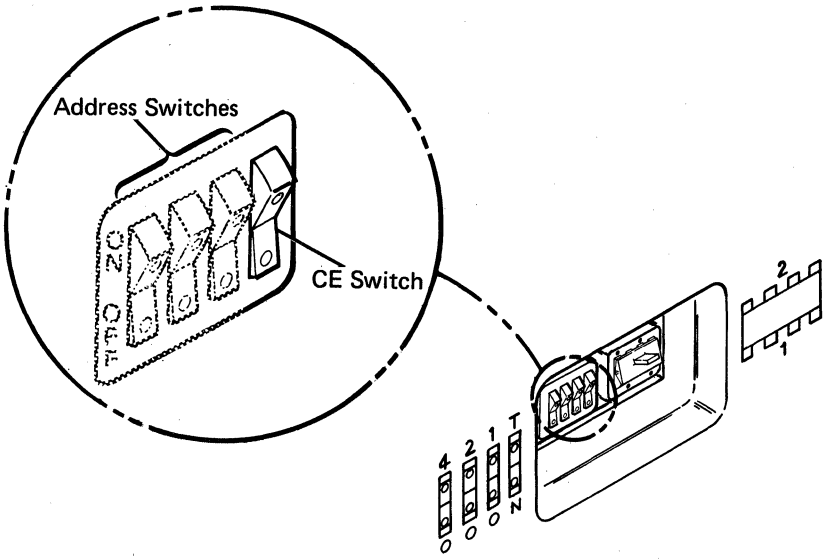
2. **To determine how the address switches should be set on your display station, match the address to one of the following numbers:**



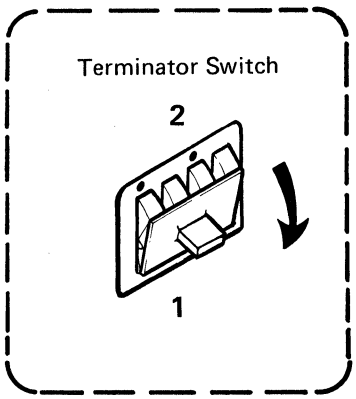
3. **Using the switch setting in the above chart as a guide, use a ballpoint pen or pencil to set the switches.**



4. **Set the CE switch to N (Normal).**



5. **Set the Terminator switch to 1.**[7]



6. **Go to *Display Station Checkout* on the next page.**

[7]If you are adding your display station to an existing series of work stations and the added display station is not the last work station in the series, set the Terminator switch to 2.

DISPLAY STATION CHECKOUT

Before doing the display station checkout on the next page, do the following:

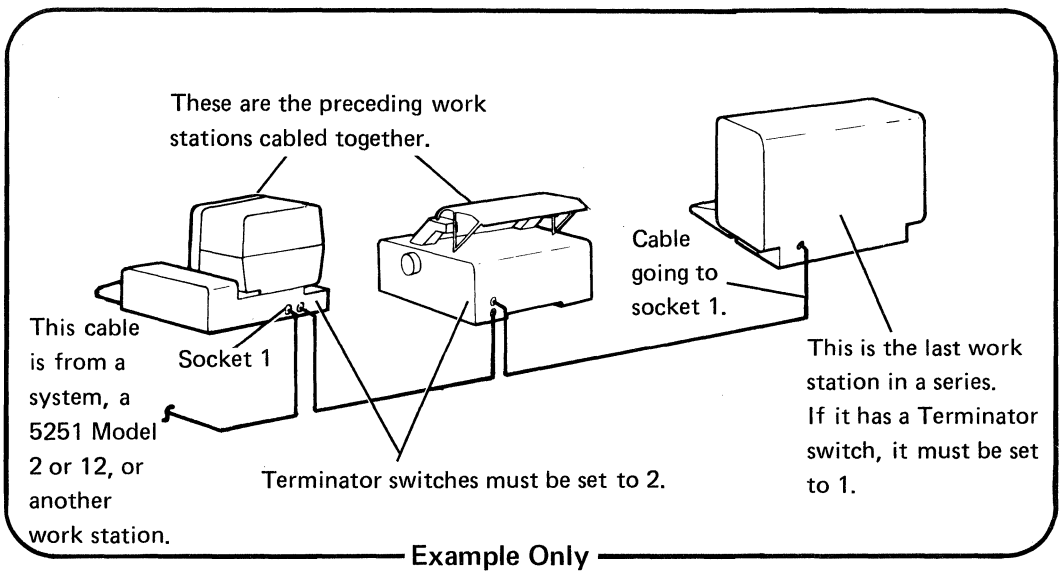
- Make sure that your display station is connected to a system, a 5251 Model 2 or 12 Display Station, or another work station.
- Make sure that the system, 5251 Model 2 or 12 Display Station, or work station to which your display station is connected is operating.

  Note: On System/38, the *work station controller* must also be operating.

If the cable attached to socket 1 on your display station comes directly from a system or a 5251 Model 2 or 12, go to step 1 on the next page.

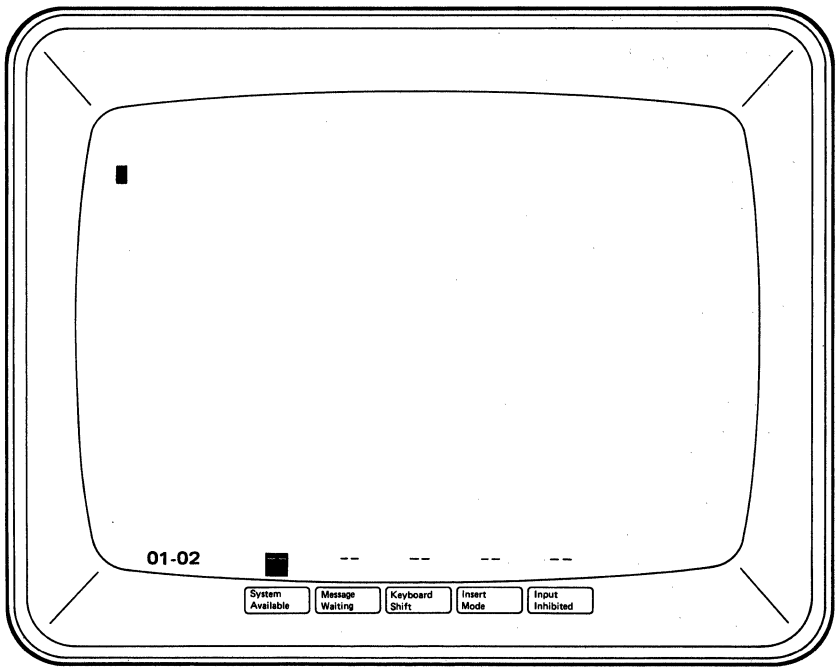
If the cable attached to socket 1 on your display station comes directly from a work station (not a system or a 5251 Model 2 or 12), do the following:

- Make sure that the preceding work station(s) is set up and is powered on.
- **If the last work station in your series has a Terminator switch, make sure it is set to 1. The Terminator switch on all other work stations must be set to 2. (See Appendix A in this manual for the location of the Terminator switches on the work stations.)**



1. **Set the Power switch to On.**

2. **Listen for the alarm and look for the cursor (▮), the System Available indicator (▀), and four status indicators (--) to appear on the display screen.**



If you do not hear a tone or if the display screen does not appear as shown, go to *Problem Checklist* at the end of this section.

3. **When step 2 has been completed successfully, enter your name. If your name appears as it should, go to step 4.**

If no characters appear or if incorrect characters are displayed, see *Problem Checklist* at the end of this section.

4. **Set the Power switch to Off.**

Setup is complete on this work station.

PROBLEM CHECKLIST

1. **If the conditions on the display in step 2 (*Display Station Checkout*) do not appear as shown, ask the person responsible for system operation to do the following:**

   a. **Check that the system or the 5251 Model 2 or 12 to which your display station is connected is operating and is able to recognize your display station.**

   Note: If your 5291 was added to a series of work stations that are attached to a 5251 Model 2 or 12, the setting of the Cluster Feature Port switches on the 5251 Model 2 or 12 may have to be changed. For more information about the Cluster Feature Port switches, see the *IBM 5250 Planning and Site Preparation Guide*, GA21-9337. (Before changing the setting of the Cluster Feature Port switches, make sure that the Power switch on the 5251 Model 2 or 12 is set to Off.)

   b. **Check that your display station has the correct address switch setting.**

   Note: Your display station many be on a line where multiple work stations are cabled together. If so, check that each work station on your line has the correct address switch setting.

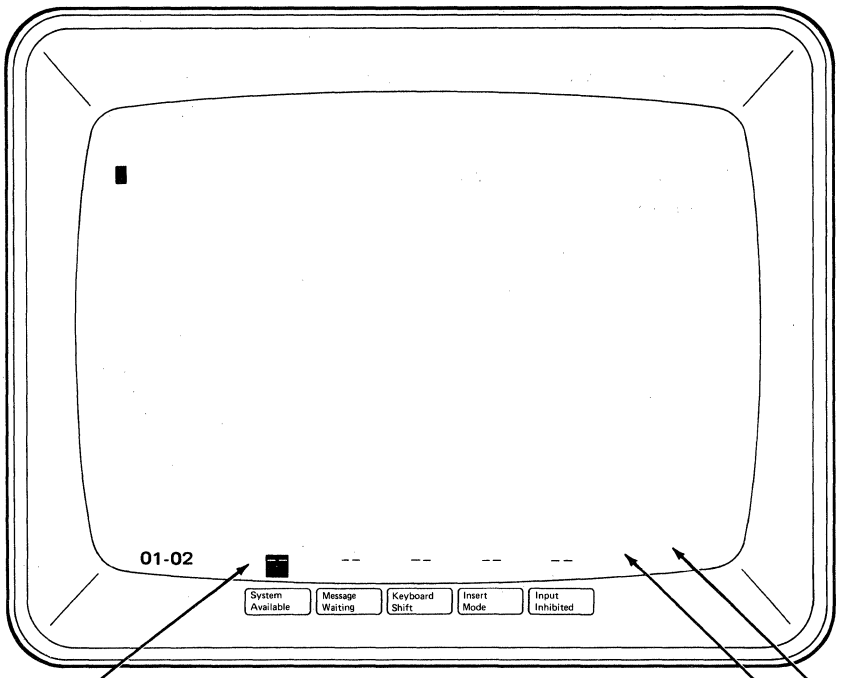
   c. **If your 5291 is connected to a System/38 and you cannot enter random characters from the keyboard, ask the person responsible for the system operation to do the following:**
      (1) **Verify that a device description has been created for your display station.**
      (2) **Ensure that the system work station controller is operating.**
      (3) Vary on the display station. (See the VRYDEV command in the *IBM System/38 Operator's Guide*, **SC21-7735.**)

2. **Ensure that the cables are connected to the correct sockets.**

3. **Ensure that the Brightness control has been turned toward the keyboard.**

4. **Set the Power switch to Off and check all cable connections to make sure they are properly positioned and tightened (review Section 3).**

5. **If you see numbers and letters appear on either side or across the display screen, do the following:**



a. **Check that the CE switch is set to Off.**

b. **Check that the number displayed here matches the address number assigned to this display station.**

c. **If you see a 1 on the display screen, check the keyboard for a stuck key.**

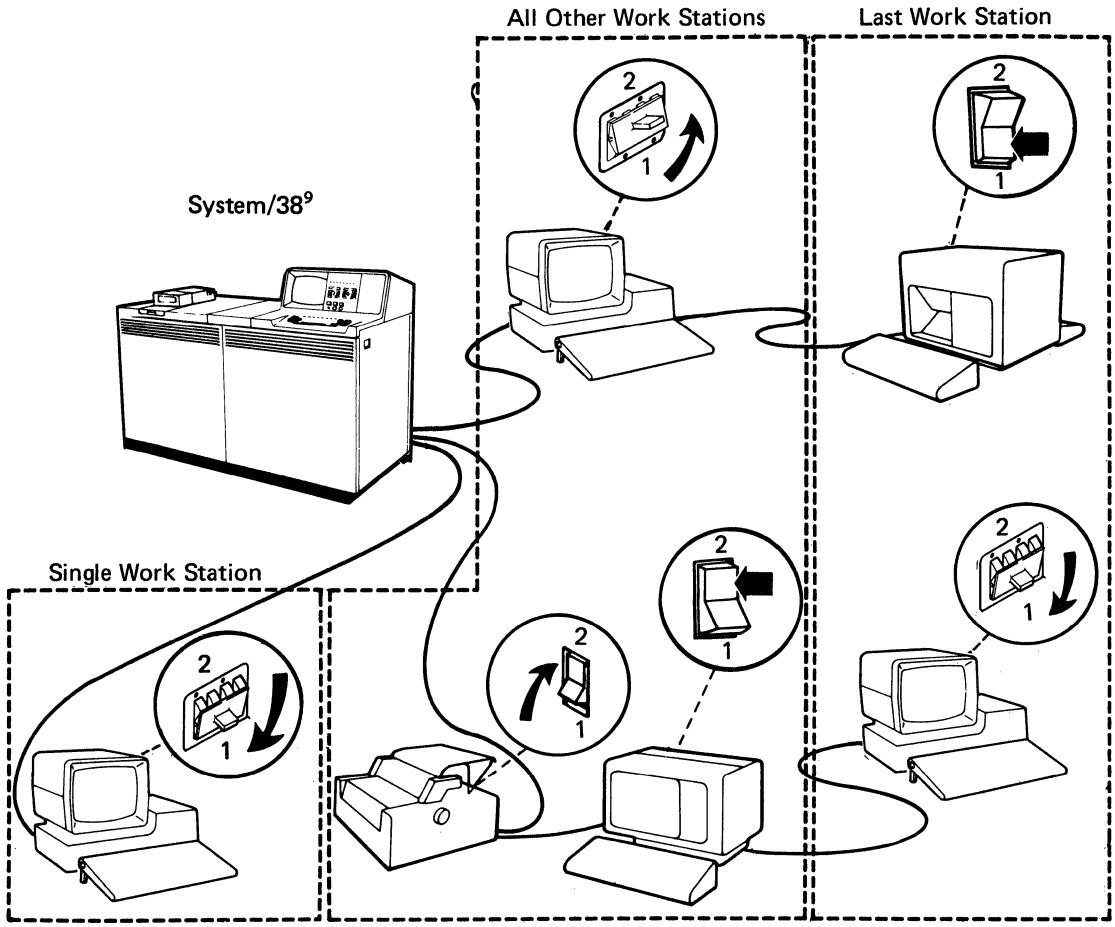
d. **If you see a letter(s) on the display screen, use the keyboard template to determine the problem.**

6. **Read the following three considerations and then check all of the Terminator switch settings on the work stations:**

   a. **When a *single work station* is connected to a system or a 5251 Model 2 or 12, the Terminator switch[8] must be set to 1.**

   b. **When work stations are connected together, the Terminator switch on the *last work station* on a line must be set to 1.**

   c. **The Terminator switches for *all other work stations* on a line must be set to 2.**



For information on where to find these switches on other work stations (like a printer), see Appendix A. For information on how to set these switches, review *Display Station Checkout* in Section 3 of this manual.

---

[8]A 5251 Model 2 or 12 Display Station does not have a Terminator switch. Any other work station that does not have a Terminator switch must be the only work station on a line or the last work station on a line.

[9]This could be a system other than the System/38, or it could also be a 5251 Model 2 or 12 Display Station.

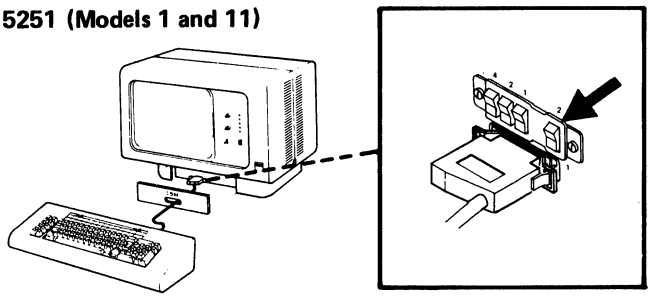
7. Set the Power switch to On.

If the conditions in step 2 or 3, *Display Station Checkout*, still do not appear as shown, contact your planner. If ok, go to step 4 in *Display Station Checkout*.

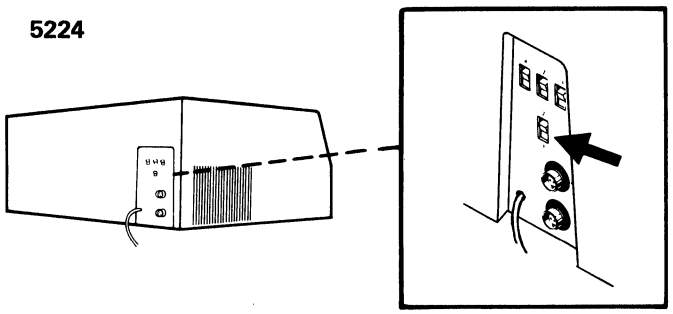
Appendix A: Location of Terminator Switches

The following illustration identifies the location of each work station Terminator switch:

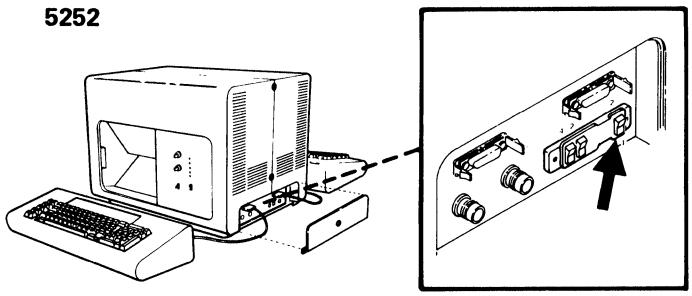
5251 (Models 1 and 11)



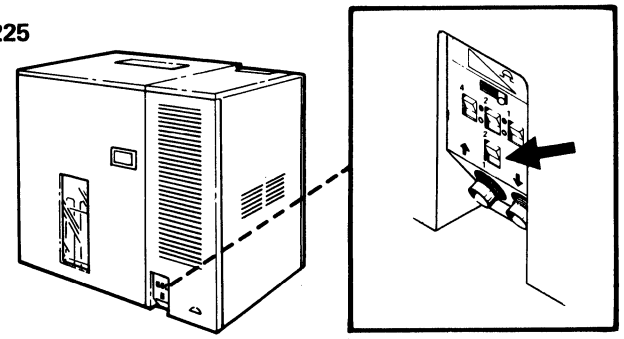
5224



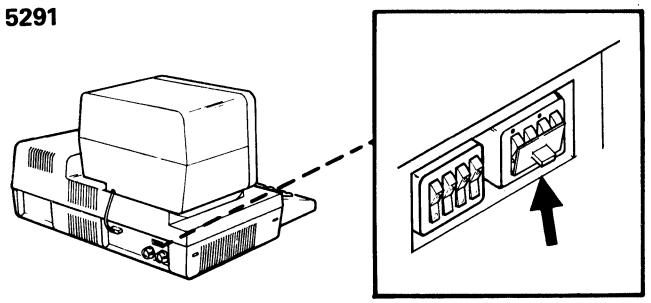
5252



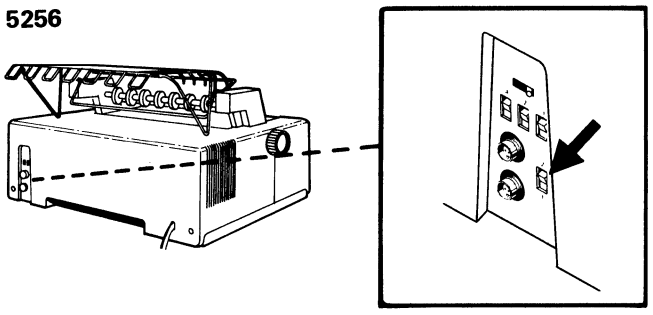
5225



5291



5256



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