IBM 7426 Terminal Interface Unit

Setup Instructions

Initialization

Operator's Checklist

Problem Analysis and Resolution

Relocation Instructions
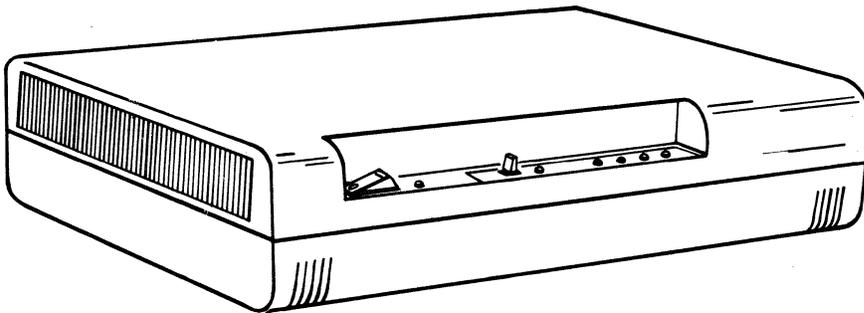
Preface

This manual is written primarily for nontechnical personnel who will set up and check out the IBM 7426 Terminal Interface Unit. The same personnel may also initialize the 7426.

The setup person will be concerned only with Chapter 1 (Setup) and Chapter 2 (Initialization). As setup person, turn to Chapter 1, page 1-1 and the illustrated instructions.

Because Chapters 2 through 5 may be used any time after the 7426 has been set up, this manual should always be available.

Organization

This manual, divided into five chapters and an appendix, contains the following:

* Chapter 1 — the step-by-step setup instructions to be used in conjunction with the worksheet developed by the site planner.

* Chapter 2 — initialization procedures to activate operational character-. istics in the 7426. These procedures are necessary after original setup, but may be used whenever operational environments are changed.

* Chapter 3 — a checklist that the operator should use daily before powering on the 7426.

* Chapter 4 — problem determination procedures to be used by the operator if difficulties are encountered after the 7426 and its peripheral terminals are operational.

* Chapter 5 — step-by-step procedures to disconnect the 7426 and prepare the unit for shipment or relocation.

* Appendix A — NTT tests for 7426 units going to Japan.

Related Manuals

IBM 7426 Terminal Interface Unit Description, Site Planning, and Configuration Guide, GA23-0077

IBM 3101 Display Terminal Description, GA18-2033

IBM 3101 Setup Instructions, GA18-2034

IBM 3101 Customer Problem Analysis and Resolution Guide, GA18-2036

IBM 3101 Operator Reference Information, GA18-2035

IBM 7485 Display Terminal Description, GA18-2075

IBM 7485 Display Terminal Setup Instructions, GA18-2073

IBM 7485 Display Terminal Model 53 Operator Reference Guide, GA18-2078

Contents

Chapter 1. Setup Instructions

How to Use This Chapter

You are about to set up a 7426 Terminal Interface Unit that attaches displays and printers to a host system. This chapter contains procedures you must perform sequentially to ensure a successful setup and test of the 7426 Terminal Interface Units, Models 1 and 2. Each procedure is numbered and requires one or more action steps. These action steps are identified with a small box (☐).

☐　　Read each step completely; then refer to the related illustration before attempting the task.

☑　　Place a check in each box when the task is finished.

Materials Needed

- The Floor Plan Worksheet that was sent to you by the site planner.

- The Cable Connection Worksheet which also contains the 3101 Initialization Switch Settings.

No Tools

No tools are required to set up the 7426.

Save the Container

Save the protective shipping container for future relocation or shipping to the repair center. Refer all questions or problems to your site planner.

Setup Procedures

Refer any questions or problems encountered in these setup procedures to your supervisor or site planner.

1 Inspecting the 7426

☐ Inspect the 7426 for possible damage. If damage is found, notify your site planner.
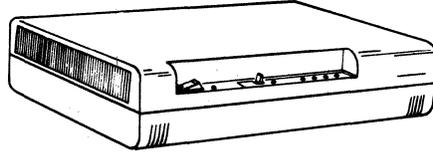
2 7426 Inventory

The 7426 will arrive with a test plug attached to the communication cable connector.

☐ Ensure that the test plug is in place, but do not remove it.

Communication Cable

Model 1 will have this type connector and test plug.

Model 2 will have this type connector and test plug.
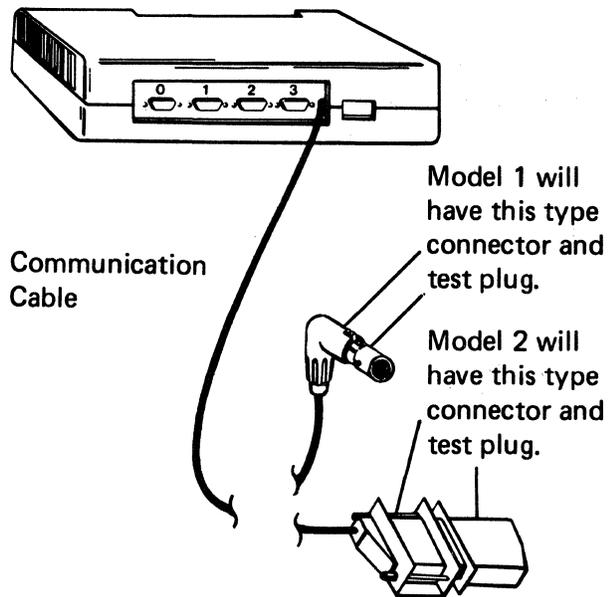
The carton will also contain a plastic bag with the following items. Check the box as you locate each item.

☐ Power cord

☐ Test plug PN 2720166

The 7426 Model 1 will have an extra test plug.

☐ Test plug PN 2720171

Set these items aside until you are instructed to use them.

3 Connecting the Power Cord

☐ Be sure the Power Switch is in the OFF (O) position.
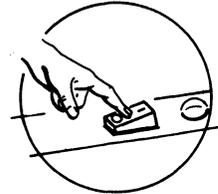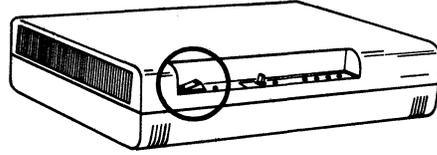
☐ Remove the power cord from the plastic bag and connect it to the 7426.
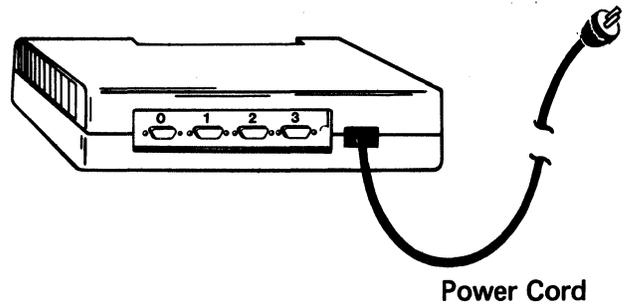
Power Cord

☐ Connect the power cord to the receptacle specified in the Floor Plan Worksheet.
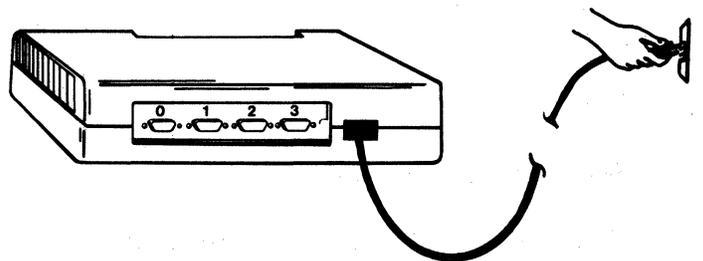
Operator Panel Information

Read the following about the operator panel and review Procedure 4 before
you proceed.
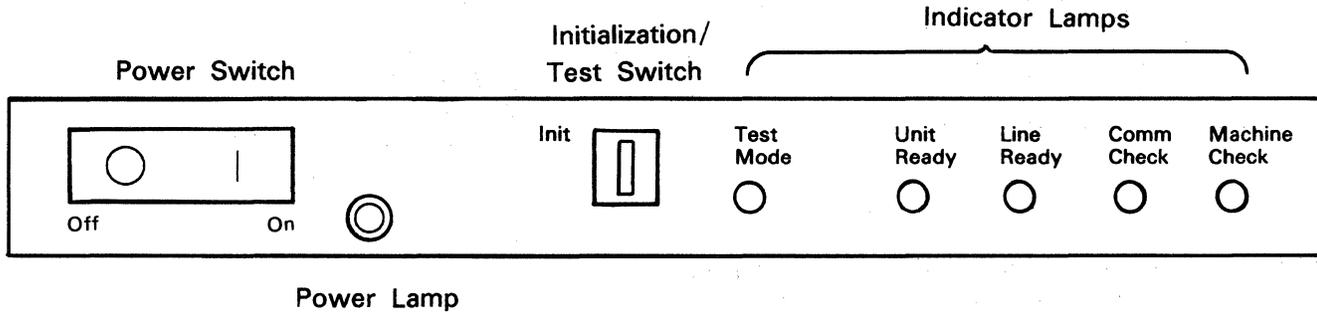
While the Power Switch is off (O), press the Init/Test switch, both to the left
and to the right, just to get the feel of it. The switch is spring-loaded and
will return to the neutral position.

Under some conditions, the Machine Check lamp will blink momentarily.
This is normal and requires no action. But, if the Machine Check lamp
should remain on any time during these setup procedures, it indicates a 7426
test failure. You must then power off and restart the setup procedures.

If a problem persists, notify your supervisor and
return the 7426 to IBM (see Chapter 5).
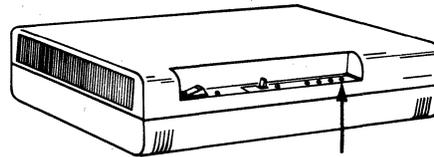
Machine Check Lamp

When the 7426 is powered on, it will automatically perform a self-test. This
will last for about 20 seconds. When the self-test has ended, the Unit Ready
and Test Mode lamps will begin to blink. This is your signal to press the
Init/Test switch to Test (right). The switch must be pressed within 6
seconds after the lamps begin to blink.

4 Powering On

Read this procedure thoroughly before performing
any activity, then return to the top of this page and begin.

☐ Press the Power Switch to ON (|).

Did the Power Lamp light?

YES   NO
| |
20-sec   ☐ Have a qualified person check the power
self-test   source, then restart Procedure 3,
| Connecting the Power Cord.

**Are the Unit Ready and Test Mode lamps blinking
(after about 20 seconds)?**

YES   NO
| |
| ☐ Press the Power Switch to OFF (O)
| and restart this procedure. If the problem
| persists, notify your supervisor and
| return the 7426 to IBM (see Chapter 5).

☐ Immediately press the Init/Test switch to Test (right).

Did all lamps light for 3 seconds?

YES   NO
| |
| ☐ This indicates a 7426 failure. Power
| off and restart this procedure. If the
| problem persists, notify your supervisor and
| return the 7426 to IBM (see Chapter 5).

**Is the Test Mode lamp blinking and the Machine
Check lamp out (after 3 seconds)?**

YES   NO
| |
| ☐ You have exceeded the 6 seconds.
| Press the Power Switch to OFF (O)
| and restart this procedure.

☐ Go to Procedure 5.

Test Mode Lamp
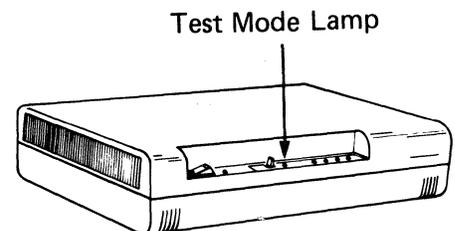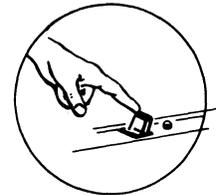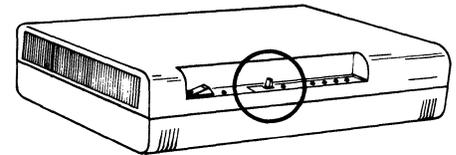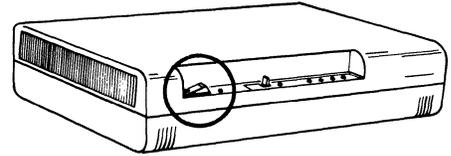
5   Testing Port 0

Note: *DO NOT turn the power off any time during these setup instructions. All ports must be tested in sequential order.*

☐ Connect test plug PN 2720166 to port 0.

☐ Tighten the test plug retainer screws by turning them clockwise (⤴).
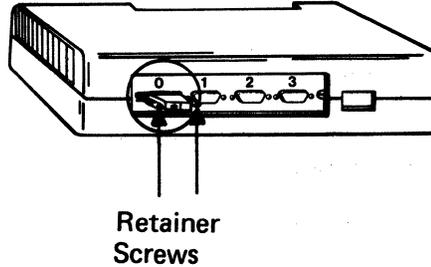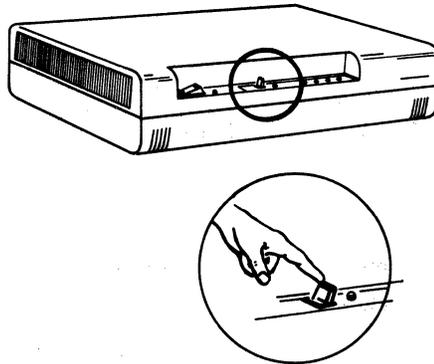
Retainer
Screws

☐ Press the Init/Test switch to Test (right).

Is the Test Mode lamp blinking and the Machine Check lamp out (after 3 seconds)?

YES   NO
  | |
  | Is this the first time you have reached
  | this step?
  |
  | YES   NO
  | | |
  | | ☐ Notify your supervisor
  | | and return the 7426 to
  | | IBM (see Chapter 5).
  | |
  | ☐ Press the Power Switch to OFF (O)
  | and restart Procedure 4, Powering
  | On.
  |
☐ Go to Procedure 6.

6 Testing Port 1

☐ Loosen the retaining screws of the test plug in port 0.

☐ Remove the test plug from port 0 and insert it in port 1.

☐ Tighten the retainer screws.

Retainer Screws

☐ Press the Init/Test switch to Test (right).

Is the Test Mode lamp blinking and the Machine Check lamp out (after 3 seconds)?

YES   NO

          Is this the first time you have reached this step?

          YES   NO

                    ☐ Notify your supervisor and return the 7426 to IBM (see Chapter 5).

          ☐ Press the Power Switch to OFF (O).

          ☐ Move the test plug from port 1 to port 0.

          ☐ Restart Procedure 4, Powering On.
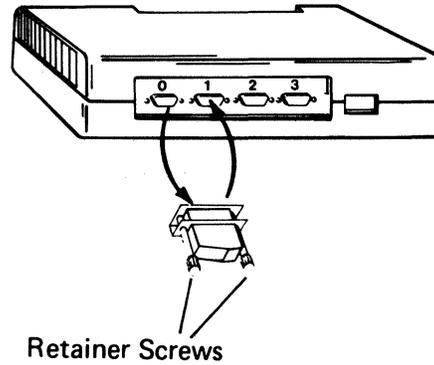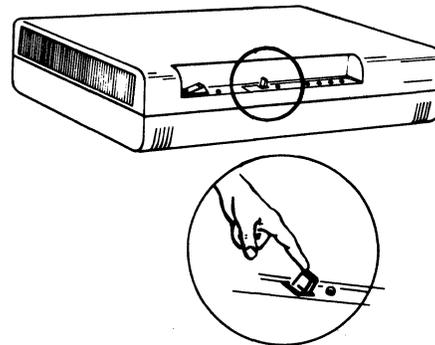
☐ Go to Procedure 7.

7 Testing Port 2

☐ Loosen the retaining screws of the test plug in port 1.

☐ Remove the test plug from port 1 and insert it in port 2.

☐ Tighten the retainer screws.

Retainer
Screws

☐ Press the Init/Test switch to Test (right).

Is the Test Mode lamp blinking and the Machine Check lamp out (after 3 seconds)?

YES   NO
|
Is this the first time you have reached this step?

    YES   NO
            |
            ☐ Notify your supervisor and return the 7426 to IBM (see Chapter 5).

      ☐ Press the Power Switch to OFF (O).

      ☐ Move the test plug from port 2 to port 0.

      ☐ Restart Procedure 4, Powering On.

☐ Go to Procedure 8.

8 Testing Port 3

☐ Loosen the retaining screws of the test plug in port 2.

☐ Remove the test plug from port 2 and insert it in port 3.

☐ Tighten the retainer screws.

Retainer Screws

☐ Press the Init/Test switch to Test (right).

Is the Test Mode lamp blinking and the Machine Check lamp out (after 3 seconds)?

YES   **NO**
│
Is this the first time you have reached this step?

   YES   **NO**
   │
   ☐ Notify your supervisor and return the 7426 to IBM (see Chapter 5).

   ☐ Press the Power Switch to OFF (O).

   ☐ Move the test plug from port 3 to port 0.

   ☐ Restart Procedure 4, Powering On.

☐ Go to Procedure 9.

9 Testing the Communication Cable

The communication cable on the 7426 Model 1 contains a round test plug.

The communication cable on the 7426 Model 2 contains a flat test plug.

☐ Be sure that the test plug is securely connected. (On the Model 2, tighten the retainer screws.)
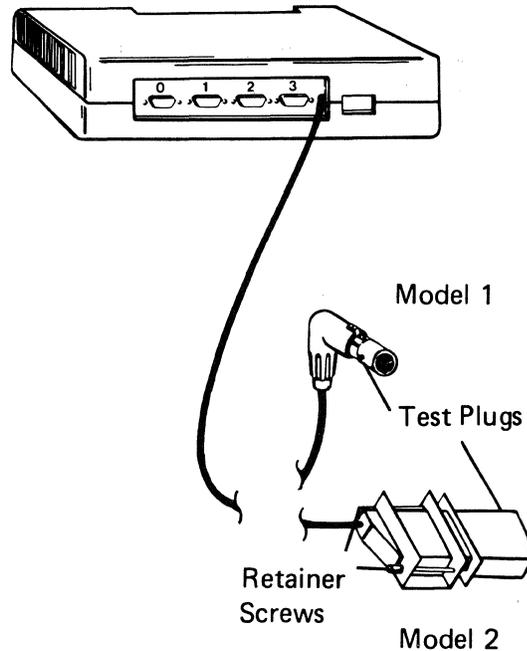
Model 1

Test Plugs

Retainer Screws

Model 2

☐ Press the Init/Test switch to Test (right).

Is the Unit Ready lamp blinking, the Test Mode lamp on, and the Machine Check lamp out?

YES   NO

     ☐ Press the Power Switch to OFF (O).

     ☐ Move the test plug from port 3 to port 0.

     ☐ Restart Procedure 4, Powering On.

     If the problem persists, notify your supervisor and return the 7426 to IBM (see Chapter 5).

☐ Press the Init/Test switch to Test (right). The Unit Ready lamp will now be on and blinking. Ignore the status of the other lamps.

☐ Go to Procedure 10.
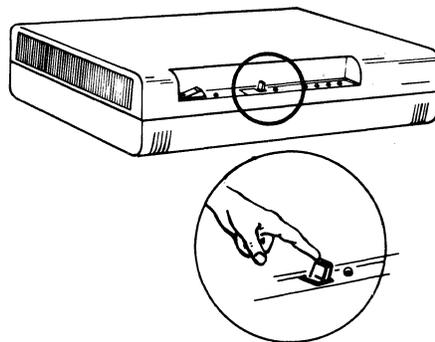
10 Removing the Test Plugs

The test plugs must be removed from all ports and from the communication cable, or the 7426 will not operate properly.

☐ Remove the test plug from the communication cable.

☐ Remove the test plug from the port.

☐ Save these test plugs. They will be needed for future maintenance procedures.

☐ If this 7426 is a Model 1, you will also have test plug PN 2720171. Keep it with the others.

Test Plug

Press this button to release.

Model 1

Test Plugs
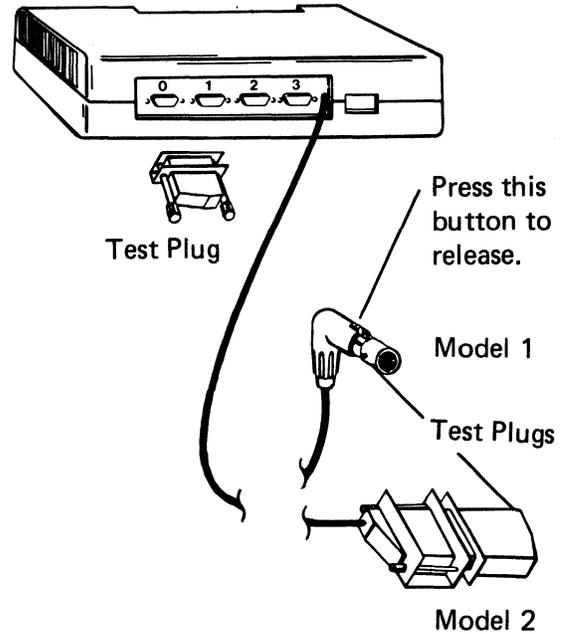
Model 2

11 Connecting the Communication Cable

Use the Floor Plan Worksheet, supplied by your site planner, to make the following connection.

Is this 7426 a Model 1?

YES   NO

☐ Connect the flat 25-pin connector to the modem or direct connect cable from the host system.

Note: *In Japan, if attaching to a modem, install adapter assembly PN 2722052 to the 7426 cable and connect the adapter to the modem.*

In the UK, if attaching to a modem, install adapter assembly PN 1727744 to the 7426 cable and connect the adapter to the modem.

☐ Tighten the retainer screws.

☐ Go to Procedure 12.

7426
Model 2

Modem or
Direct
Connect Cable

Retainer
Screws
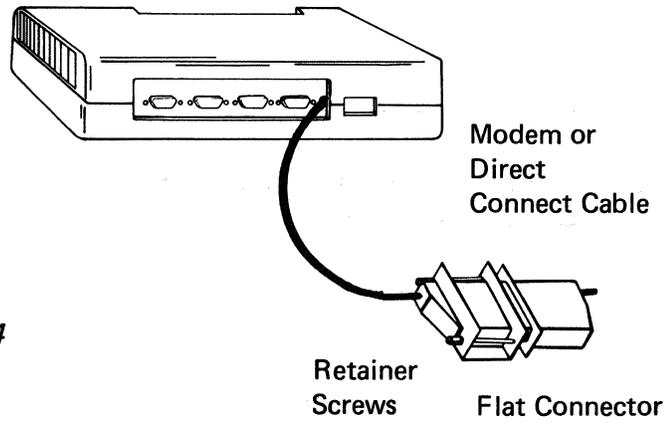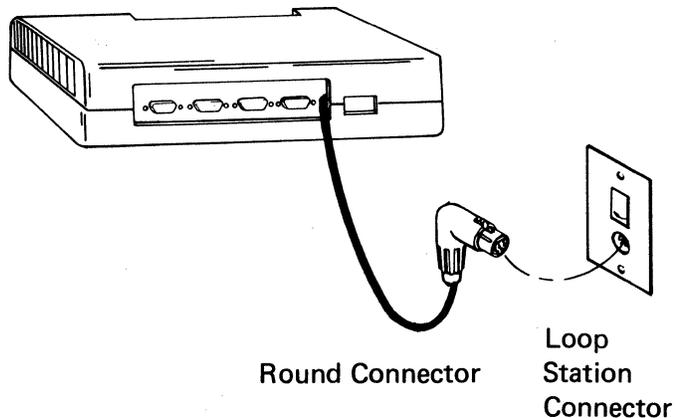
Flat Connector

☐ Connect the round loop cable connector to the loop station connector.

☐ Go to Procedure 12.

7426
Model 1

Round Connector

Loop
Station
Connector

12 Connecting the Terminals to the 7426

Note: *Prior to the arrival of the displays and printers, communication cables were installed from the display and printer locations to the 7426 location.*

☐ Locate the Cable Connection Worksheet sent by the site planner.

☐ Using the worksheet, connect these cables to the ports shown.

☐ Be sure the label numbers on the connectors match the port numbers.

Communication cables from displays or printers.
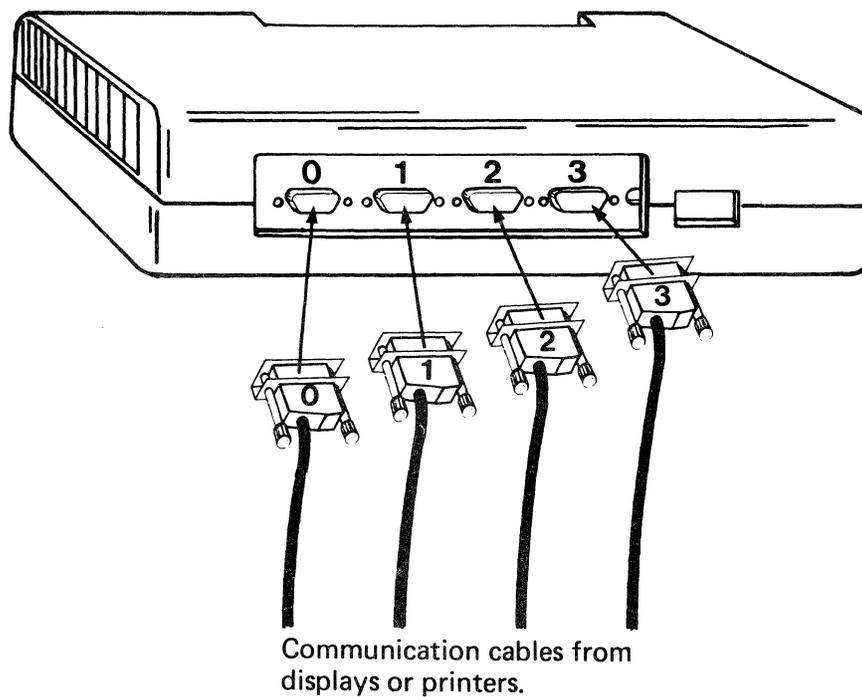
☐ Turn to Chapter 2 for initialization.

Chapter 2. Initialization

Initialization is the process of loading operational information into the 7426 storage area. It must be performed:

- After setup.
- After changing the 7426 configuration.
- While resolving a hardware problem (as directed by Chapter 4).

How to Use This Chapter

This chapter contains procedures you must perform to ensure a successful initialization of the 7426 Terminal Interface Unit. Each procedure is numbered and requires one or more action steps. These action steps are identified with a small box (☐).

☐   Read each step completely; then refer to the related illustration before attempting the task.

☑   Place a check in the box when the task is finished.

Materials Needed

- The Initialization Worksheet that was sent by the site planner. It specifies the 3101 or 7485 terminal you are to attach to port 0 and the data you must enter through the terminal.

- The 3101 Switch Setting Checklist if the Initialization Worksheet specifies a 3101. This checklist shows the physical switch settings of the 3101. The 7485 does not require a checklist.

Refer all questions or problems to your site planner.

Procedures

1   Powering Off the 7426

☐   Press the Power Switch of the 7426 to OFF (O).

2   Connecting the Initializing Terminal

Is a 3101 or a 7485 Display Unit Connected to Port 0?

YES   NO

☐   Connect a 3101 or 7485 display unit to port 0 of the 7426, as specified on the Initialization Worksheet, to perform initialization.

☐   Return to the question.

☐   Ensure the 3101 switches match the Switch Setting Checklist sent by your site planner. (The 7485 does not have setup switches.)

3   Powering On the Display Unit

☐   Press the display unit Power Switch to ON (|).

Read the Next Step Carefully.

☐   Press the 7426 Power Switch to ON (I).
Wait 20 seconds; the Unit Ready and Test Mode lamp will blink.
Ignore all other lamps during this time.

☐   While the lamps are blinking, press the 7426 Init/Test switch to Init (left). The Unit Ready and Test Mode lamps will go out.
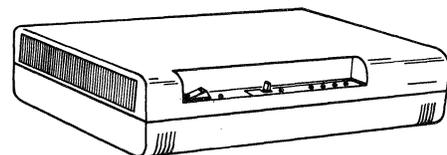
4 **Entering Initialization Data**

A format should now appear on the terminal screen similar to that on the Initialization Worksheet. See Figure 2-1 and read the notes relating to it.

The **A** position is a machine response to the operator. Ignore the first display and continue with the instructions.

```
IBM 7426-0X  (0X = Model 01 or 02)
A
*   __  _____  __  __  __

0   __  __  __  __  __  __
1   __  __  __  __  __  __
2   __  __  __  __  __  __
3   __  __  __  __  __  __

                         _____

_____
CHAR  MODE
```

Notes:

1. *The positions on your screen may or may not contain previous data. Regardless, they must be changed to reflect the Initialization Worksheet.*

2. *The numbers on the left side of the format (0, 1, 2, and 3) represent the four ports on the 7426. DO NOT attempt to change these numbers.*

Figure 2-1 Initialization Display Format

4 Entering Initialization Data (continued)

Did the format on Figure 2-1 appear on your display terminal?

YES   NO

Is this the first time you have reached this step?

     YES   NO

               ☐ **Have you just completed Chapter 1 setup instructions?**

                        YES   NO

                               ☐ Go to Chapter 4, Part 2, and perform the External Port Test and return to this point.

                                 Were the tests successful?

                                 YES   NO

                                         ☐ Replace the 7426 by following your local procedures.

                                 ☐ The problem is external to the 7426. Notify your supervisor.

                    ☐ The problem is external to the 7426. Notify your supervisor.

        ☐ Be sure that a communication cable is attached to the display.

        ☐ Be sure that the display power cable is attached to a proper outlet.

        ☐ Restart with Procedure 1 of this chapter.

☐ Use either the Tab key or the Backspace key to move the cursor (position marker). Enter the data shown on the Initialization Worksheet.

☐ When all positions are completed, hold the Alt key down and press the D key on the 3101. If you are using a 7485, press the Accept key.

4 Entering Initialization Data (continued)

Does a 2 appear in the Ⓐ position?

YES   NO

☐ You have made an invalid entry. An X appears at the first invalid position. Correct only that position. Hold the Alt key and press the D key (3101) or the Accept key (7485) again.

If you still do not receive a 2 in the Ⓐ position, continue as above until all X's have disappeared.

Double-check your entries.

☐ Hold the Alt key and press the D key (3101) or the Accept key (7485).

Does a 3 appear in the Ⓐ position?

YES   NO

You have made an invalid entry, or the worksheet is incorrect.
☐ Retry this Procedure. If you still do not get a 3 in the Ⓐ position, ask your site planner to check the worksheet.

☐ When the Unit Ready lamp is blinking, press the Init/Test switch to Init (left). The Unit Ready lamp will now be on. Ignore the status of the other lamps.

Initialization is complete. This manual, the Initialization Worksheet, and the Switch Setting Checklist will be needed for future reference. Therefore, always store these items where they will be readily available.

Chapter 3. Operator's Checklist

☐ Turn power on (I) on all units attached to the 7426.

☐ When the 7426 is powered on, it will automatically perform a self-test. This will last for about 20 seconds. When the self-test has ended, the Unit Ready and Test Mode lamps will begin to blink.

☐ If your 7426 is not powered on at this time, press the 7426 Power Switch to ON (I).

Is the Unit Ready lamp on?

YES   NO

☐ Turn to Chapter 4 and find the lamp display that matches the display on the 7426.

Is the Line Ready lamp on?

YES   NO

Is the Machine Check lamp on?

YES   NO

☐ Call the host operator and ask that your line be made operational.

Does the Line Ready lamp light?

YES   NO

☐ Go to Chapter 4.

☐ The 7426 is operational. You may now use the attached displays or printers.

☐ Power off and retry powering on. If the problem persists, notify your supervisor and return the 7426 to IBM (see Chapter 5).

☐ The 7426 is operational. You may now use the attached displays or printers.

Chapter 4. Customer Problem Analysis and Resolution

This chapter contains two parts. Part 1 contains procedures to help you resolve problems indicated by the 7426 display lamps. You can select a specific procedure for your specific problem. Part 2 is an External Port Test and can only be reached as directed by Part 1.

Part 1 Initial Problem Determination Procedures

You may be directed to other chapters and then return. If this happens, you may find it helpful to use a paper clip to clip the page you are leaving, so that you can easily return to the procedure from where you started.

☐ In the following chart, find the display that matches your present 7426 display; then go to the procedure indicated.
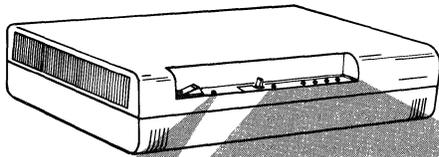
Legend
● = ON
O = OFF
B = Blinking

Power Lamp	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check	Description	Go to Procedure
O	O	O	O	O	O	Power Lamp out	1
●	O	O	O	O	O	7426 Models 1 & 2	2
●	O	B	O	O	O	7426 Models 1 & 2	3
●	O	●	O	O	O	7426 Models 1 & 2	4
●	O	●	O	●	O	7426 Model 1	5
●	O	●	O	●	O	7426 Model 2	6
●	O	●	O	●	●	7426 Model 1	7
●	O	O	O	B	B	7426 Model 1	7
●	O	●	O	O	●	7426 Models 1 & 2	8
●	O	●	●	O	●	7426 Models 1 & 2	8
●	O	●	●	O	O	One or more failing ports 7426 Models 1 & 2	9
●	O	O	O	O	●	7426 Models 1 & 2	10
●	O	B	B	O	O	7426 Models 1 & 2	11

1

Power	Test	Unit	Line	Comm	Machine
Lamp	Mode	Ready	Ready	Check	Check
O	O	O	O	O	O

☐ Press the Power Switch to OFF (O), then to ON (|).

Is the Power Lamp still out?

YES   NO

☐ Use the Chapter 3 checklist.

☐ Have a qualified person check the power source.

☐ Press the Power Switch to OFF (O) then to ON (|).

Is the Power Lamp still out?

YES   NO

☐ Use the Chapter 3 checklist.

☐ Replace the 7426 following your local procedures.

2

Power	Test	Unit	Line	Comm	Machine
Lamp	Mode	Ready	Ready	Check	Check
●	O	O	O	O	O

☐ Press the Power Switch to OFF (O), then to ON (|).

Are other lamps on (after about 20 seconds)?

YES   NO

☐ Replace the 7426 following your local procedures.

☐ Use the Chapter 3 checklist.

3

Power Test	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check
●	O	B	O	O	O

☐ Perform initialization (Chapter 2), then RETURN TO THIS POINT.

Note: *If you have reached this procedure each day when you power on the 7426, replace the 7426 by following your local procedures.*

Is the Unit Ready lamp still blinking?

YES   NO

          ☐   Go to the Chapter 3 checklist.

☐   Replace the 7426 by following your local procedures.

4	Power Test	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check
	●	O	●	O	O	O

Have you used the Operator's Checklist (Chapter 3) since the failure occurred?

YES   NO

☐   Go to the Chapter 3 checklist.

☐   Be sure that the modems and data link are operational (if you have them).

Does the problem still exist?

YES   NO

☐   Go to the Chapter 3 checklist.

☐   Go to Part 2 of this chapter and perform the External Port Test. When that is finished, RETURN TO THIS POINT.

Does the problem still exist?

YES   NO

☐   Go to the Chapter 3 checklist.

☐   Perform initialization (Chapter 2), then RETURN TO THIS POINT.

Does the problem still exist?

YES   NO

☐   Go to the Chapter 3 checklist.

The problem is external to the 7426. You may wish to check the modems, direct connect cable, or the loop (whatever your 7426 is attached to).

5

<table>
<tr><td colspan="6" align="center">7426 Model 1</td></tr>
<tr><td>Power
Test</td><td>Test
Mode</td><td>Unit
Ready</td><td>Line
Ready</td><td>Comm
Check</td><td>Machine
Check</td></tr>
<tr><td>●</td><td>O</td><td>●</td><td>O</td><td>●</td><td>O</td></tr>
</table>

The problem is external to the 7426.

Have you used the Operator's Checklist (Chapter 3) since the failure occurred?

YES   NO
| |
| ☐   Go to the Chapter 3 checklist.
|
☐   Verify that the loop station connector is operational. (Call the host operator to check the loop.)

6

<table>
<tr><td colspan="6" align="center">7426 Model 2</td></tr>
<tr><td>Power
Test</td><td>Test
Mode</td><td>Unit
Ready</td><td>Line
Ready</td><td>Comm
Check</td><td>Machine
Check</td></tr>
<tr><td>●</td><td>O</td><td>●</td><td>O</td><td>●</td><td>O</td></tr>
</table>

Have you used the Operator's Checklist (Chapter 3) since the failure occurred?

YES   NO
| |
| ☐   Go to the Chapter 3 checklist.
|
☐   Be sure that the modem is operational.

☐   Be sure that the direct connect cable is securely connected (tighten the retaining screws).

Does the problem still exist?

YES   NO
| |
| ☐   Go to the Chapter 3 checklist.
|
☐   Go to Part 2 of this chapter and perform the External Port Test. When that is finished, RETURN TO THIS POINT.

Does the problem still exist?

YES   NO
| |
| ☐   Go to the Chapter 3 checklist.
|

The problem is external to the 7426. You may wish to check the modem or the direct connect cable.

7

Power Lamp	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check
●	O	●	O	●	●

OR

Power Lamp	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check
●	O	O	O	B	B

☐ Go to Part 2 of this chapter and perform the External Port Test. When that is finished, RETURN TO THIS POINT.

Does the problem still exist?

YES   NO

          ☐ Go to the Chapter 3 checklist.

☐ The problem is external to the 7426. You may wish to have the host operator check the loop.

8

Power Lamp	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check
●	O	●	O	O	●

OR

Power Lamp	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check
●	O	●	●	O	●

☐ Go to Part 2 of this chapter and perform the External Port Test. When that is finished, RETURN TO THIS POINT.

Does the problem still exist?

YES   NO

          ☐ Go to the Chapter 3 checklist.

☐ Replace the 7426 by following your local procedures.

9

Power Lamp	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check
●	O	●	●	O	O

☐ Call the host operator and ask that the 7426 and all appropriate ports be made operational.

Does the problem still exist?

YES   NO

   ☐ Your 7426 is operational. You may now use the attached terminals.

☐ Verify that the setup switches on the terminal attached to the failing port are in proper position. (Refer to the terminal documentation.)

☐ Be sure that the terminal attached to the failing port is operational. (Refer to the terminal documentation.)

☐ Be sure that all cables are securely connected.

☐ Be sure that the modems and data link are operational (if you have them).

☐ Go to Part 2 of this chapter and perform the External Port Test. When that is finished, RETURN TO THIS POINT.

Does the problem still exist?

YES   NO

   ☐ Go to the Chapter 3 checklist.

☐ Perform initialization (Chapter 2), then RETURN TO THIS POINT.

Does the problem still exist?

YES   NO

   ☐ Go to the Chapter 3 checklist.

The problem is external to the 7426. However, you may use the test plug (PN 2720171) to test the communication cable (PN 2720173 or PN 2720174). If the failing terminal is attached with cable PN 2720150, the cable must be replaced.

Note: *In Japan, if the failing terminal is connected through a modem, go to the Chapter 3 checklist.*

Perform the test as follows:

☐ Disconnect all the 7426 port cables EXCEPT the cable connected to the failing terminal.

☐ Disconnect the cable from the failing terminal and attached the test plug (PN 2720171) to the terminal end of the cable.

☐ Go to the next page and continue.

9 (Continued)

☐ Read the following note, then go to Part 2 of this chapter and perform the External Port Test. When that is finished, RETURN TO THIS POINT.

> **Note:** *You have already disconnected up to three cables from the 7426 and now you will test the cable to the failing terminal. When performing the External Port Test, you will be directed to remove all the cables from all the ports on the 7426. DO NOT REMOVE THE CABLE TO BE TESTED. You will be directed to move a test plug from port to port. When you get to the port with the cable attached, set the test plug aside because the cable will have a test plug attached. Continue the other procedures as directed, then RETURN TO THIS POINT.*

Did the port with the cable attached fail the test?

YES   NO

☐ Disconnect the test plug from the cable and store it for future use.

☐ Reconnect the cable to the terminal.

☐ Go to the Chapter 3 checklist.

☐ Replace the failing cable. (This may have to be ordered by your site planner.)

10

Power Lamp	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check
●	O	O	O	O	●

☐ Press the Power Switch to OFF (O) then to ON (I).

Does the Machine Check lamp remain on?

YES   NO

☐ Go to the Chapter 3 checklist.

☐ Replace the 7426 by following your local procedures.

11

Power Lamp	Test Mode	Unit Ready	Line Ready	Comm Check	Machine Check
●	O	B	B	O	O

☐ Perform initialization (Chapter 2), then RETURN TO THIS POINT.

Does the problem still exist?

YES   NO

☐ Go to the Chapter 3 checklist.

☐ Locate your Initialization Worksheet.

```
IBM 7426-0X (0X = Model 01 or 02)

         8-Character.
  *      Field
    __  _____  __  __  __

  0 __  __  __  __  __  __

  1 __  __  __  __  __  __

  2 __  __  __  __  __  __

  3 __  __  __  __  __  __

                         _____

  _____
  CHAR MODE
```

The 8-character field on the worksheet must match the name (8 characters) of the
data set stored at the host.

☐ Notify the host operator that your 7426 Downstream Load Data Set cannot be found.

☐ Read the 8-character field from your worksheet to the host operator, so that he can determine if there is a match.

☐ The host operator will either correct the problem at his end, or may give you a new set of 8 characters which you must record on your Initialization Worksheet. Then repeat Chapter 2 initialization with the new information on the worksheet.

Part 2 External Port Test

1 Powering Off the 7426

☐   Be sure the Power Switch is in the OFF (O)
position.
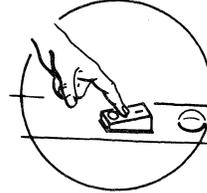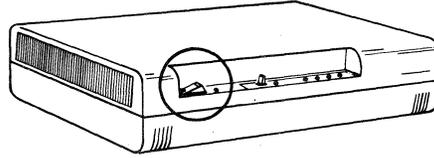
2 Disconnecting the Communication Cable

☐   Disconnect the 7426 communication cable.

Note: *In Japan, if the 7426 is connected to a
modem and the modem is powered on, turn
the Test/Oper switch on the adapter cable to
Test.* Do not *disconnect the communication
cable.*

Loop
Cable
Connector

Model 1

Loop
Station
Connector

25-Pin
Connector

Model 2

Modem or the
Host System
(direct connect)
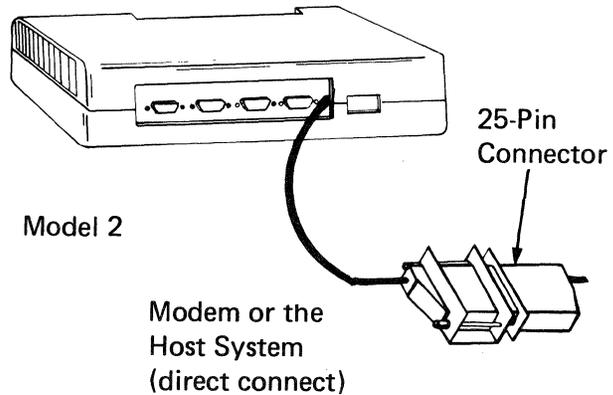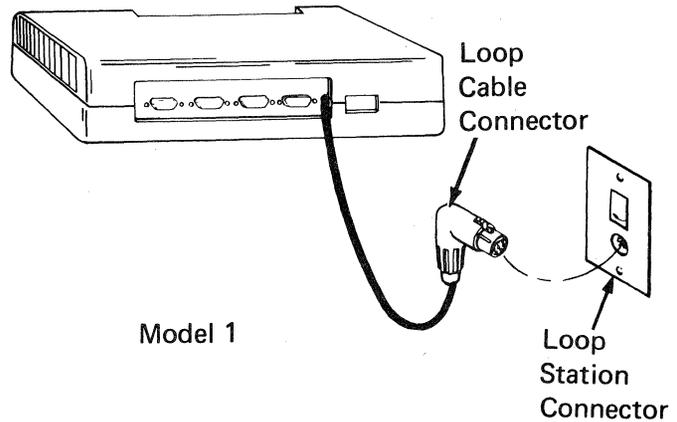
3 Disconnecting the Port Cables

Be sure that the number on the cables match the
port numbers before you remove any cables.

☐ Disconnect the cables from the four ports
of the 7426.

   Note: *In Japan, if any ports are connected
   to a modem, turn the Test/Oper switch on
   the adapter cable to Test.* Do not *disconnect
   the cable.*
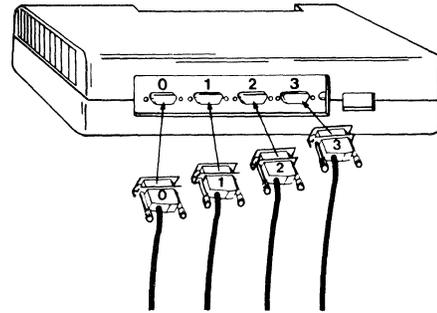
Communication cables from
displays or printers.

4 Inserting the Test Plugs

☐ Insert the test plug (PN 2720166) into port 0.

☐ Tighten the retainer screws.
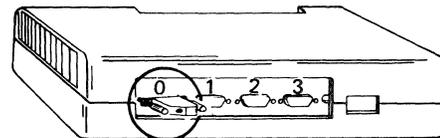
2720166

Retainer Screws

Operator Panel Information

Read the following about the operator panel and review Procedure 5, before
you proceed.
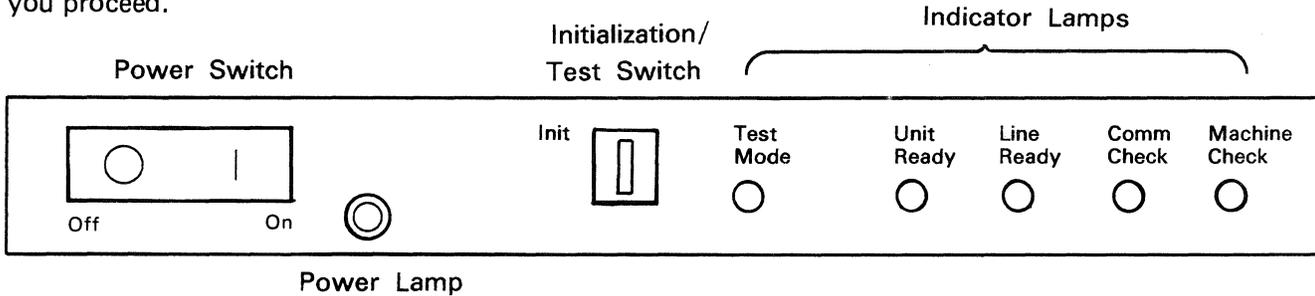
Power Switch   Initialization/   Indicator Lamps
                Test Switch

Init   Test   Unit   Line   Comm   Machine
        Mode   Ready   Ready   Check   Check

Off   On

Power Lamp

While the Power Switch is off (O), press the Init/Test switch, both to the left
and to the right, just to get the feel of it. The switch is spring-loaded and will
return to the neutral position.

Under some conditions, the Machine Check lamp will blink momentarily.
This is normal and requires no action. But, if the Machine Check lamp should
remain on any time during these procedures, it indicates a 7426 failure. Note
the failure and continue.
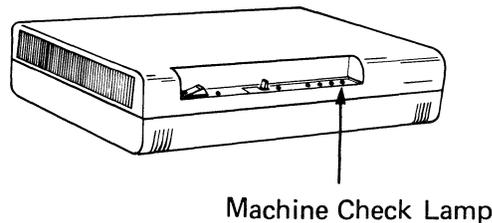
Machine Check Lamp

When the 7426 is powered on, it will automatically perform a self-test. This
will last for about 20 seconds. When the self-test has ended, the Unit Ready and
Test Mode lamps will begin to blink. This is your signal to press the Init/Test
switch to Test (right). The switch must be pressed within 6 seconds after the
lamps begin to blink.

5 Powering On

Read this procedure thoroughly before performing any activity, then return to the top of this page and begin.

☐ Press the Power Switch to ON (I).
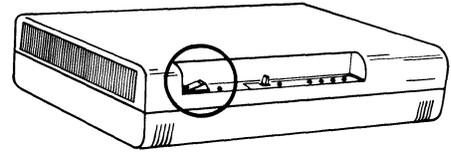
Did the Power Lamp light?

YES   NO

20-sec   ☐   Be sure that the power cord is securely
self-test   connected. If it is, have a qualified
                person check the power source.
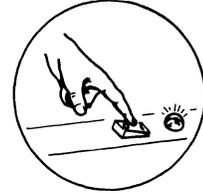
Are the Unit Ready and Test Mode lamps blinking (after about 20 seconds)?

YES   NO

        ☐   Press the Power Switch to OFF (O)
            and restart this procedure. If the
            problem persists, replace the 7426
            following your local procedures.
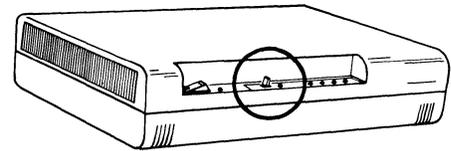
☐ Immediately press the Init/Test switch to Test (right).
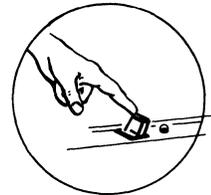
Did all lamps light for 3 seconds?

YES   NO

        ☐   Press the Power Switch to OFF (O)
            and restart this procedure. If the
            problem persists, replace the 7426
            following your local procedures.

Is the Test Mode lamp blinking and the Machine Check lamp out (after 3 seconds)?

YES   NO

        ☐   You have exceeded the 6 seconds.
            Press the Power Switch to OFF (O)
            and retry this procedure.

☐ Go to Procedure 6.

Test Mode Lamp
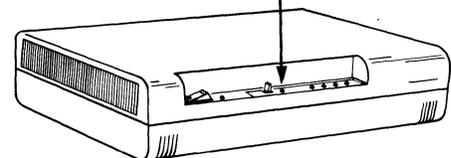
6 Testing Port 0

Note: *DO NOT turn the power off any time during Procedures 6 through 11.*

When both the Machine Check and the Comm Check lamps light, it indicates a port failure. Note the failure and continue with the tests.

☐ Press the Init/Test switch to Test (right).
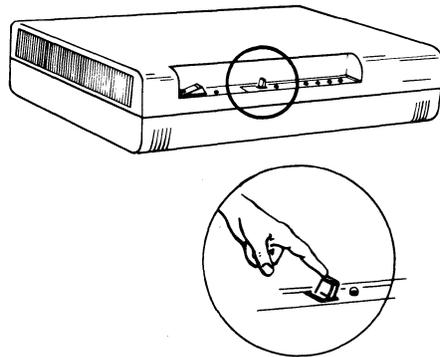
Is the Test Mode lamp blinking and the Machine Check lamp out (after 3 seconds)?

YES   NO

       Is this the first time you have reached this step?

       YES   NO

                ☐ Note the failure and go to Procedure 7.

       ☐ Press the Power Switch to OFF (O) and restart Procedure 5, Powering On.

☐ Go to Procedure 7.
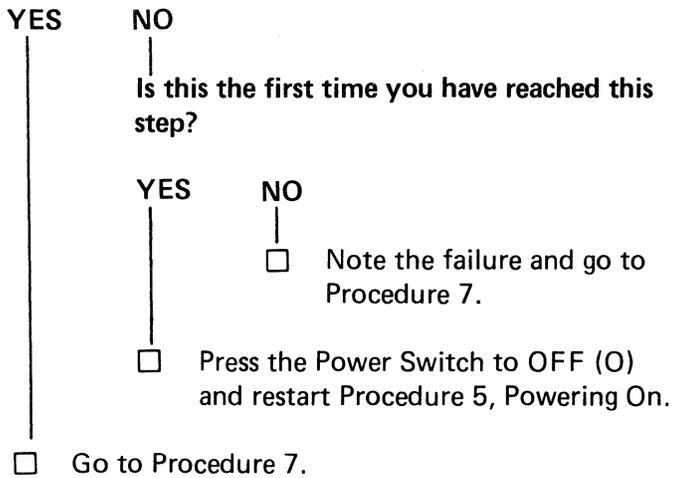
7 Testing in Port 1

☐ Loosen the retaining screws of the test plug in port 0.

☐ Remove the test plug from port 0 and insert it in port 1.

☐ Tighten the retainer screws.
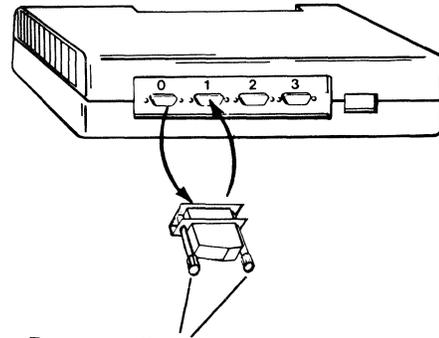
Retainer Screws

☐ Press the Init/Test switch to Test (right).
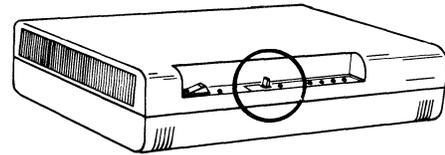
Is the Test Mode lamp blinking and the Machine Check lamp out (after 3 seconds)?

YES   NO
|
Is this the first time you have reached this step?

      YES   NO
      | |
      | ☐ Note the failure and go to Procedure 8.

      ☐ Press the Power Switch to OFF (O).

      ☐ Move the test plug from port 1 to port 0.

      ☐ Restart Procedure 5, Powering On.

☐ Go to Procedure 8.
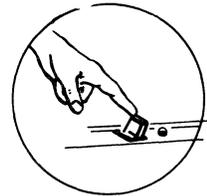
8 Testing Port 2

☐ Loosen the retaining screws of the test plug in port 1.

☐ Remove the test plug from port 1 and insert it in port 2.

☐ Tighten the retainer screws.

Retainer Screws
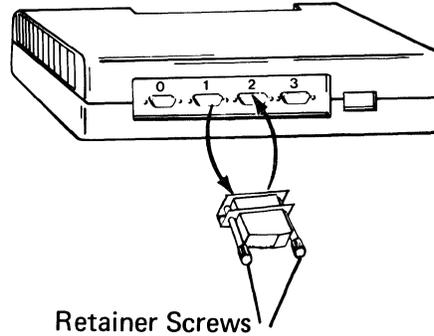
☐ Press the Init/Test switch to Test (right).
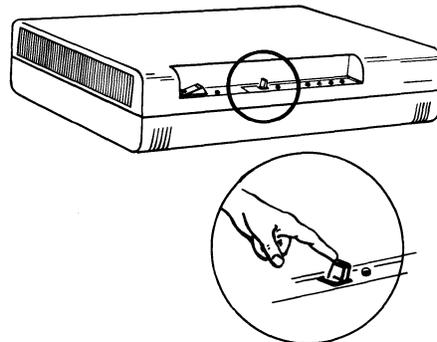
Is the Test Mode lamp blinking and the Machine Check lamp out (after 3 seconds)?

YES   NO
         |
         Is this the first time you have reached this step?

         YES   NO
                  |
                  ☐ Note the failure and go to Procedure 9.

         ☐ Press the Power Switch to OFF (O).

         ☐ Move the test plug from port 2 to port 0.

         ☐ Restart Procedure 5, Powering On.

☐ Go to Procedure 9.

9 Testing Port 3

☐ Loosen the retaining screws of the test plug in port 2.

☐ Remove the test plug from port 2 and insert it in port 3.

☐ Tighten the retainer screws.

Retainer Screws
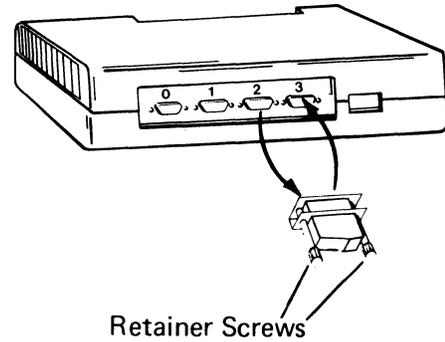
☐ Press the Init/Test switch to Test (right).
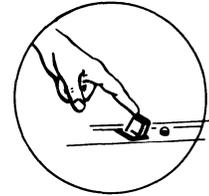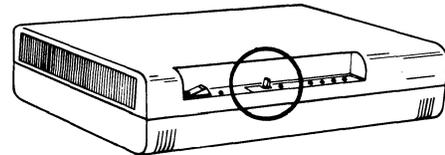
Is the Test Mode lamp blinking and the Machine Check lamp out (after 3 seconds)?

YES   NO
           |
           Is this the first time you have reached this step?

           YES   NO
                      |
                      ☐ Note the failure and go to Procedure 10.

           ☐ Press the Power Switch to OFF (O).

           ☐ Move the test plug from port 3 to port 0.

           ☐ Restart Procedure 5, Powering On.

☐ Go to Procedure 10.

10 Testing the Communication Cable

The communication cable must have a test plug attached.

☐ Securely connect the test plug to the end of the 7426 communication cable.

 Note: *In Japan, if a model B is connected to a modem, be sure the Test/Operate switch is in the Test position and that the modem is powered on.*
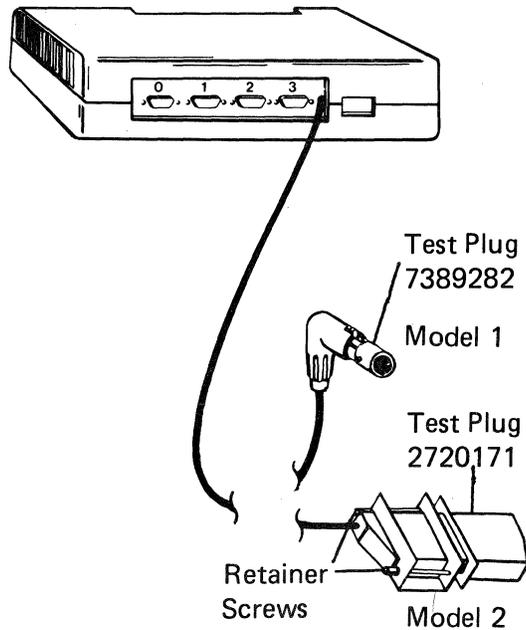
Test Plug
7389282

Model 1

Test Plug
2720171

Retainer
Screws

Model 2

☐ Press the Init/Test switch to Test (right).

Is the Unit Ready lamp blinking, the Test Mode lamp on, and the Machine Check lamp out?

YES	NO

☐ Press the Power Switch to OFF (O).

☐ Move the test plug from port 3 to port 0.

☐ Restart Procedure 5, Powering On.

☐ If the problem persists, replace the 7426 following your local procedures.

 Note: *In Japan, if the model 2 is connected to a modem, disconnect the modem adapter cable from the communication cable and attach test plug PN 2720171 to the communication cable, move the test plug from port 3 to port 0, and restart Procedure 5. If the problem goes away, check the modem and the modem adapter cable.*
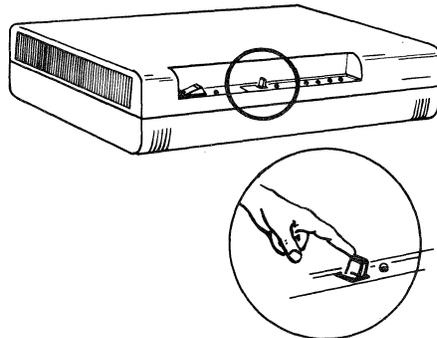
☐ Press the Init/Test switch to Test (right). The Unit Ready lamp will be on and blinking. Ignore the status of the other lamps.

☐ Go to Procedure 11.

11 Removing the Test Plugs

The test plugs must be removed from all ports and
from the communication cable, or the 7426 will not
operate properly.

☐   Remove the test plug from the communication
cable.

> **Note:** *In Japan, return the Test/Oper switch to the
> Oper position on all modem adapter cables.*

☐   Remove the test plug from the port.

☐   Save these test plugs. They will be needed
for future maintenance procedures.
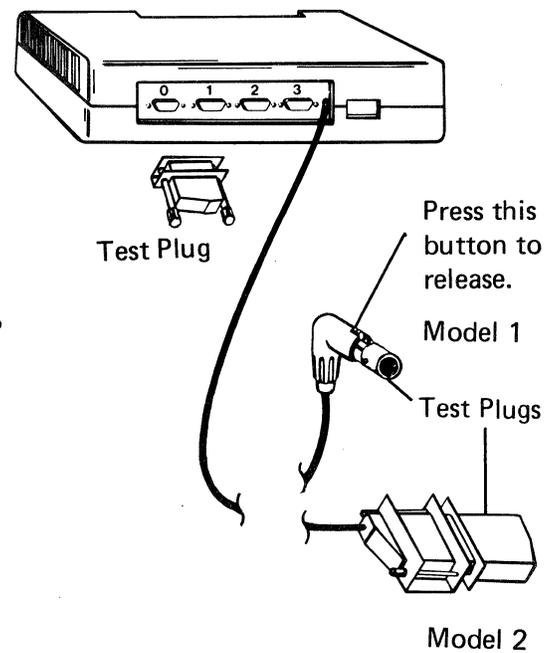
Have you noted any failures on any ports?

YES   NO

☐ Reconnect all the communication cables.

☐ Return to where you came from in Part 1 of this chapter.

If you have a spare 7426, use Chapter 1 to replace the failing 7426 with the spare.

If you do not have a spare 7426, the following procedure will allow you to use the terminals that were not failing. However, the 7426 should be replaced as soon as possible.

Note: *In Japan, if the failing port is connected to a modem, disconnect the cable from that port and restart Procedure 1. If the problem goes away, check the cables which were connected to the failing port.*

Were cables originally connected to all four ports?

YES   NO

There is a spare port which may be used with the cable from the failing port.

Is port 0 the failing port?

YES   NO

☐ Relabel the cable from the failing port with the number from the spare port.

☐ Reconnect all the communication cables.

☐ Label the failing port (with tape), identifying it as being bad.

☐ Check the Initializaiton Worksheet to see if the information about the new port is the same as that of the failing port. (Refer to the worksheet and Figure 2-1 in Chapter 2.)

Is the information on the Initialization Worksheet identical for the new and failing port?

YES   NO

☐ Change the worksheet to make the information about the new port match the information about the failing port.

☐ Notify the host operator to activate the new port.

☐ Use Chapter 2 to perform initialization.

☐ Notify the host operator to activate the new port.

☐ Go to the Chapter 3 checklist.

A   **B**

Go to Next
Page

12 Reconnecting the Terminals to the 7426 (Continued)

Ⓐ   **Ⓑ**

☐ Check the Initialization Worksheet to see if the information
about the new port is the same as that of the failing port.
(Refer to the worksheet and Figure 2-1 in Chapter 2.)

**Is the information on the Initialization Worksheet identical for the new
and failing port?**

YES   NO

☐ Label port 0 (with tape), identifying it as being bad.

☐ Reconnect all other communication cables, but leave
port 0 disconnected.

Note: *You may continue your operation without the
terminal that was on port 0. However, you must replace
the 7426 as soon as possible..*

☐ Go to the Chapter 3 checklist.

☐ Relabel the cable from the failing port 0 with the number from
the spare port.

☐ Reconnect all the communication cables.

☐ Label port 0 (with tape) identifying it as being bad.

☐ Notify the host operator to activate the new port.

☐ Go to the Chapter 3 checklist.

There are no spare ports on the 7426. You may continue your operation without the termi-
nal that was on the bad port. However, you must replace the 7426 as soon as possible.

☐ Label the failing port (with tape), identifying it as being bad.

☐ Reconnect all other communication cables, but leave the bad port disconnected.

☐ Go to the Chapter 3 checklist.

Chapter 5. Relocation Instructions

This chapter contains sequential procedures to prepare a 7426 unit for relocation or shipment. Each procedure is numbered and requires one or more action steps. These action steps are identified with a small box (□).

    □ Read each step completely; then refer to any related illustration before performing the task.

    ☑ Place a check in the box when the task is completed.

1 Shipping Container

□ Locate the original shipping container. If it is lost, see your site planner.

2 Test Plugs

□ Locate the two test plugs (refer to Chapter 1, Procedure 10 to remove test plugs).

3 Powering Off

□ Press the 7426 Power Switch to OFF (O).

□ Power off all terminals attached to the 7426.
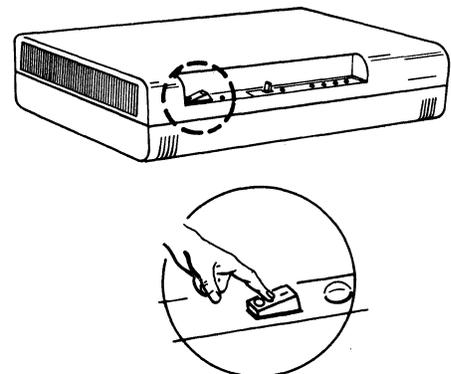
4 Removing the Power Cord

☐ Disconnect the power cord from the power outlet.
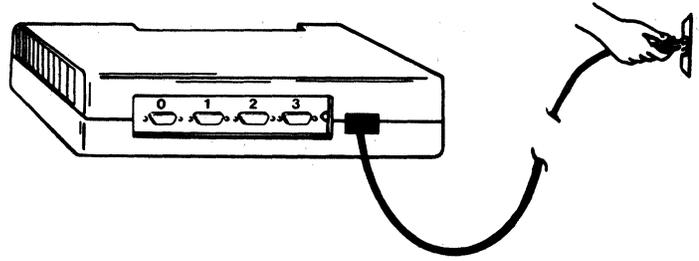
☐ Disconnect the power cord from the 7426 unit.

5 Disconnecting the Communication Cable

☐ Disconnect the 7426 communication cable.

Loop
Cable
Connector

Loop
Station
Connector

Model 1

25-Pin
Connector

Model 2

Modem or the
Host System
(direct connect)
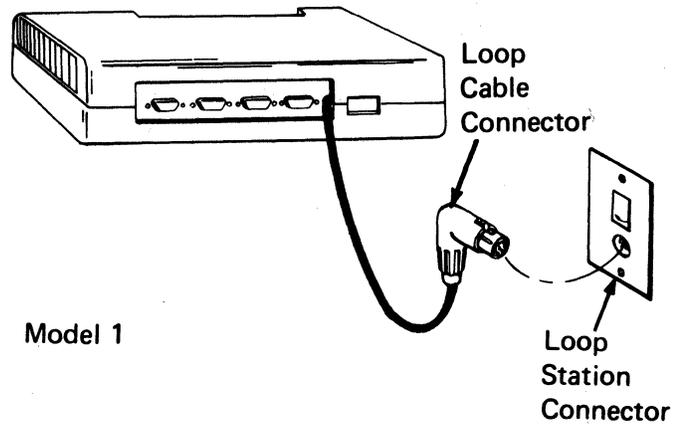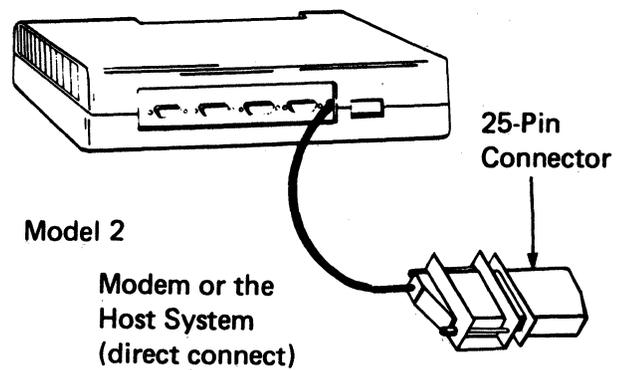
6 Removing the Communication Cables

☐ Remove the communication cables from the back of the 7426.
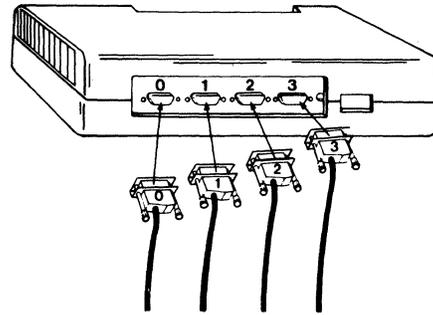
Communication cables from displays or printers.

7 Replacing the Test Plugs

Is the 7426 a Model 1?

YES   NO
 | |
 | ☐ Connect test plug PN 2720171 to the communication cable.
 |
 | ☐ Keep test plug PN 2720166 with the power cord.
 |
 | ☐ Go to Procedure 8.
 |
 |
 |
☐ Connect test plug PN 7389282 to the communication cable.

☐ Keep test plug PN 2720166 and test plug PN 2720171 with the power cord.

☐ Go to Procedure 8.
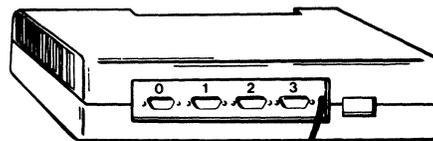
Model 1 test plug
PN 7389282

Model 2 test plug
PN 2720171
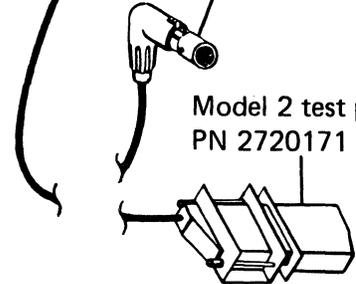
8 Packing the 7426

**Are you preparing this 7426 for shipment to
an IBM Repair Center?**

YES   **NO**

☐ Use the packing instructions
found with the shipping
container to pack the 7426 for
relocation.

☐ Fill in all the information requested on the
IBM Repair Center Machine Repair
Authorization form (GX27-0006).

☐ Use the packing instructions found with
the shipping container to pack the 7426
for shipment to the repair center.

Appendix A. NTT Tests for Japan

When an NTT modem is provided, an authorized inspector must test and approve the CCITT interface drivers of all 7426 units for use in Japan.

The 7426 units were previously tested at the source of manufacture, and a form (2720351) is documented for each port of the 7426. These forms (four for Model 1 and five for Model 2) are shipped with each 7426. The customer must present these forms to the authorized inspector of the area.

If the inspector should question any of the recorded measurements, the customer must display the initialization screen to activate the 7426 ports. The inspector will then test any questionable port measurements for satisfaction. If the 7426 fails the test, it must be replaced.

Display the initialization screen as follows:

☐ Attach a 3101 or 7485 display unit to port 0 of the 7426.

☐ Press the power switches to OFF (O) on the 7426 and the display unit.

☐ If the display unit is a 3101, be sure the setup switches match the Switch Setting Checklist sent by the site planner.
(The 7485 does not have setup switches).

☐ Press the power switch of the display unit to ON (I).

☐ Press the 7426 Power Switch to ON (I).
(After about 20 seconds, the Unit Ready and Test Mode lamps will blink. Ignore all other lamps at this time).

☐ While the lamps are blinking, press the Init/Test switch to Init (left).
The Unit Ready and Test Mode lamps will go out.
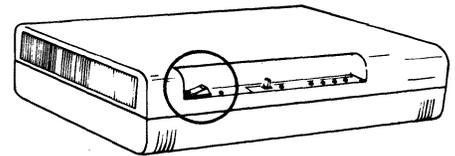
A format similar to that shown below will appear on the display tube. DO NOT change any data already on the screen.

```
IBM  7426-0X  (0X = Model  01  or  02)
Ⓐ
*   ━   ━━━━   ━   ━   ━

0   ━   ━   ━   ━   ━   ━
1   ━   ━   ━   ━   ━   ━
2   ━   ━   ━   ━   ━   ━
3   ━   ━   ━   ━   ━   ━
                        6-Character Field
                        ━━━━━━━━━━━━
━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━
CHAR  MODE
```
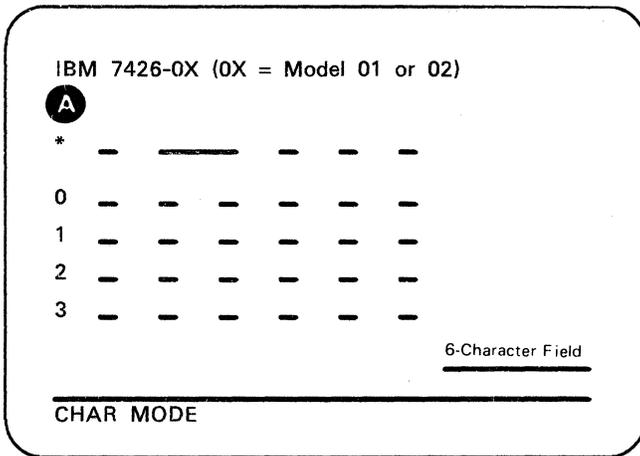
Did this format appear on your display terminal?

YES   NO

Is this the first time you have reached this step?

YES   NO

Have you just completed the Chapter 1 setup instructions?

YES   NO

Go to Chapter 4, Part 2, and perform the External Port Test. Return here if the tests were successful.

Were the tests successful?

YES   NO

Replace the 7426 by following your local procedures.

The problem is external to the 7426. Notify your supervisor.

The problem is external to the 7426. Notify your supervisor.

☐ Be sure that a communication cable is attached to the display.

☐ Be sure that the display power cable is attached to a proper outlet.

☐ Restart with Procedure 1 of this chapter.

☐ Continue with the NTT tests.

A-2

In the lower right corner of the screen, a blank 6-character field is displayed.

☐   Fill this field with "NTTPOL". DO NOT enter this in memory. Read the following instructions:

     1.   NTT is a constant. It must NOT be changed.

     2.   P must be changed to:
         1 to test port 1
         2 to test port 2
         3 to test port 3
         9 to test the host connector

     3.   O must be changed to:
         0 to test all ports

     4.   L must be changed to:
         0 for down level on interface lines.
         1 for up level on interface lines.

When the proper input is displayed in the 6-character field (example NTT100):

☐   Hold the Alt key down and press the D key (3101) or Accept key (7485). This action will be referred to as "Press Enter".

☐   Change the 6-character field for each port to be tested and Press Enter.

To Test Port 0:

☐   Change the field to NTT190.

☐   Press Enter.

     Note: *Ignore any line check message on the display.*

☐   Change the display cable from port 0 to port 1.

☐   The 6-character field has now been changed to underscores;
Enter one of the following:
NTT000 for down level from port 0
NTT001 for up level from port 0.

☐   Press Enter.

To End the NTT Tests:

☐   Put all spaces, nulls, or underlines in the 6-character field.

☐   Press Enter; a 2 will appear in the **Ⓐ** field.

☐   Press Enter; a 3 will appear in the **Ⓐ** field. If it does not, the
     initialization data has been altered and must be corrected by repeating
     the Chapter 2 initialization procedure.

☐   For CCITT interface information, refer to *IBM 7426 Terminal Interface
     Unit Description Guide,* GA23-0077.

IBM 7426 Terminal Interface Unit

Order No. GA23-0078-1

User's Comment Form

Your comments will help us improve the quality of this manual. If you answer a question by checking a NO ☑, please explain.

Did you find that the information was:

	Yes	No			Yes	No
● Useful	☐	☐	● Easy to Understand		☐	☐
● Accurate	☐	☐	● Well Written		☐	☐
● Complete	☐	☐	● Well Illustrated		☐	☐
● Easy to Find	☐	☐	● Well Organized		☐	☐
● Easy to Read	☐	☐	● Flexible (fits your program)	☐	☐

Brief explanation

If you had a problem with a procedure, please include the following information with your comments:

Procedure Number_____ Page Number_____

What was the problem and how did you solve it?

How could the problem be eliminated and, in general, how could the manual be improved ?

Comments

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User's Comment Form

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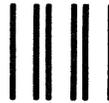
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