

DESKTOP
GENERATION®

Warning

Model 10 and 10/SP

Model 10 and 10/SP systems have undergone rigorous testing and have been found to comply with FCC Rules for computing devices as described in the following paragraphs.

The statement below applies to systems configured with a maximum of the following components, or less: system computer unit (including 15-megabyte Winchester disk, dual floppy diskettes, cartridge tape subsystem, CPU logic, memory and I/O cards); Model 10 and 10/SP system console (including a keyboard and either one monochrome or one color monitor); a model 4434 multifunction dot matrix printer; and a model 4435 color graphics plotter.

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate the computer with respect to the receiver
- move the computer away from the receiver
- plug the computer into a different outlet so that the computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems."

This booklet is available from the US Government Printing Office, Washington, DC 20402, Stock No. 004-000-000345-4.

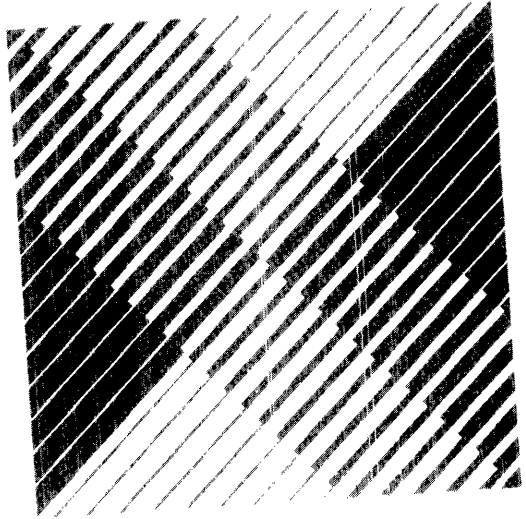
If you expand the above-described system configuration to include other peripherals, such as the second Winchester disk unit or additional terminals, the statement below applies.

All Other Models

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for Class A computing devices 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.

by Data General

DESKTOP GENERATION® Peripherals



DESKTOP
GENERATION®

Installation Guide

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DESKTOP GENERATION® Peripherals
Installation Guide
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About This Manual

This manual is intended for both new and experienced users of DESKTOP GENERATION™ systems. It tells you how to install peripherals to either a newly assembled computer or to a previously installed system.

The manual covers unpacking and installation of your standard peripherals: the Model 10 and 10/SP system console, the DASHER® terminals, the data tablet, the mouse, the printers, and the plotter. For information on peripherals not covered in this book, refer to the manual shipped with the device.

If you are unable to solve a problem with the information supplied in this manual, contact one of the Data General Service Operations Centers listed in the back of the book.

After you have installed your peripherals, use your DESKTOP GENERATION *Systems Operator's Guide* to power up the system and your Customer Diagnostics diskette to test its operation. For information on operating your peripherals, refer to the DESKTOP GENERATION *Peripherals Operator's Guide* or the manual shipped with the peripheral.

If you would like to order additional documentation, refer to the Related Documentation information at the end of the book.

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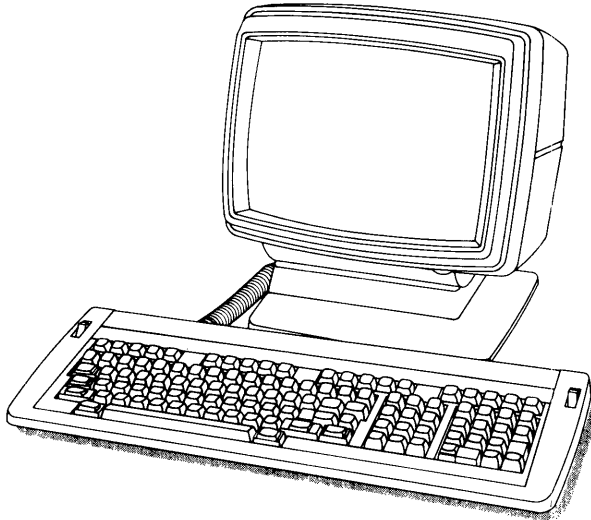
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1

**Model 10 and 10/SP
System Console**

This chapter tells you how to unpack, inspect, configure, and install the Model 10 and 10/SP system console with the standard monochrome monitor or with the optional color monitor. To install a system console in other DESKTOP GENERATION™ systems, refer to the chapter on the DASHER® terminal you ordered.



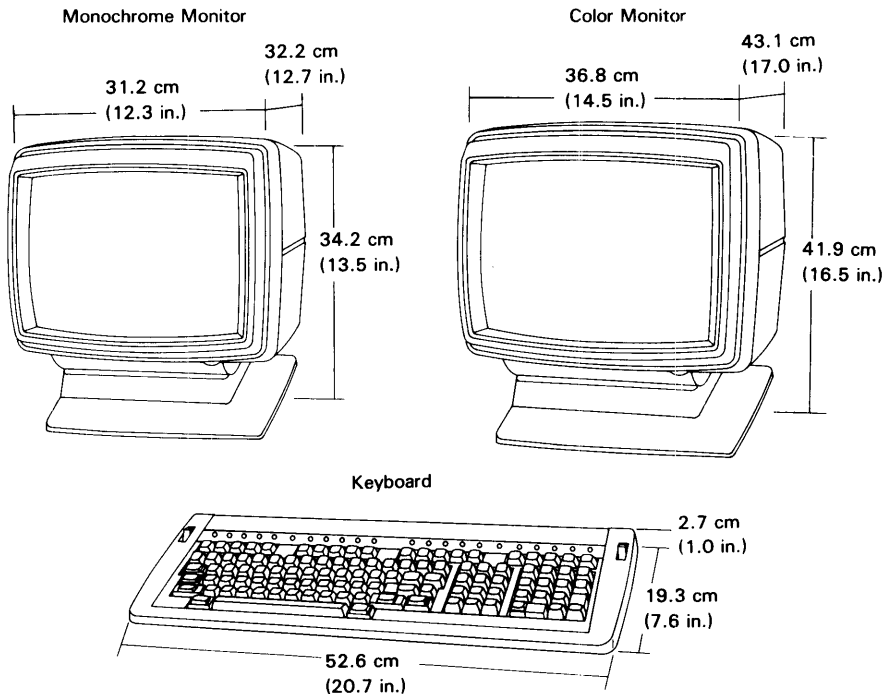
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Getting Started

Before you unpack your system console, a review of the site you have chosen for it will help ensure that it operates correctly. The temperature of your site should stay within 32 and 100 degrees F (0 to 38 degrees C) for a monochrome monitor and within 32 and 110 degrees F (0 and 43 degrees C) for a color monitor. Relative humidity should be between 20 and 80 percent (noncondensing) for either monitor.

You can install either monitor in a space approximately 1.5 by 1.5 ft (45.7 cm). While the monitor requires little space beyond its own dimensions, you should allow 6 in. (15.2 cm) around and above it for ventilation and cabling.

The keyboard requires an area of approximately 2 ft by 9 in. (61 by 22 cm) and stands 1 in. (2.7 cm) high. It is adjustable to three angles: 0, 10, and 15 degrees.



You will need to place the monitor within 8 ft (2.5 m) of the power supply module in order to connect it to the special ac outlet on the back of the power supply module. Since the keyboard connects to the monitor by a coiled cord which expands from 1.5 ft (.5 m) coiled to 4 ft (1.2 m) stretched, you have some flexibility in where you place the keyboard.

The monitor should not be too close to the power supply module or other electrical devices such as printers and typewriters because the magnetic fields generated by these devices can cause the screen to flicker.

The following mechanical specifications will help you install the system console in your system. The electrical specifications apply to both the monochrome and color monitor unless otherwise indicated.

Mechanical Specifications

Monochrome Monitor

Height:	13.5 in	(34.2 cm)
Width:	12.3 in	(31.2 cm)
Depth:	12.7 in	(32.2 cm)
Weight:	17.7 lbs	(8.0 kg)

Color Monitor

Height:	16.5 in	(41.9 cm)
Width:	14.5 in	(36.8 cm)
Depth:	17.0 in	(43.1 cm)
Weight:	35.9 lbs	(16.3 kg)

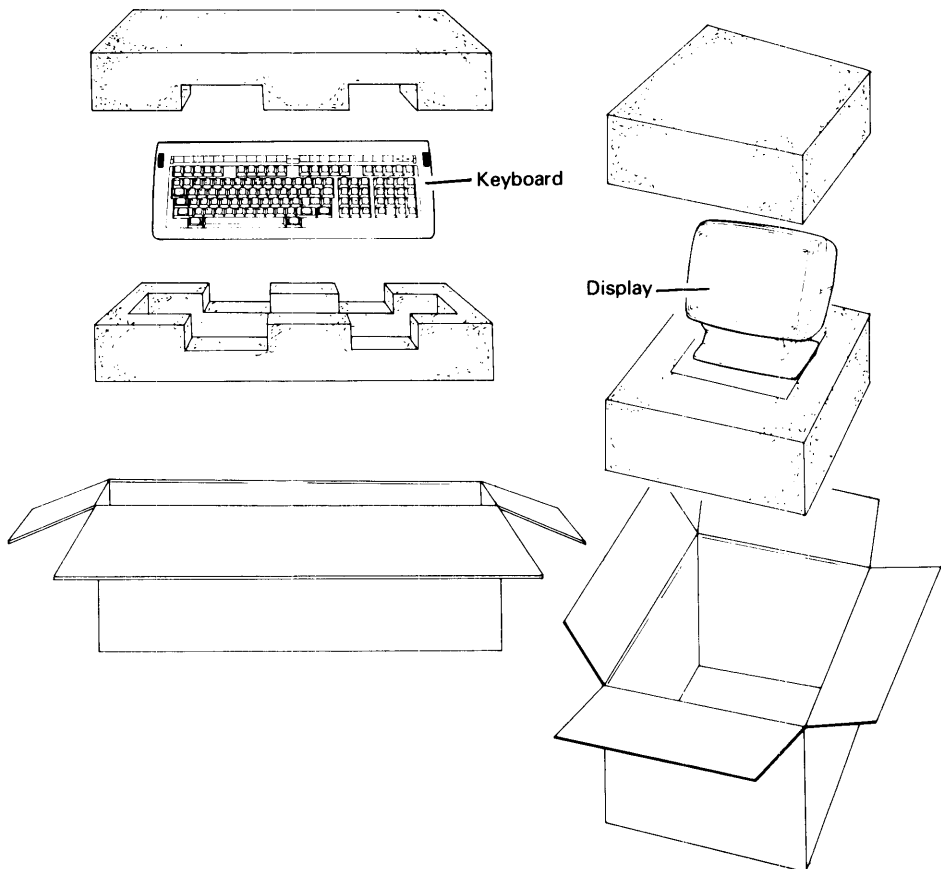
Keyboard

Height:	1.0 in	(2.7 cm)
Width:	20.7 in	(52.6 cm)
Depth:	7.6 in	(19.3 cm)
Weight:	6.0 lbs	(2.7 kg)

Unpacking and Inspecting the Console

Take the following steps to unpack and inspect the system console.

1. Open the shipping cartons and remove the monitor, keyboard, and other items.
2. Gently remove all packing materials.



3. Check the contents of the carton against the following inventory checklist to make sure you have received all items. Some items such as device cables may be in other cartons. You can find the device cable's part number at the end of this manual under "Cables."

Inventory Checklist

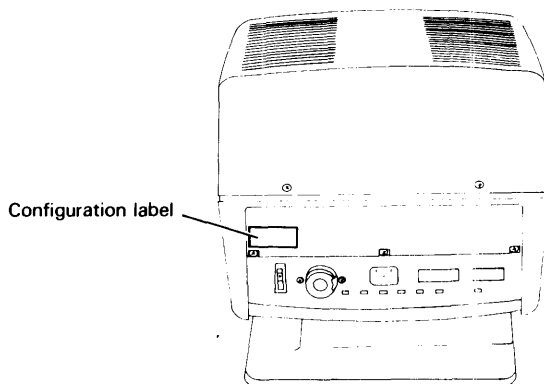
Monitor Carton

- Monitor
- Keyboard with cable
- Power cord
- Device cable

DG-26142

4. Save the cartons and all packing materials to use if you move or if you must return it.
5. Carefully inspect the system console for any visible damage. If it appears damaged or contains any loose parts, call the nearest Service Operations Center and report the problem. If you need to return the system console, repack it as shown in the packing drawing.
6. Using the figure on the next page, locate the console configuration label on the rear of the monitor. Using the table below, make sure the model number on the label specifies the monitor you ordered and that its power characteristics match those of your ac power source.

Model	Color	Power
6261/-0	Monochrome	120 Vac, 60 Hz
6261/-1	Monochrome	100 Vac, 50 Hz
6261/-2	Monochrome	220 Vac, 50 Hz
6261/-4	Monochrome	240 Vac, 50 Hz
6262/-0	Color	120 Vac, 60 Hz
6262/-1	Color	100 Vac, 50 Hz
6262/-2	Color	220 Vac, 50 Hz
6262/-4	Color	240 Vac, 50 Hz



DG-25715

If the monitor is not the right type or its power characteristics are incorrect, call the nearest Service Operations Center and report the problem. If you need to return the monitor, repack it as shown in the packing drawing.

Check the bottom of the display unit's keyboard. You should find a label with model number 6245-T- or 6246-. A letter following the final dash specifies the international font of your keyboard. "A" for U.S., "B" for U.K., "C" for French, and so on.

If the keyboard's model number or international font suffix are incorrect, call the Service Operations Center and report the problem. If you need to return the keyboard, repack it as shown in the packing diagram.

7. Enter information about your system console on the system configuration sheet.

Installing the Console

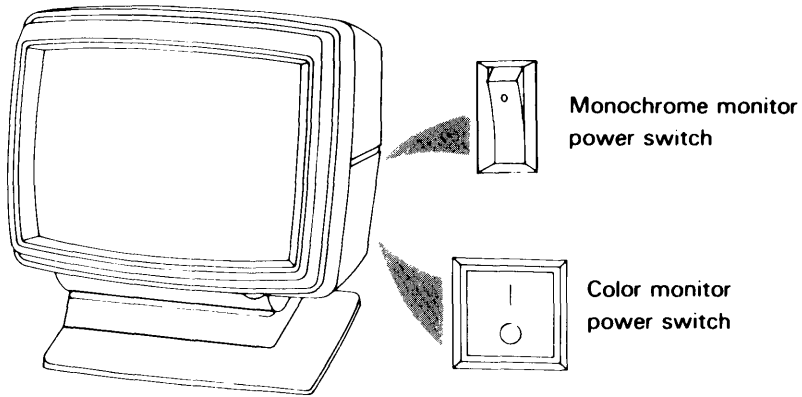
To install your system console, you connect the keyboard to the monitor and connect the console to the printed circuit card that controls it.

A system console with a monochrome monitor is controlled by the console interface and keyboard interfaces on the SPU2 card in slot 2 of the CPU logic module. The console's device cable plugs onto the SPU2 card through an opening behind the module.

A system console with a color monitor is controlled by the color controller card in slot 3 of the CPU logic module and by a keyboard interface on the SPU2 card in the CPU logic module. The console's device cable plugs onto the color controller card through an opening behind the module. An internal cable between the color controller and SPU2 card provides the connection to the keyboard interface. Your system comes with this internal cable and the color controller card already installed.

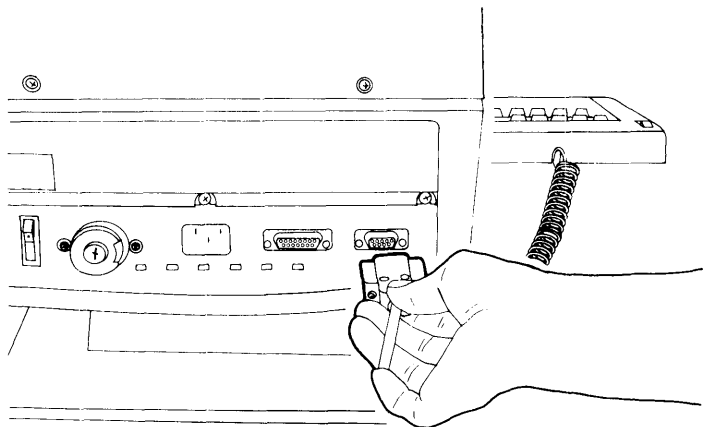
Take the following steps to install the system console, keeping a small Phillips-head and flat screwdriver handy. To remove the console from your system, simply follow these steps in reverse.

1. Turn off the power to the computer.
2. Make sure the monitor is turned off.



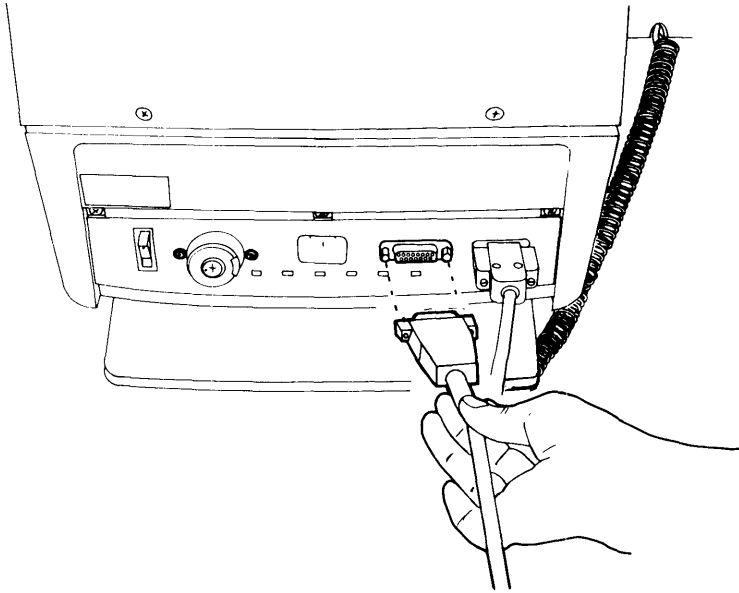
DG-26185

3. Locate the keyboard connector behind the monitor and plug the keyboard cable into it. Tighten the two screws that hold the cable in place.

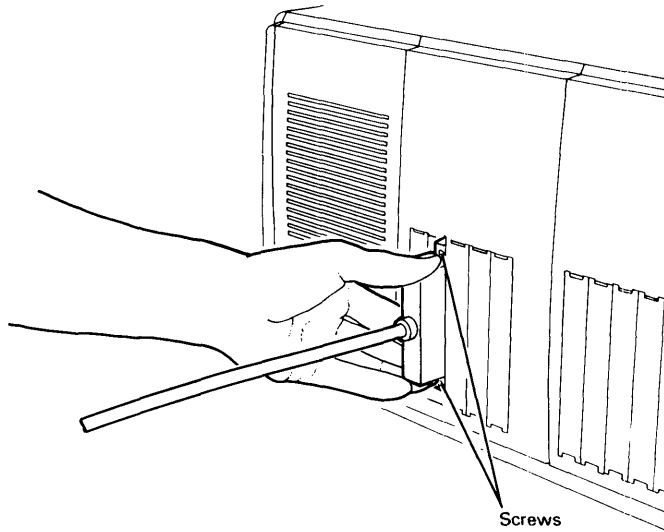


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4. Locate the computer connector behind the monitor and plug one end of the system console device cable into it. Tighten the two screws that hold the device cable in place.

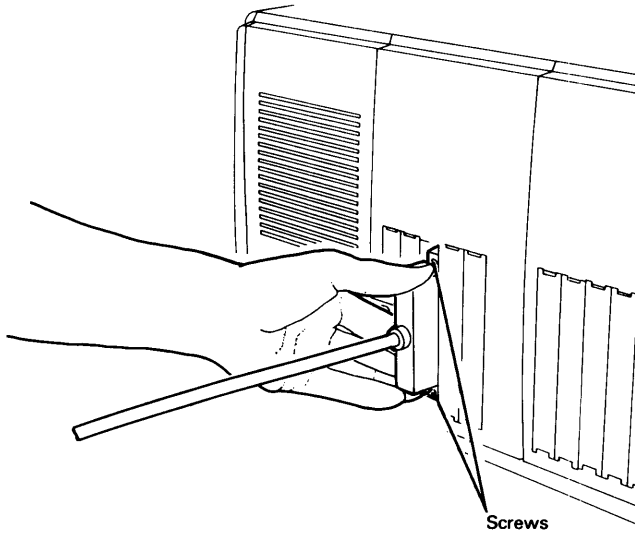


5. For a monochrome monitor, connect the other end of the console device cable to the SPU2 card in slot 2 of the CPU logic module. Tighten the two screws that hold the cable in place.



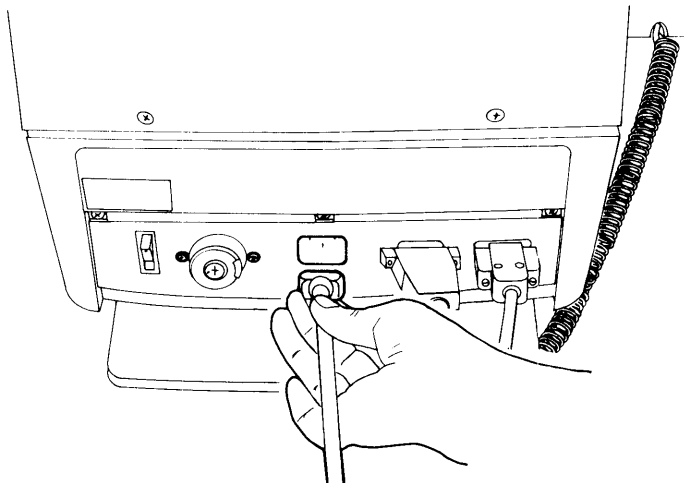
DG-26225

6. For a color monitor, connect the other end of the console device cable to the graphic controller card in slot 3 of the CPU logic module. Tighten the two screws that hold the cable in place.



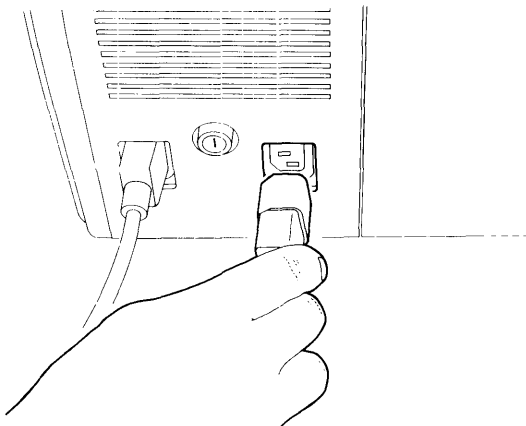
DG-26153

7. Plug one end of the monitor's power cord into the ac connector behind the monitor.



DG-25723

8. Plug the other end of this power cord into the special ac outlet behind the power supply module.



DG-26105

The Next Step

If your system includes other devices — terminals, printer, or plotter — continue with the chapters ahead to install them. After connecting your system, turn to your *DESKTOP GENERATION Systems Operator's Guide* to test your system with diagnostic software.

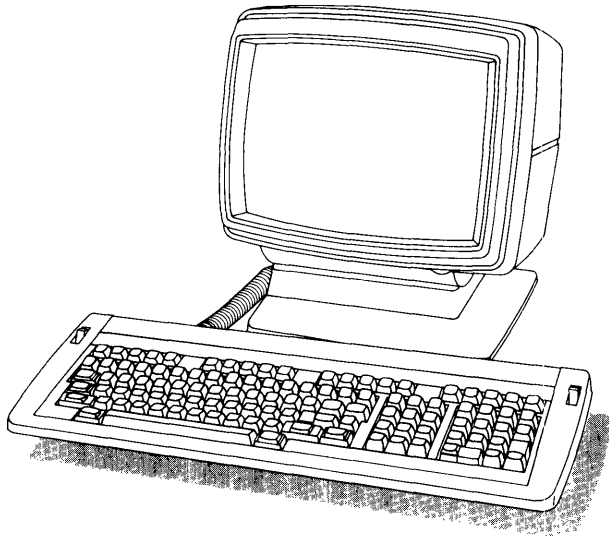
If you have any questions about the operation of the devices in your system, refer to the *DESKTOP GENERATION Peripherals Operator's Guide* or to the manual shipped with the device.



2

**DASHER D210, D211, and
D220 Terminals**

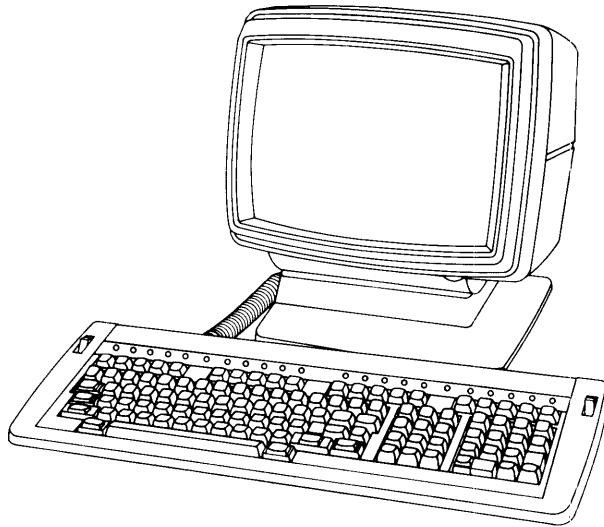
This chapter tells you how to unpack, inspect, configure, and install your DASHER D210, D211 or D220 terminal. The terminal can function as the system console for any DESKTOP GENERATION systems, except the Model 10 and 10/SP. It can also be a user terminal in any system, or a foreground terminal in a DG/RDOS system.



Getting Started

Before you unpack your terminal, a review of the site you have chosen for it will help ensure that it operates correctly. The temperature of this site should stay between +50 and +100 degrees F (+10 and +38 degrees C). The relative humidity should be between 20 and 80 percent (noncondensing).

You can install the display unit in an area of approximately 1.5 cubic feet (45.7 cm). While the display unit requires little space beyond its own dimensions, you should allow 6 in. (15.2 cm) around and above it for ventilation and cabling. The keyboard requires an area of approximately 2 ft by 9 in. (61 cm by 22 cm) and stands 1 inch high (2.7 cm). It is adjustable to three angles: 0, 10, and 15 degrees.



You will need to place the display unit within 25 ft (6.1 m) of the computer unit to connect it directly to the system with the standard-length device cable. You will also need to place it within 7.5 ft (2.25 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source. The keyboard connects to the display unit by a coiled cord which expands from 2 ft (0.6 m) coiled to 4 ft (1.2 m) stretched, giving you some flexibility in where you place it.

WARNING *To prevent injury to yourself or damage to the terminal, use only a three-pronged ac receptacle for ac power.*

The terminal requires that the ac voltage, current, and line frequency be within certain ranges for correct operation and reliability. Your main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special equipment.) General electrical requirements can be found in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you install the terminal in your system.

Electrical Specifications

	D210/211		D220	
Voltage type	100 V, 120 V	220 V ¹ , 240 V ¹	100 V, 120 V	220 V, 240 V
Voltage range	90-132 V	187-264 V	90-132 V	187-264 V
Maximum amps/phase	0.75 A	0.40 A	1.6 A	0.8 A
Power consumed (maximum) @ 0.75 A nominal current	40 W	40 W	110 W	110 W
Input surge (maximum)	25 A	25 A	25 A	5 A
Heat Output	150 BTU/hr	150 BTU/hr	377 BTU/hr	377 BTU/hr
Power cord	8.2 ft (2.5 m)	8.2 ft (2.5 m)	7.5 ft (2.3 m)	7.5 ft (2.3 m)

¹D211 and D220 terminals only.

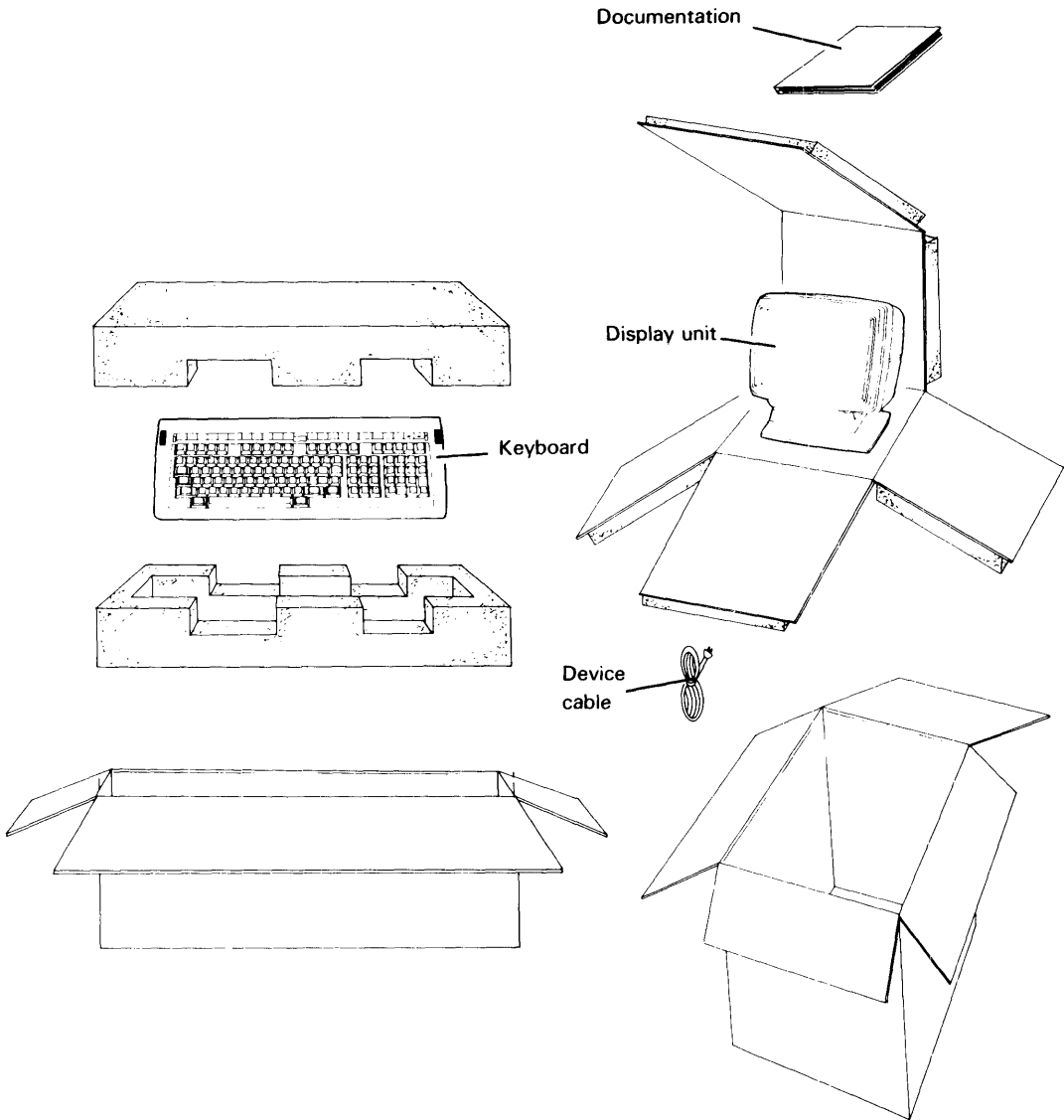
Mechanical Specifications

Display Unit	D210/D211		D220	
Height:	13.1 in	(34.0 cm)	13.1 in	(34.0 cm)
Width:	12.8 in	(32.5 cm)	12.8 in	(32.5 cm)
Depth:	12.8 in	(32.7 cm)	14.2 in	(36.0 cm)
Weight:	18 lb	(8.1 kg)	27 lbs	(12.2 kg)
Keyboard				
Height:	2.4 in	(4.4 cm)	2.4 in	(4.4 cm)
Width:	20.4 in	(51.9 cm)	20.4 in	(51.9 cm)
Depth:	7.5 in	(19.6 cm)	7.5 in	(19.6 cm)
Weight:	5.8 lb	(2.6 kg)	5.8 lb	(2.6 kg)

Unpacking and Inspecting the Terminal

Take the following steps to unpack and inspect your terminal.

1. Open the shipping cartons and remove the display unit, keyboard, and other items.
2. Gently remove all packing materials.



3. Check the contents of the carton against the inventory checklist below to make sure you have received all items. Some items such as device cables may be in other cartons. You can find the device cable's part number at the end of this manual under "Cables."

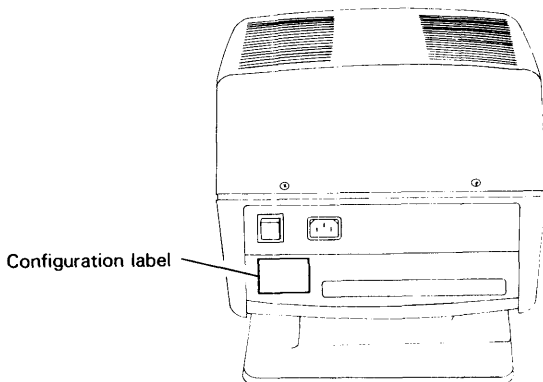
Inventory Checklist

- Documentation
- Monitor
- Device cable
- Keyboard with cable
- Power cord

DG-26146

4. Save the cartons and all packing materials to use if you move or if you must return the terminal.
5. Carefully inspect the terminal for any visible damage. If it appears damaged or contains any loose parts, call the nearest Service Operations Center and report the problem. If you need to return the terminal, repack it as shown in the packing diagram.
6. Using the figure on the next page, locate the configuration label in back of the display unit. Using the table below, make sure the model number on the label specifies the display unit you ordered and that its power characteristics match those of your ac power source.

D210 Model	D211 Model	D220 Model	Power Requirement
6242	6243	6283	120 Vac
6242/-1	6243/-1	6283/-1	100 Vac
6242/-2	6243/-2	6283/-2	220 Vac
6242/-4	6243/-4	6283/-4	240 Vac
6242/-5	6243/-5	6283/-5	240 Vac
6242/-6	6243/-6	6283/-6	240 Vac
6242/-7	6243/-7	6283/-7	220 Vac
6242/-8	6243/-8	6283/-8	220 Vac
6242/-9	6243/-9	6283/-9	220 Vac
6242/-0	6243/-0	6283/-0	220 Vac



DG-26147

If the display unit is not the right type or its power characteristics are incorrect, call your nearest Service Operations Center and report the problem. If you need to return the terminal, repack it as shown earlier in the packing diagram.

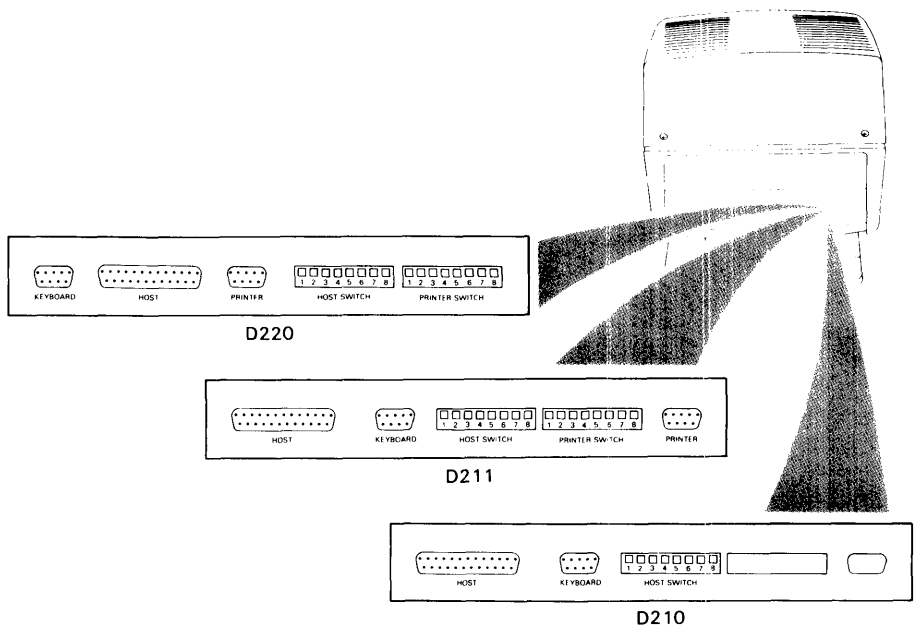
Check the bottom the display unit's keyboard. You should find a label with model number 6245- or 6246-. A letter following the dash specifies the international font of your keyboard. "A" for U.S., "B" for U.K., "C" for French, and so on.

If the keyboard's model number or international font suffix are incorrect, call the Service Operations center and report the problem. If you need to return the keyboard, repack it as shown in the packing diagram.

7. Enter information about your terminal on the system configuration sheet.

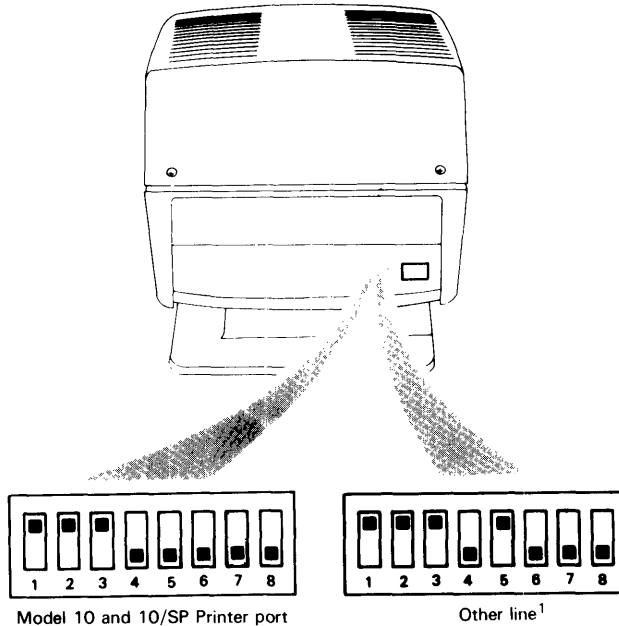
Configuring the Terminal

Terminal characteristics, such as data transmission rates, are selected by switches behind the display unit. These switches, called *host switches*, select characteristics for communicating with the computer unit. The D211 or D220 display unit has a second set of switches, called *printer switches*, which select characteristics for communicating with an optional slave printer. Host switches must be set to the values required by operating system software supported by Data General.



D210 Host Switch

Depending on whether you connect the terminal to the Model 10 and 10/SP printer port or to another line¹, make sure that the host switches S1 through S6 and S8 are set as shown below. (Switch S7 selects ac line frequency of 50Hz or 60Hz; its settings are described later.)



DG-26910

These settings select the following characteristics:

	Model 10 or 10/SP printer port	Other line¹
Operating mode:	DG	DG
Baud rate:	9600	9600
Parity:	Mark	Mark
Data length:	7 bits	7 bits

¹Console interface on SPU (all models except Model 10 or 10/SP), USAM line or 4207 card.

Do not change these settings unless you are using the terminal in a customized application or with an operating system not supported by Data General that requires different characteristics. If you need to change the values, refer to *DASHER D210 and D211 Display Terminal User's Manual* (DGC No. 014-000746) or *DASHER D220 Color Display Terminal User's Manual* (DGC No. 014-000950).

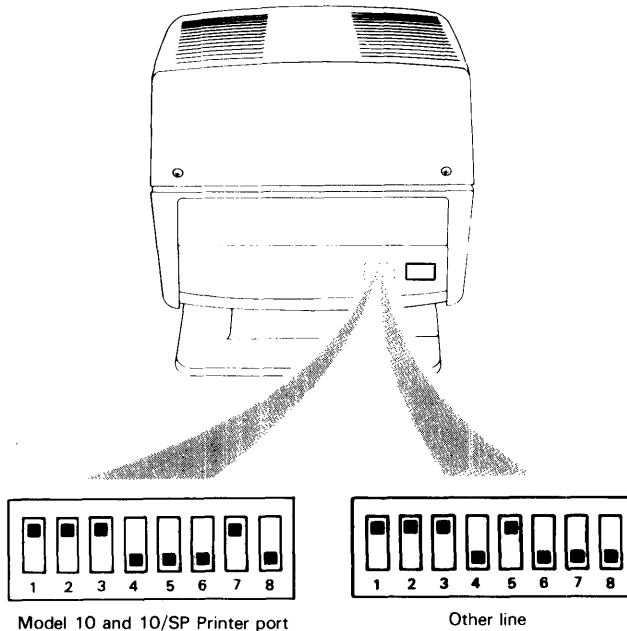
Switch S7 selects the line frequency for the D210 terminal. This switch should be set

UP (1 position) if you are using a 50Hz ac power source.

DOWN (0 position) if you are using a 60Hz, power source.

D211 or D220 Host Switch

Depending on whether you connect the terminal to the printer port (Model 10 and 10/SP only) or to another line¹, make sure that the host switches S1 through S8 are set as shown below.



These settings select the following characteristics:

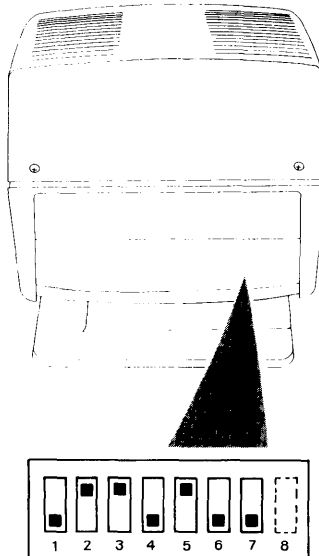
	Model 10 and 10/SP printer port	Other line¹
Operating mode:	DG	DG
Baud rate:	9600	9600
Parity:	None	Mark
Data length:	8 bits	7 bits

Do not change these settings unless you are using the terminal in a customized application or with a non-Data General operating system that requires different characteristics. If you need to change the values, refer to *DASHER D210 and D211 Display Terminal User's Manual* (DGC No. 014-000746) or *DASHER D220 Color Display Terminal User's Manual* (DGC No. 014-000950).

¹Console interface on SPU (except Model 10 and 10/SP), USAM, or 4207 card.

D211 or D220 Printer Switch

If you are using a slave printer, make sure that printer switches S1 through S7 are set as shown as below. Switch 8 is described later.



PRINTER
SWITCH

These settings select the following characteristics:

Baud rate: 9600

Data length: 8 bits

Printer switch S8 selects the line frequency for the D211 or D220 terminal. This switch should be set

UP (1 position) if you are using a 50 Hz ac power source.

DOWN (0 position) if you are using a 60 Hz ac power source.

You should maintain these settings unless they fail to match the characteristics of your slave printer. If you need to change their values, refer to *DASHER D210 and D211 Display Terminal User's Manual* (DGC No. 014-000746) or *DASHER D220 Color Display Terminal User's Manual* (DGC No. 014-000950).

Installing the Terminal

Depending on the computer model and the card used for control, the terminal can function as a system console, a user terminal in any system, or a DG/RDOS foreground terminal. The tables below list functions that the terminal can perform in Model 10 and 10/SP systems or in other models; the card used to control the terminal and its location; and the adapter cable connected to the card.

Refer to the tables below before you install your terminal. Then follow the steps to connect the keyboard to the monitor and the terminal to the printed circuit card that controls it.

Model 10 and 10/SP

Function	Card	Card Location	Adapter Cable
User terminal	SPU 1 (printer port)	CPU logic, slot 1	005-021148
	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
DG/RDOS foreground terminal	SPU 1 (printer port)	CPU logic, slot 1	005-021148

Other Models

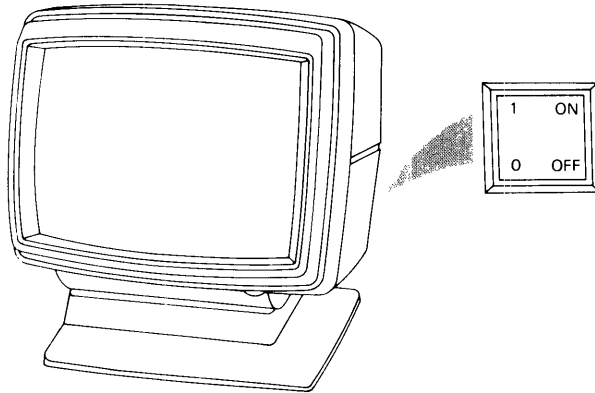
Function	Card	Card Location	Adapter Cable
System console	SPU card	CPU logic, slot 1	005-021148
User terminal	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
	4207 ¹	CPU logic or logic expansion, I/O slot	005-021148
DG/RDOS foreground terminal	4207 ¹	CPU logic or logic expansion, I/O slot	005-021148

¹Model 20 and 30 systems only.

Keyboard and Monitor

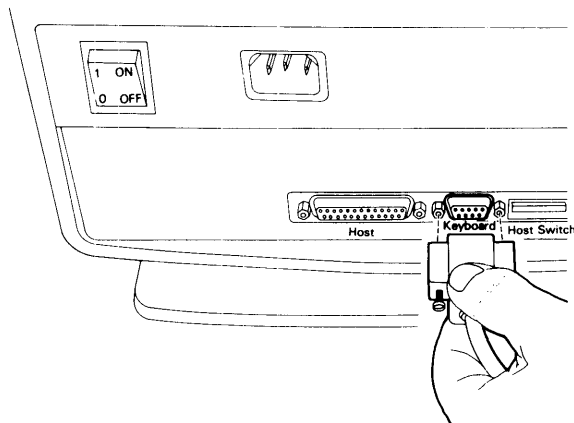
To connect the keyboard to the monitor, use the following steps.

1. Make sure the computer is turned off.
2. Make sure the terminal is turned off.



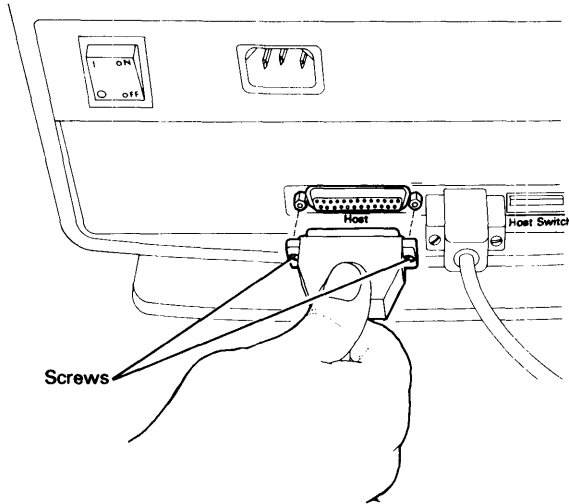
DG-26152

3. Locate the KEYBOARD connector behind the display unit and plug the keyboard cable into it. Tighten the two screws that hold the cable in place.



DG-26108

4. Locate the HOST computer connector behind the display unit and plug one end of the terminal's device cable into it. Tighten the two screws that hold the device cable in place.



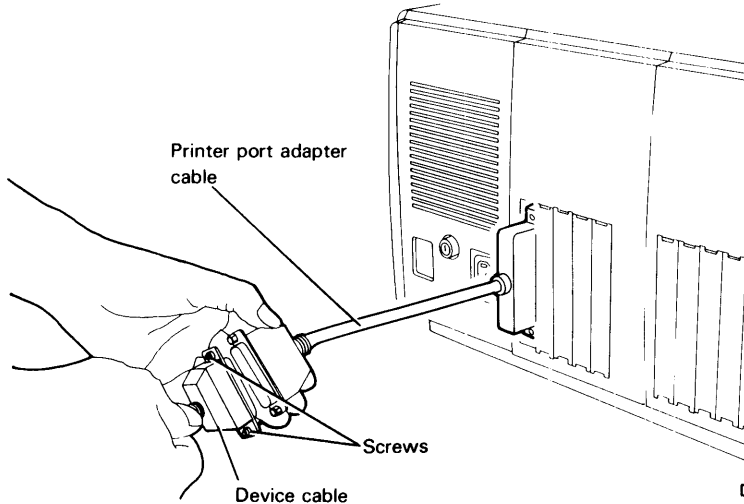
DG-26110

If you are installing your terminal in a Model 10 or 10/SP system, use the next section. If you are installing your terminal in another DESKTOP GENERATION system, skip ahead to the "Other Models" section.

Model 10 and 10/SP

Use this section to install the terminal as a DG/RDOS foreground terminal or user terminal in Model 10 and 10/SP systems. Skip ahead if you have another model.

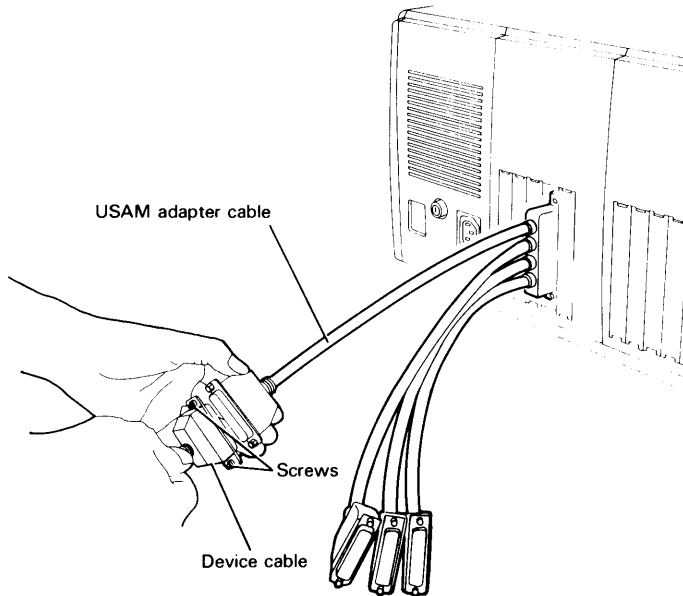
1. For a DG/RDOS foreground terminal, locate the printer port adapter cable connected to slot 1 behind the CPU logic module and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cable in place.



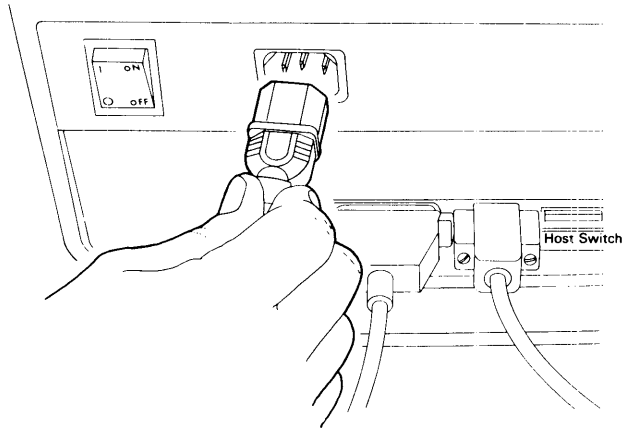
DG-26189

2. For a user terminal controlled by a line on a USAM card, locate the adapter cable for the line controlling the terminal and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cables in place. The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.

NOTE If you do not remember which line of the USAM card controls the terminal, check the installation sheet for connecting peripherals.



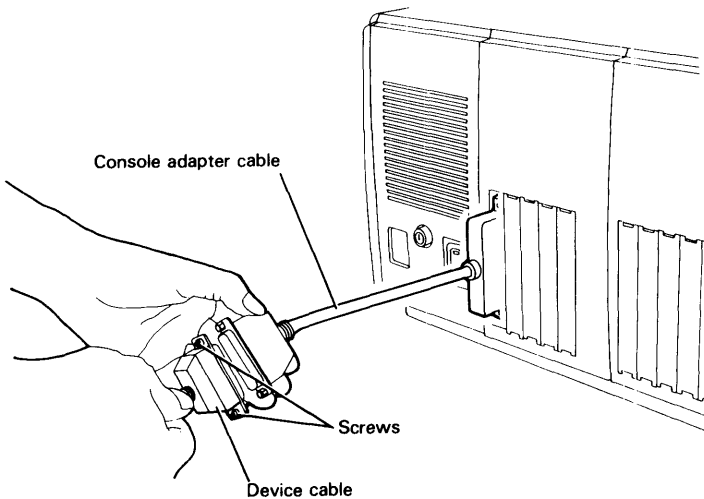
3. Plug one end of the terminal's power cord into the ac connector behind the display unit and the other end into an ac outlet.



Other Models

To install your terminal in systems other than the Model 10 and 10/SP systems, use this section. The terminal can be used as a system console, a DG/RDOS foreground terminal¹, and a user terminal.

1. For the system console, locate the console adapter cable connected to slot 1 behind the CPU logic module and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cables in place.

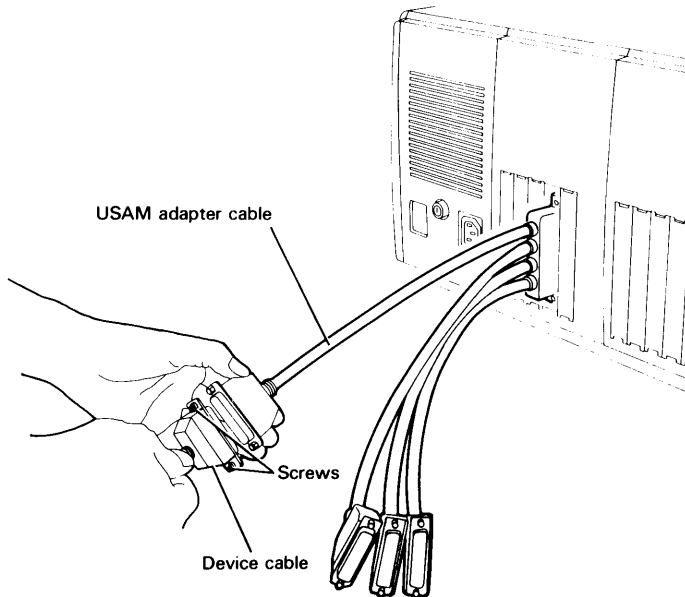


DG-26081

¹Model 20 and 30 systems only.

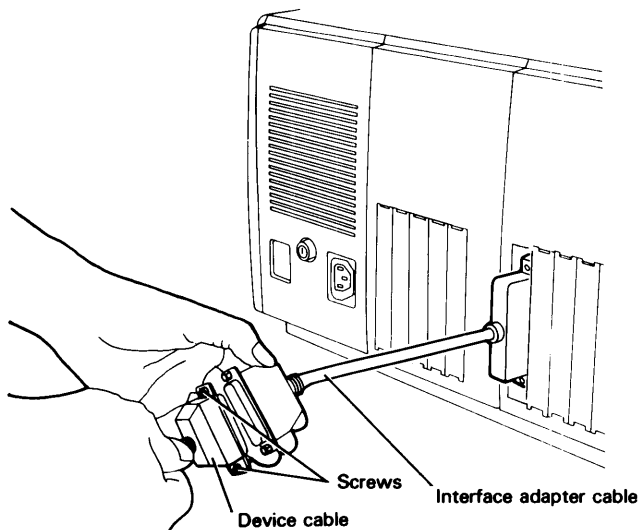
2. For a user terminal, locate the adapter cable for the USAM line or 4207 interface controlling the terminal and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.)

NOTE If you do not remember which line of the USAM card controls the terminal, check the installation sheet on connecting peripherals.



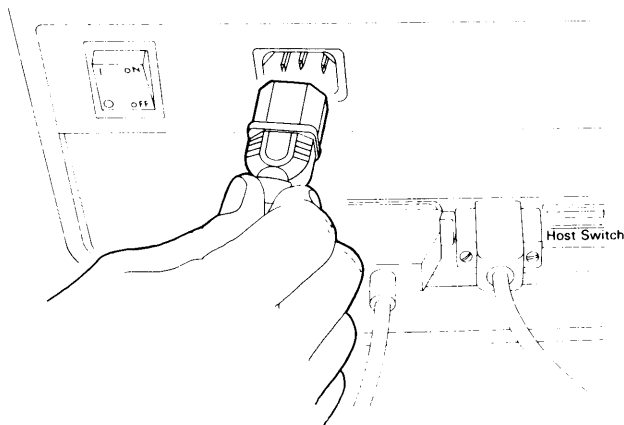
DG-26155

3. For a DG/RDOS foreground terminal in Model 20 or 30 systems, locate the slot containing the interface adapter cable for the 4207 card and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cables in place. (The figure below shows the connection to a 4207 card in slot 1 of the logic expansion module.)



DG-26227

4. Plug one end of the terminal's power cord into the ac connector behind the display unit and the other end into the ac outlet.



DG-26111

The Next Step

If your system includes other equipment, connect it with the help of the chapters ahead. After installing your system, turn to the DESKTOP GENERATION *Systems Operator's Guide* to verify your system's operation with diagnostic software.

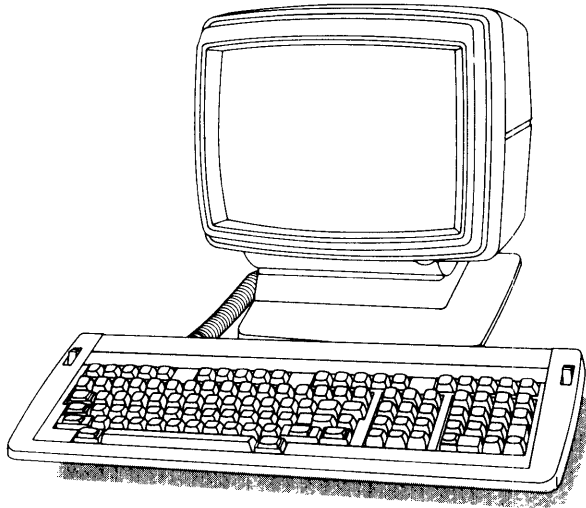
If you have any questions about the operation of the devices in your system, refer to the DESKTOP GENERATION *Peripherals Operator's Guide* or to the manual shipped with the device.



3

**DASHER D410, D460, and
D470C Terminals**

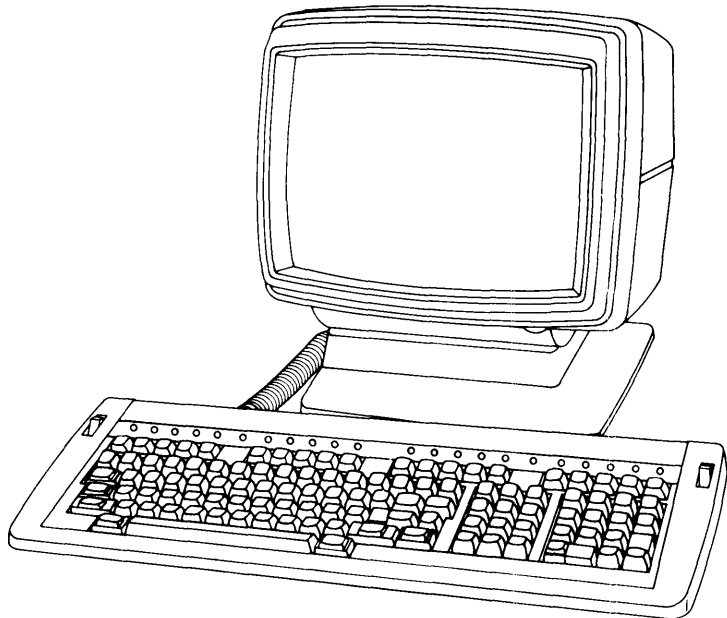
This chapter tells you how to unpack, inspect, configure, and install your DASHER D410, D460, or D470C terminal. The terminal can function as the system console for any DESKTOP GENERATION system, except Model 10 and 10/SP. It can also be a user terminal in any system, or a foreground terminal in a DG/RDOS system.



Getting Started

Before unpacking your terminal, a review of the site you have chosen for it will help ensure that it operates correctly. The temperature of your site should be between +10 and +38 degrees C (+50 and +100 degrees F). The relative humidity should stay within 20 and 80 percent (noncondensing).

You can install the display unit in an area approximately 1.5 by 1.5 ft (45.7 cm). While the display unit needs little space beyond its own dimensions, you should allow 6 in. (15.2 cm) around and above it for ventilation and cabling. The keyboard requires an area of approximately 2 ft by 9 in. (61 cm by 22 cm) and stands 1 inch (2.7 cm). It adjusts to three angles: 0, 10, and 15 degrees.



You will need to place the display unit within 25 ft (6.1 m) of the computer unit to connect it directly to the system with a standard-length device cable. You will also need to place it within 7.5 ft (2.25 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source. The keyboard connects to the display unit by a coiled cord which expands from 2 ft (0.6 m) coiled to 4 ft (1.2 m) stretched, giving you some flexibility in where you place it.

WARNING *To prevent injury to yourself or damage to the terminal, use only a three-pronged ac receptacle for ac power.*

The terminal requires that the ac voltage, current, and line frequency be within certain ranges for correct operation and reliability. Your main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special equipment.) General electrical requirements for your system can be found in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you install the terminal in your system.

Electrical Specifications

	D410/D460		D470C	
Voltage type	100 V, 120 V	220 V, 240 V	100 V, 120 V	220 V, 240V
Voltage range	90-132 V	187-264 V	90-132 V	187-264 V
Maximum amps/phase	1.0 A	0.75 A	2.0 A	1.0 A
Power consumed (maximum) @ 0.75 A nominal current	90 W	90 W	110 W	110 W
Input surge (maximum)	25 A	25 A	25 A	12.5 A
Heat Output	283 BTU/hr	283 BTU/hr	377 BTU/hr	377 BTU/hr
Power cord	7.5 ft (2.25 m)	7.5 ft (2.25 m)	7.5 ft. (2.25 m)	7.5 ft (2.25 m)

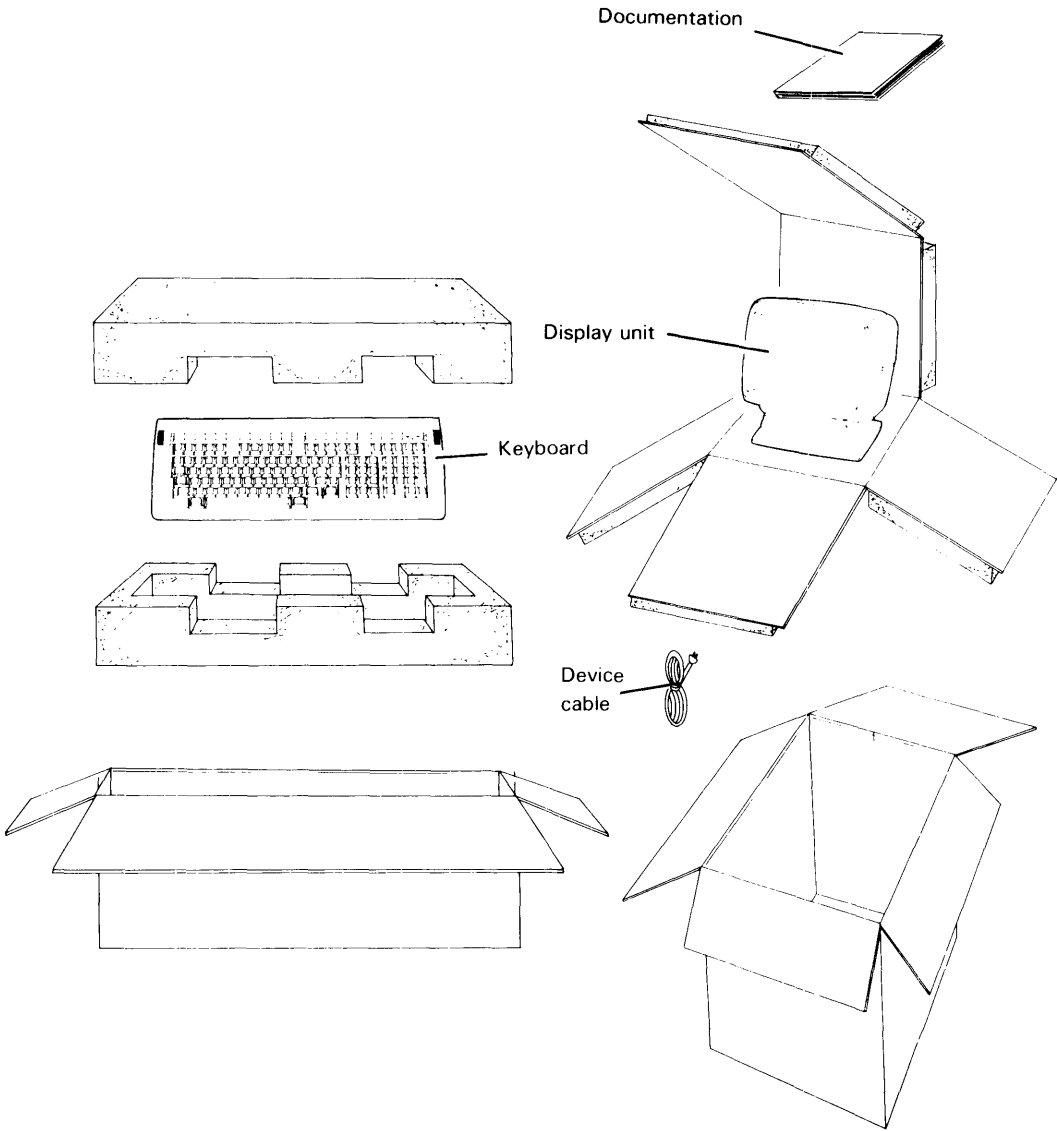
Mechanical Specifications

Display Unit	D410/D460		D470C	
Height:	13.2 in	(34.0 cm)	13.1 in	(34.0 cm)
Width:	12.7 in	(32.5 cm)	12.8 in	(32.5 cm)
Depth:	12.8 in	(32.7 cm)	14.2 in	(36.0 cm)
Weight:	18.0 lbs	(8.1 kg)	27.5 lbs	(12.5 kg)
Keyboard				
Height:	2.4 in	(4.4 cm)	2.4 in	(4.4 cm)
Width:	20.4 in	(51.9 cm)	20.4 in	(51.9 cm)
Depth:	7.5 in	(19.6 cm)	7.5 in	(19.6 cm)
Weight:	5.8 lbs	(2.6 kg)	5.8 lbs	(2.6 kg)

Unpacking and Inspecting the Terminal

Take the following steps to unpack and inspect your terminal.

1. Open the shipping cartons and remove the display unit, keyboard, and other items.
2. Gently remove all packing materials.



3. Check the contents of the carton against the inventory checklist below to make sure you have received all items. Some items such as device cables may be in other cartons. You can find the device cable's part number at the end of this manual under "Cables."

Inventory Checklist

- Documentation
- Monitor
- Device cable
- Keyboard with cable
- Power cord

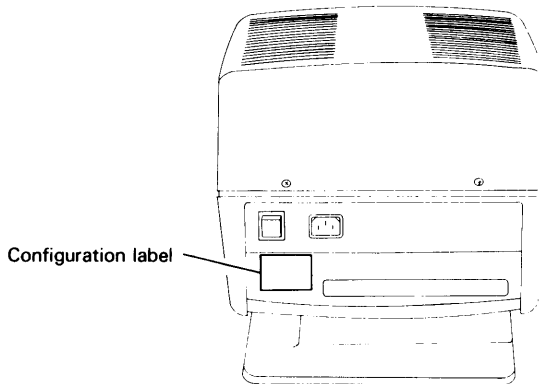
DG-26146

4. Save the cartons and all packing materials to use if you move or if you must return the terminal.

5. Carefully inspect the terminal for any visible damage. If it appears damaged or contains any loose parts, call your nearest Service Operations Center and report the problem. If you need to return the terminal, repack it as shown in the packing diagram.

6. Using the figure on the next page, locate the configuration label behind the display unit. Using the table below, make sure the model number on the label specifies the display unit you ordered and that its power characteristics match those of your ac power source.

D410 Model	D460 Model	D470C Model	Power (voltage)
6255	6256	6291	120 Vac
6255/-1	6256/-1	6291/-1	100 Vac
6255/-2	6256/-2	6291/-2	220 Vac
6255/-4	6256/-4	6291/-4	240 Vac
6255/-5	6256/-5	6291/-5	240 Vac
6255/-6	6256/-6	6291/-6	240 Vac
6255/-7	6256/-7	6291/-7	220 Vac
6255/-8	6256/-8	6291/-8	220 Vac
6255/-9	6256/-9	6291/-9	220 Vac
6255/-0	6256/-0	6291/-0	220 Vac



DG-26147

If the display unit is not the right type or its power characteristics are incorrect, call your nearest Service Operations Center and report the problem. If you need to return the terminal, repack it as shown in the packing diagram.

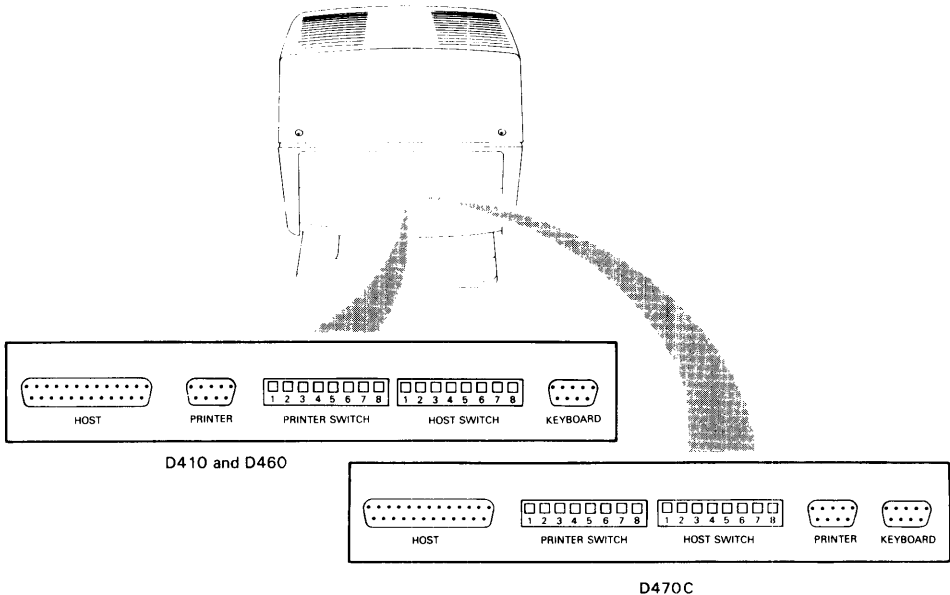
Check the bottom of the display unit's keyboard. You should find a label with model number 6245- or 6246-. A letter following the dash specifies the international font of your keyboard. "A" for U.S., "B" for U.K., "C" for French, and so on.

If the keyboard's model number or international font suffix are incorrect, call the Service Operations center and report the problem. If you need to return the keyboard, repack it as shown in the packing diagram.

7. Enter information about your terminal on the system configuration sheet.

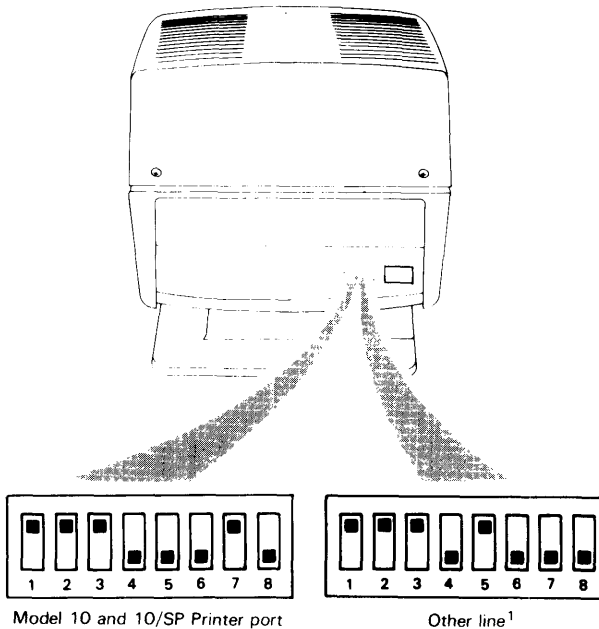
Configuring the Terminal

Terminal characteristics, such as data transmission rates, are selected by switches behind the display unit. Your display unit has two sets of switches: one set, called the *host switches*, selects characteristics for communicating with the computer unit; the second set, called the *printer switches*, selects characteristics for communicating with an optional slave printer. Host switches must be set to the values required by operating system software supported by Data General.



Host Switch

Depending on whether you connect the terminal to the Model 10 and 10/SP printer port or to another line, make sure the host switches behind your display unit are set as shown below. (Switch S8 of the printer switches selects ac line frequency; its settings are described later.)



DG-26913

These settings select the following characteristics:

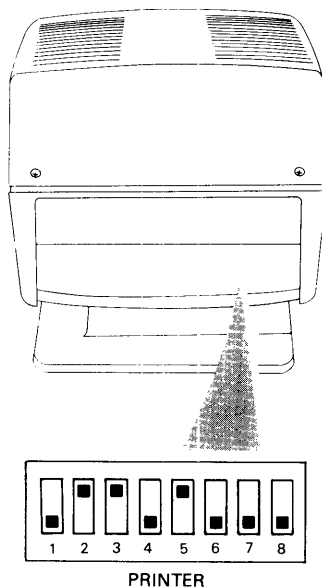
	Model 10 or 10/SP Printer Port	Other line ¹
Operating mode:	DG	DG
Baud rate:	9600	9600
Parity:	None	Mark
Data length:	8 bits	7 bits

Do not change these settings unless you are using your terminal in a customized application or with an operating system not supported by Data General that requires different characteristics. If you need to change the values, refer to *DASHER D410 and D460 Display Terminal User's Manual* (DGC No. 014-000761) or *DASHER 470C Color Display Terminal User's Manual* (DGC No. 014-000788).

¹Console interface on SPU (all models except Model 10 or 10/SP), USAM line or 4207 card.

Printer Switches

If you are using a slave printer, make sure that printer switches S1 through S8 are set as shown below. (Switch S8 selects ac line frequency; its settings are described later.)



DG-26159

These settings select the following characteristics:

Baud rate: 9600
Split baud: No
Data length: 8 bits

You should maintain these switch settings unless they fail to match the characteristics of your slave printer. If you need to change the values, refer to *DASHER D410 and D460 Display Terminal User's Manual* (DGC No. 014-000761) or *DASHER D470C Color Display Terminal User's Manual* (DGC No. 014-000788).

Printer switch S8 selects the line frequency for the terminal. This switch should be set

- UP (1 position) if you are using a 50 Hz ac power source.
- DOWN (0 position) if you are using a 60 Hz ac power source.

Installing the Terminal

Depending on the computer model and the card used for control, the terminal can function as a system console, a user terminal in any system, or a DG/RDOS foreground terminal. The tables below list functions the terminal can perform in Model 10 and 10/SP systems or in other models; the card used to control the terminal and its location; and the adapter cable connected to the card.

Refer to the tables below before you install your terminal. Then follow the steps to connect the keyboard to the monitor and the terminal to the printed circuit card that controls it.

Model 10 and 10/SP

Function	Card	Card Location	Adapter Cable
User terminal	SPU 1 (printer port)	CPU logic, slot 1	005-021148
	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
DG/RDOS foreground terminal	SPU 1 (printer port)	CPU logic, slot 1	005-021148

Other Models

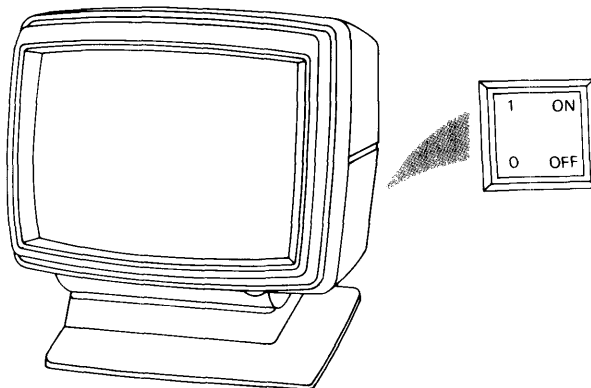
Function	Card	Card Location	Adapter Cable
System console	SPU card	CPU logic, slot 1	005-021148
User terminal	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
DG/RDOS foreground terminal	4207 ¹	CPU logic or logic expansion, I/O slot	005-021148
	4207 ¹	CPU logic or logic expansion, I/O slot	005-021148

¹Model 20 and 30 systems only.

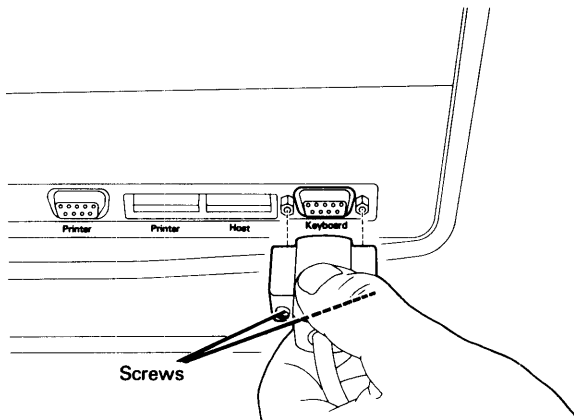
Keyboard and Monitor

To connect the keyboard to the monitor, use the following steps.

1. Make sure the computer is turned off.
2. Make sure the terminal is turned off.

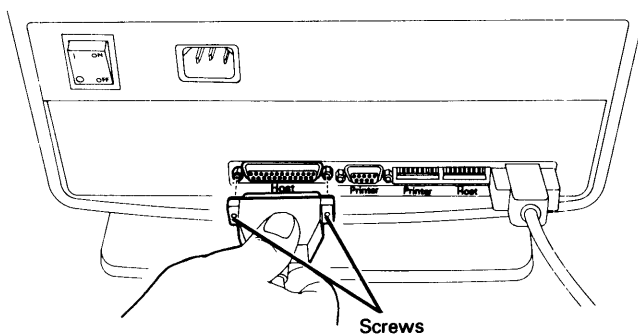


3. Locate the **KEYBOARD** connector behind the display unit and plug the keyboard cable into it. Tighten the two screws that hold the cable in place.



DG-26114

4. Locate the **HOST** connector behind the display unit and plug one end of the terminal's device cable into it. Tighten the two screws that hold the device cable in place. The illustration shows the back of the D410 and D460.



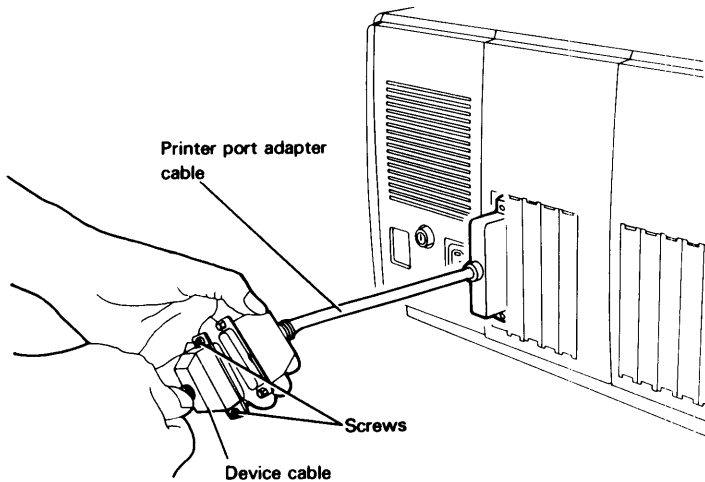
DG-26115

If you are installing your terminal in a Model 10 or 10/SP system, use the next section. If you are installing your terminal in another **DESKTOP GENERATION** system, skip ahead to the "Other Models" section.

Model 10 and 10/SP

Use this section to install the terminal as a DG/RDOS foreground terminal or user terminal in Model 10 and 10/SP systems. Skip ahead if you have another model.

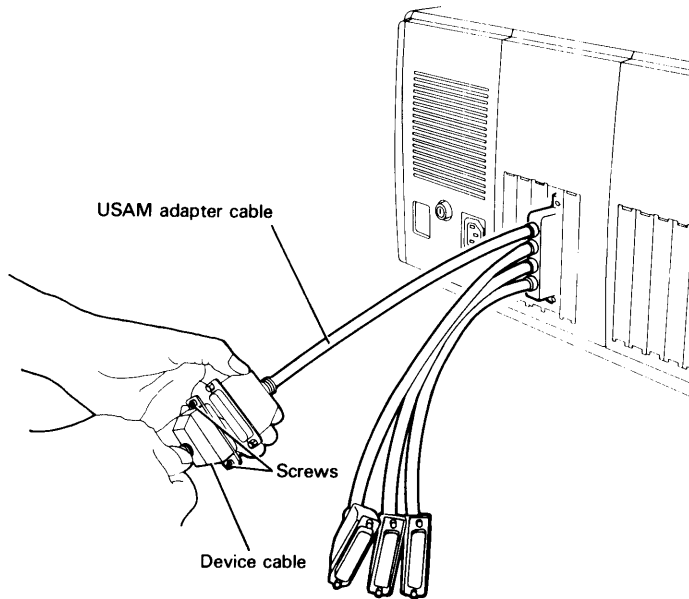
1. For a DG/RDOS foreground terminal, locate the printer port adapter cable connected to slot 1 behind the CPU logic module and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cable in place.



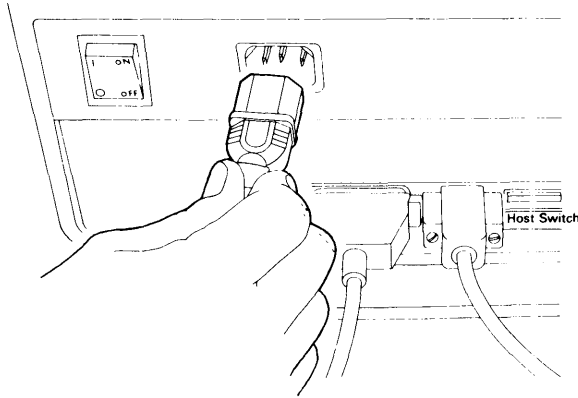
DG-26189

2. For a user terminal controlled by a line on a USAM card, locate the adapter cable for the line controlling the terminal and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the SPU logic module.)

NOTE If you do not remember which line of the USAM card controls the terminal, refer to the installation sheet for connecting peripherals.



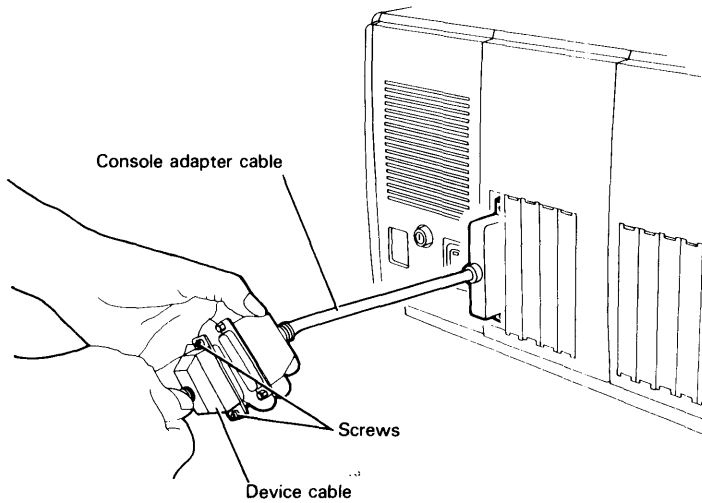
3. Plug one end of the terminal's power cord into the ac connector behind the display unit and the other end into an ac outlet.



Other Models

To install your terminal in systems other than the Model 10 and 10/SP systems, use this section. The terminal can be used as a system console, a DG/RDOS foreground terminal¹, and a user terminal.

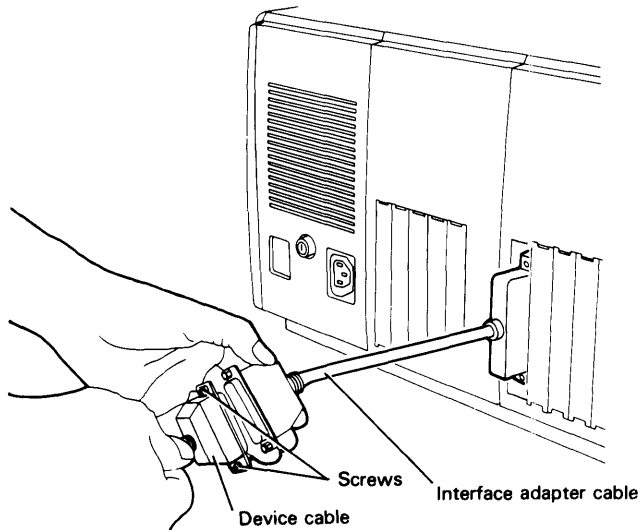
1. For the system console, locate the console adapter cable connected to slot 1 behind the CPU logic module and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cables in place.



DG-26081

¹Model 20 and 30 systems only.

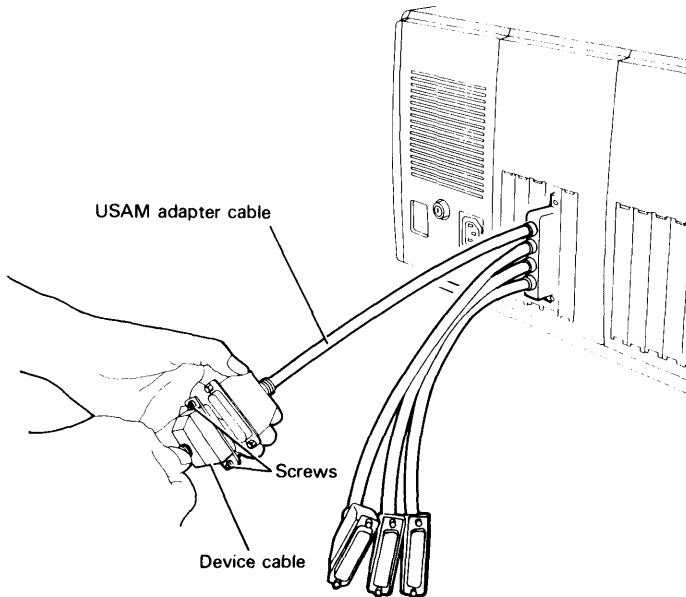
2. For a DG/RDOS foreground terminal in Model 20 or 30 systems, locate the slot containing the interface adapter cable for the 4207 card and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cables in place. (The figure below shows the connection to a 4207 card in slot 1 of the logic expansion module.)



DG-26227

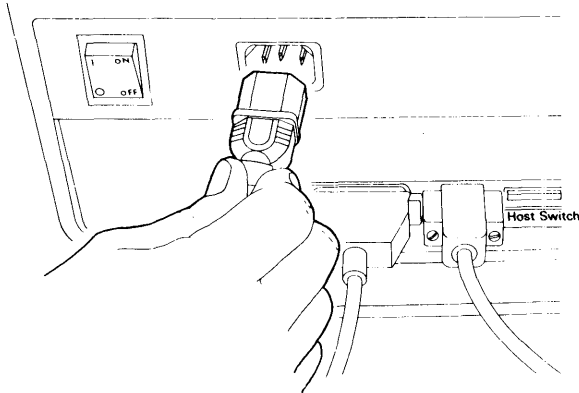
3. For a user terminal, locate the adapter cable for the USAM line or 4207 interface controlling the terminal and plug it into the other end of the terminal's device cable. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.)

NOTE If you do not remember which line of the USAM card controls the terminal, refer to the installation sheet for connecting peripherals.



DG-26155

4. Plug one end of the terminal's power cord into the ac connector behind the display unit and the other end into an ac outlet.



DG-26111

The Next Step

If your system includes other equipment, connect it with the help of the chapters ahead. After installing your system, turn to the *DESKTOP GENERATION Systems Operator's Guide* to verify your system's operation with diagnostic software.

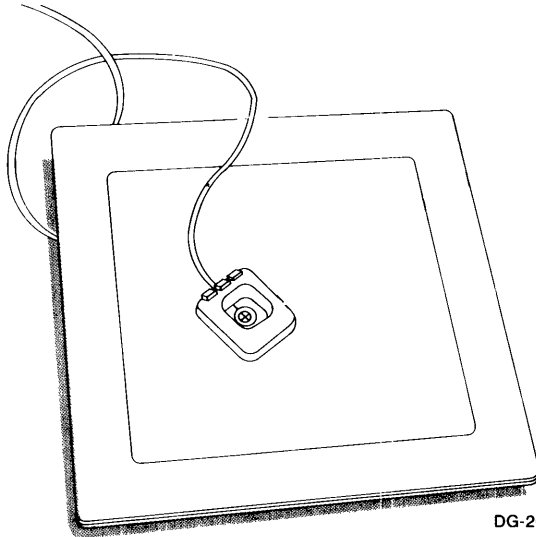
If you have any questions about the operation of the devices in your system, refer to the *DESKTOP GENERATION Peripherals Operator's Guide* or to the manual shipped with the device.



4

Data Tablet

This chapter tells you how to unpack, inspect, and connect your data tablet and your cursor puck or stylus, called *positioning devices*.

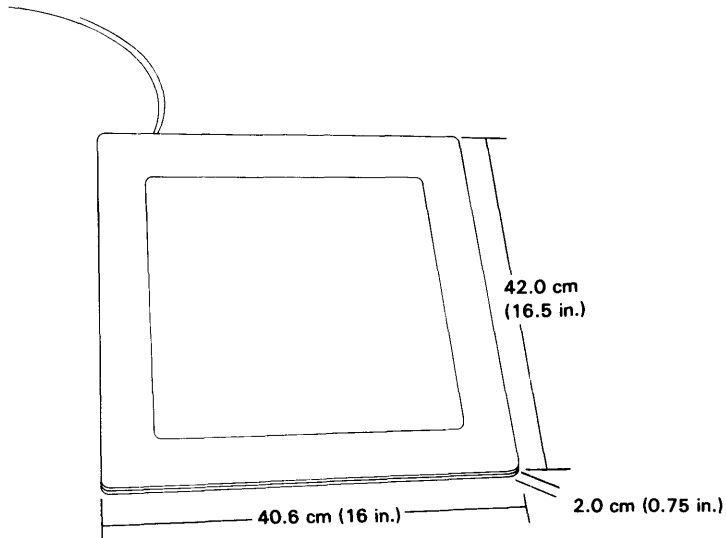


DG-26168

Getting Started

Before you unpack your data tablet, a review of the site you have chosen for it will help to ensure that it operates correctly. The temperature of your site should stay within 45 and 110 degrees F (7 and 43 degrees C). Relative humidity should be between 20 and 80 percent.

You can install your data tablet in a space approximately 18 inches square. (45 cm square). Although the data tablet and positioning devices require little space beyond their own dimensions, you should allow extra room for cables and routine maintenance.



DG-26169

You will need to place the data tablet within 6 ft (1.8 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source.

WARNING *To prevent injury to yourself or damage to the tablet and positioning device, use only a three-pronged ac receptacle for ac power.*

The data tablet comes with a modular power supply that plugs into an ac outlet. The ac outlet must have a clearance of at least 6 in. on all sides in order to accommodate the power supply.

The data tablet and positioning device require the ac voltage, current, and line frequency to be within a certain range for correct operation and reliability. Your main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special equipment.)

You will find general electrical requirements for your system in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you to install the data tablet and positioning device in your system.

Electrical Specifications

Power type	100 V	120 V	220/240 V
Voltage range	90-110 V	104-127 V	200-260 V
Line frequency	50/60 Hz	58-62 Hz	48-52 Hz
Current (maximum)	Not available	Not available	Not available
Power consumed (maximum)	20 W	20 W	20 W

Mechanical Specifications

Data Tablet

Height:	0.75in	(2.0 cm)
Width:	16 in	(40.6 cm)
Depth:	16.5 in	(42.0 cm)
Weight:	4.0 lbs	(1.8 kg)
Angle of tilt:	5 to 20 deg	

Cursor Puck

Height:	0.75 in	(2.0 cm)
Width:	2.5 in	(6.4 cm)
Depth:	3.1 in	(7.9 cm)

Stylus

Height:	0.44 in	(1.1 cm)
Width:	0.6 in	(1.5 cm)
Length:	5.4 in	(13.8 cm)

Unpacking and Inspecting Your Data Tablet

Take the following steps to unpack and inspect your data tablet and positioning device.

1. Open the shipping cartons and remove all items.
2. Gently remove all packing materials from around the items.
3. Review the inventory checklist on the next page to make sure you have received all items. Some items, such as the power supply module, may be shipped in other cartons. You can find the device cable's part number at the end of this manual under "Cables." The manual supplied with your data tablet applies to many different types of computer systems; for this reason, we recommend that you install, operate, and test the tablet using this and other DESKTOP GENERATION books written specifically for your system.

Inventory Checklist

- | | |
|---|---|
| <input type="checkbox"/> Tablet with split-end cable | <input type="checkbox"/> Power supply module with cable |
| <input type="checkbox"/> Cursor puck with cable
or Stylus with cable | <input type="checkbox"/> Documentation |

4. Save the cartons and all packing materials to use if you move or must return your tablet or positioning device.
5. Carefully inspect the tablet and positioning device for any visible damage. If the tablet or positioning device appears damaged or contains any loose parts, call the Service Operation Center and report the problem. If you need to return your tablet or positioning device, pack it as it was when you received it.
6. Enter information about your tablet and positioning device on the system configuration sheet.

Installing Your Data Tablet

You install the tablet in your system by connecting it to the printed circuit card which controls it. Depending on the model, the tablet is controlled by a line on a USAM card, a 4207 card, or the SPU 1 card. The table below lists the models with the cards that can control the tablet, the location of the card, and the adapter cable for each card.

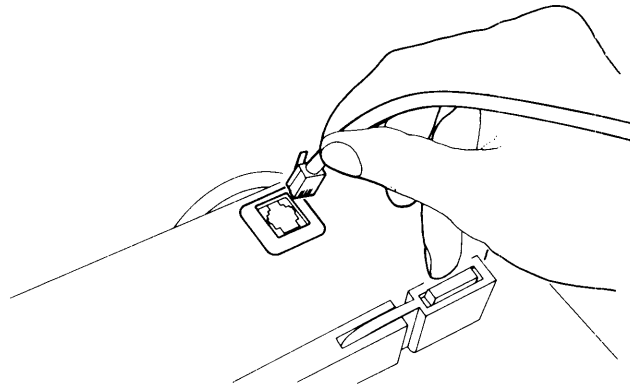
Refer to this table before installing your data tablet.

Model	Card	Card Location	Adapter Cable
All	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
Model 20 and 30	4207	CPU logic or logic expansion, I/O slot	005-021148
Model 10 and 10/SP	SPU 1 (printer port)	CPU logic, slot 1	005-021148

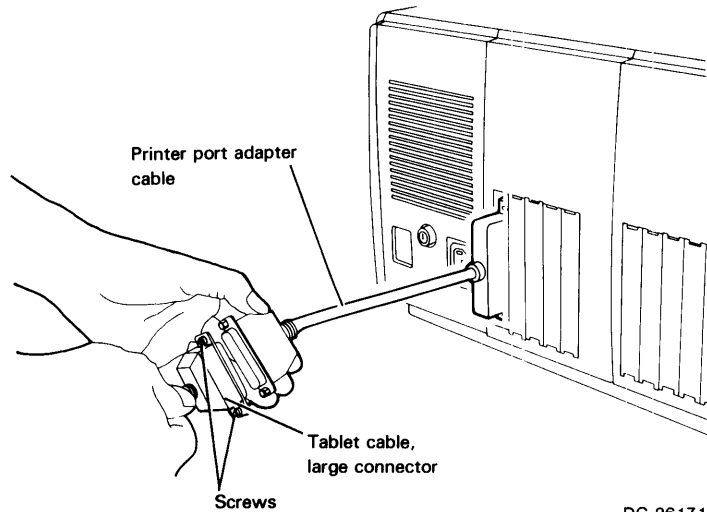
NOTE *If you are adding a tablet to a previously installed system without a USAM line or Model 10 and 10/SP printer port available, you must add a card to your system. You can add a 4207 card (Model 20 and 30 systems only) or a USAM card. Install this card before connecting the tablet, using the information in the system installation manual.*

Take the following steps to install your tablet and positioning device, keeping a small flat screwdriver handy. If you are removing the tablet or positioning device from your system, follow these steps in reverse.

1. Make sure the computer is turned off.
2. Locate the modular jack plug on the upper right corner beneath the tablet. Plug the modular connector of your cursor puck or stylus cable into this jack plug.



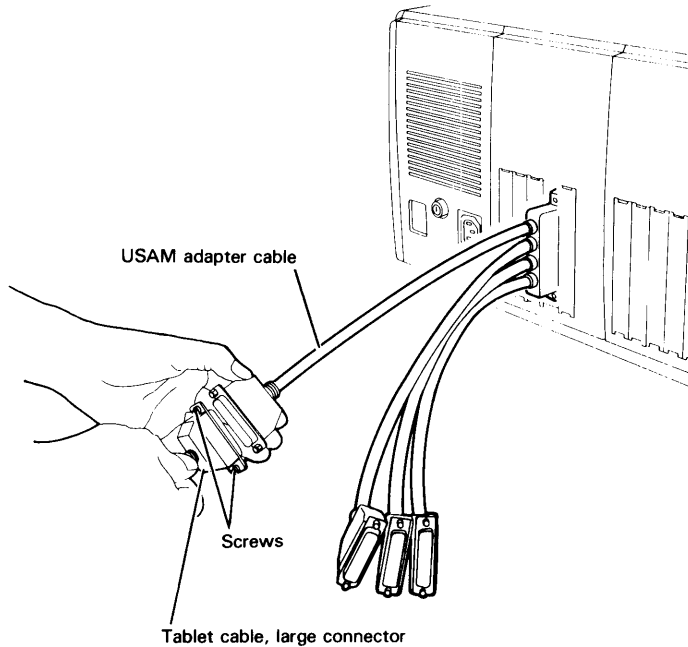
3. To connect the tablet to the Model 10 and 10/SP printer port, plug the tablet cable's large connector into the connector for the SPU1 adapter cable. Tighten the two screws that hold the cables in place.



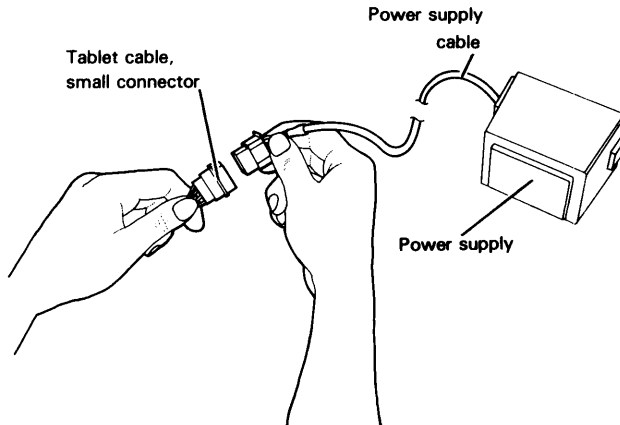
DG-26171

4. To connect the tablet on a USAM line (or 4207 card), locate the adapter cable connector for the line that controls the tablet and plug it into the tablet cable's large connector. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.)

NOTE *If you do not remember which line of the USAM card controls the data tablet, check the installation sheet on connecting peripherals.*

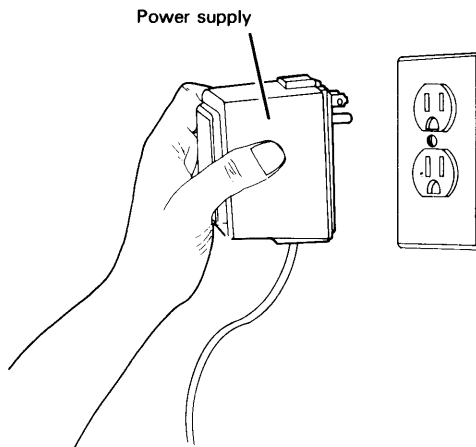


- 5.** Plug the tablet cable's small connector into the cable connector for the tablet's power supply. (Your power supply may be larger or smaller than the one shown below.)



DG-26118

- 6.** Plug the tablet's power supply into an ac outlet. (Your power supply may be larger or smaller than the one shown below.)



DG-25929

The Next Step

If your system includes any other devices, such as a printer or plotter, connect them with the help of the chapters ahead. After installing your system, turn to the DESKTOP GENERATION *Systems Operator's Guide* to verify your system's operation with diagnostic software.

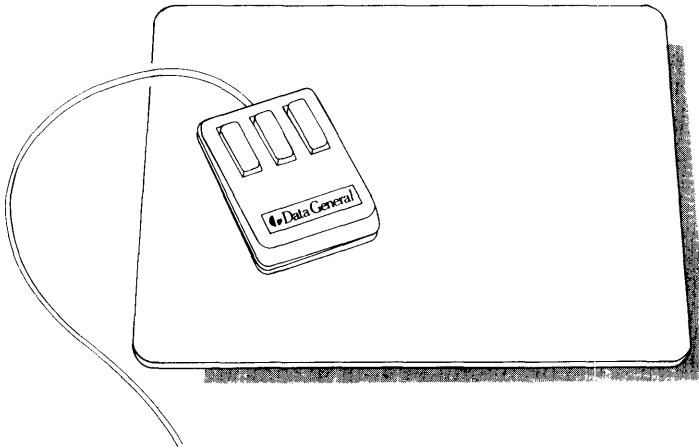
If you have any questions about the operation of the devices in your system, refer to the DESKTOP GENERATION *Peripherals Operator's Guide* or to the manual shipped with the device.



5

Mouse

This chapter tells you how to unpack, inspect, and connect the mouse and mouse pad. The chapter also explains how to calibrate the mouse once you connect it to the system.

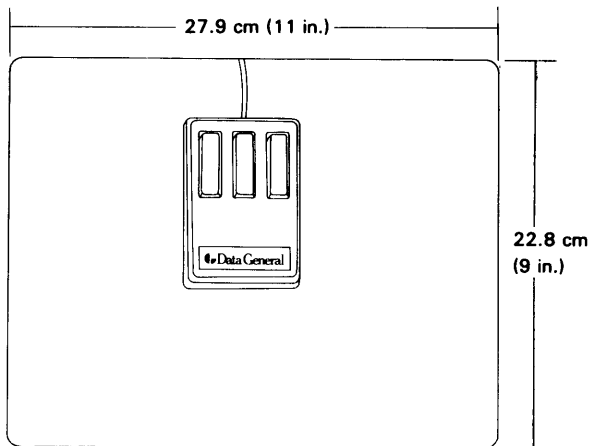


DG-26173

Getting Started

Before you unpack your mouse and pad, a review of the site you have chosen for them will help to ensure that they operate correctly. The temperature of your site should stay within 50 and 100 degrees F (10 and 38 degrees C). Relative humidity should be between 20 and 80 percent.

You can install your mouse and pad on a level surface measuring approximately 12 by 12 in. (30.5 cm). Although the mouse and pad require little space beyond their own dimensions, you should allow extra room for cables and routine maintenance.



DG-26174

You will need to place the mouse within 6 ft (1.8 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source.

WARNING *To prevent injury to yourself or damage to the mouse, use only a three-pronged ac receptacle for ac power.*

The mouse comes with a modular power supply that plugs into an ac outlet. The ac outlet must have a clearance of at least 6 in. on all sides in order to accommodate the power supply.

The mouse and pad require that ac voltage, current, and line frequency be within a certain range for correct operation and reliability. Your main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special equipment.)

You will find general electrical requirements for your system in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you to install the mouse and pad in your computer system.

Electrical Specifications

Power type	100 V	120 V	220/240 V
Voltage range	90-110 V	100-135 V	200-260 V
Line frequency	48-52 Hz	58-62 Hz	48-52 Hz
Current (maximum)	Not available	0.1 A	Not available
Power consumed (maximum)	Not available	12 W	Not available

Mechanical Specifications

Mouse

Height:	1.0 in	(2.5 cm)
Width:	2.6 in	(6.6 cm)
Depth:	3.9 in	(9.9 cm)
Weight:	168 gm	(6.0 oz)

Pad

Height:	1/16 in	(0.15 cm)
Width:	11 in	(27.9 cm)
Depth:	9 in	(22.8 cm)
Weight:		

Unpacking and Inspecting Your Mouse

1. Open the shipping cartons and remove all items.
2. Gently remove all packing materials from around the items.
3. Review the inventory checklist below to make sure you have received all items. Some items, such as the power supply module, may be shipped in other cartons. You can find the device cable's part number at the end of this manual under "Cables." The manual supplied with the mouse applies to several types of computer systems; for this reason, we recommend that you install, operate, and test the mouse using this and other DESKTOP GENERATION manuals written specifically for your system.

Inventory Checklist

- Mouse pad
- Mouse with split-end cable
- Power supply module with cable
- Documentation

DG-26175

4. Save the cartons and all packing materials to use if you move the mouse and pad or must return them.
5. Carefully inspect the mouse and pad for any visible damage. If the mouse or pad appears damaged or contains any loose parts, call your nearest Service Operations Center and report the problem. If you need to return your mouse or pad, pack it as it was when you received it.
6. Enter information about your mouse and pad on the system configuration sheet.

Installing Your Mouse

You install the mouse in your system by connecting it to the printed circuit card which controls it. Depending on the model, the mouse is controlled by a line on a USAM card, a 4207 card, or the SPU 1 card. The table below lists the models with the cards that can control the mouse, the location of the card, and the adapter cable for each card.

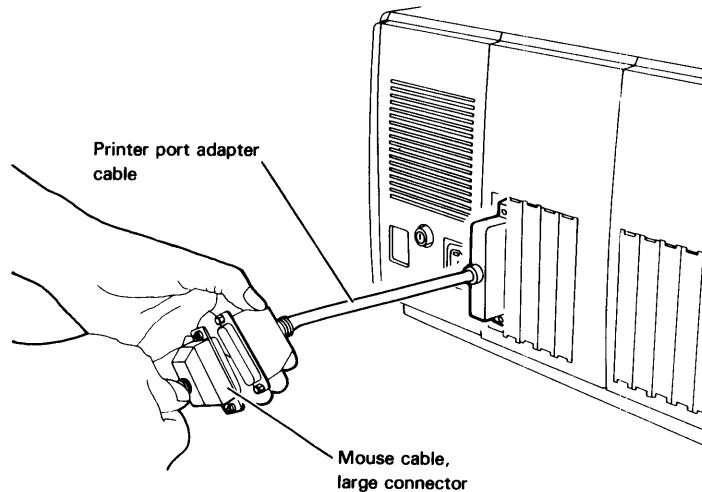
Refer to this table before installing your mouse.

Models	Card	Card Location	Adapter Cable
All	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
Model 20 and 30	4207	CPU logic or logic expansion, I/O slot	005-021148
Model 10 and 10/SP	SPU 1 (printer port)	CPU logic, slot 1	005-021148

NOTE *If you are adding a mouse to a previously installed system without a USAM line or Model 10 and 10/SP printer port available, you must add a card to your system. You can add a 4207 card (Model 20 and 30 systems only) or a USAM card. Install this card before connecting the mouse and pad, using information in the system installation manual.*

Take the following steps to connect the mouse, keeping a small flat screwdriver handy. If you are removing the mouse from your system, follow these steps in reverse.

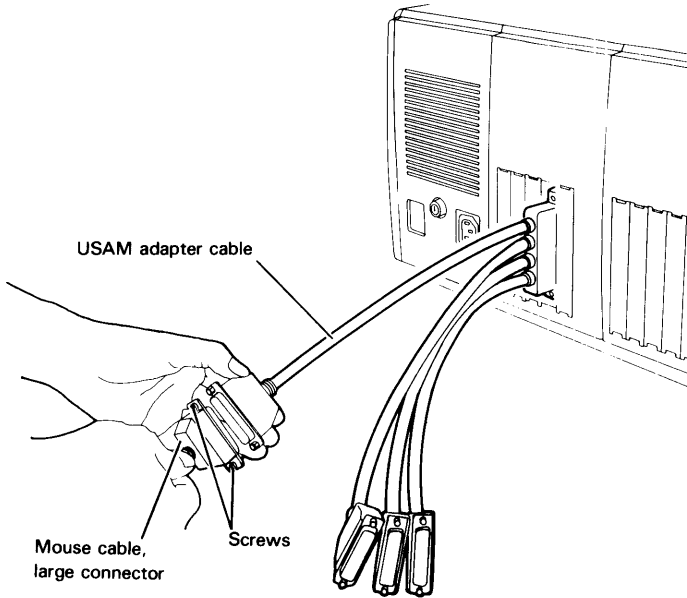
1. Make sure the computer is turned off.
2. To connect the mouse on the Model 10 and 10/SP printer port, plug the mouse cable's large connector into the connector for the SPU1 adapter cable. Tighten the two screws that hold the cables in place.



DG-26176

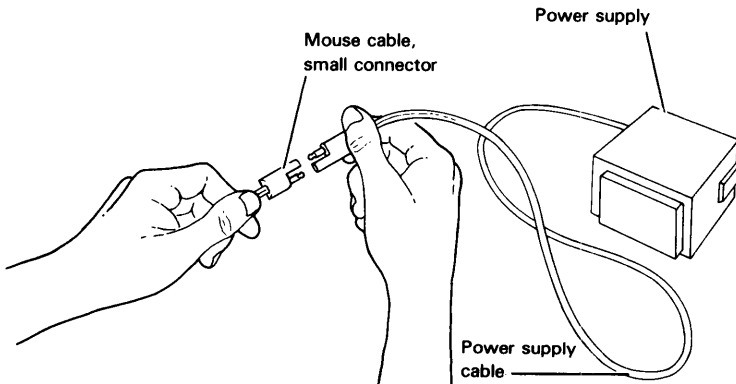
3. To connect the mouse on a USAM line (or 4207 card), locate the adapter cable connector for the line that controls the mouse and plug it into the mouse cable's large connector. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.)

NOTE *If you do not remember which line of the USAM card controls the mouse, check the installation sheet on connecting peripherals.*



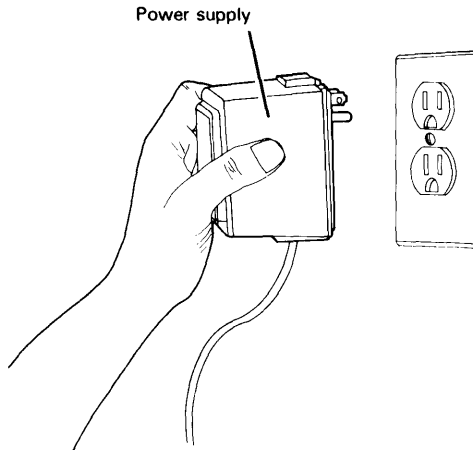
DG-26177

4. Plug the mouse cable's small red connector into the cable connector for the mouse's power supply. (Your power supply may be larger or smaller than the one shown below.)



DG-26178

5. Plug the power supply module into an ac outlet. (Your power supply may be larger or smaller than the one shown below.)



DG-25929

Calibrating the Mouse

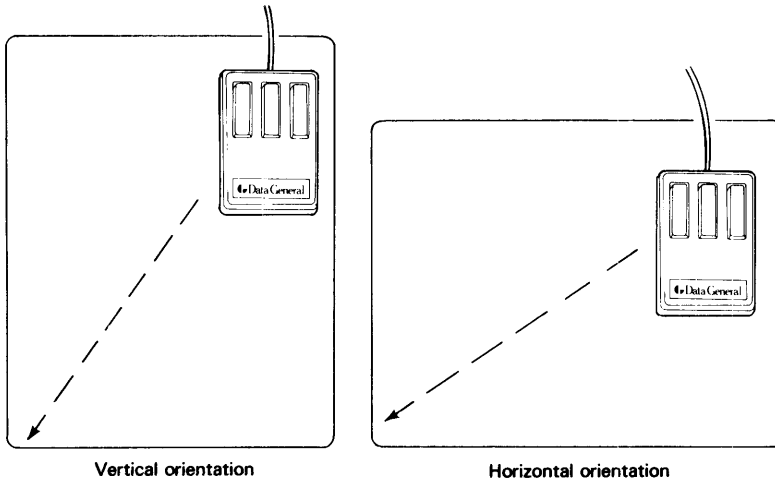
The mouse is automatically calibrated the first time you move it across the pad after power up. The orientation of the mouse in either the vertical or horizontal position relative to the pad is also established during calibration.

CAUTION *Do not unplug the mouse's power supply unless you want to recalibrate the mouse or remove it from your system.*

If you do not know the orientation of the mouse or want to change it, take the following steps to calibrate the mouse.

1. Position the mouse pad on your working surface either vertically or horizontally, whichever way you want to use it.
2. Power down the mouse and then power it up again by unplugging its power supply from the ac outlet and then plugging it in again.
3. Position the mouse on the top right corner of the pad with its keys towards the top of the pad.

4. Move the mouse across the pad in a diagonal direction, from the top right corner to the bottom left corner.

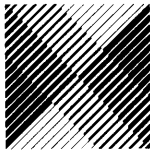


DG-25933

The Next Step

If your system includes any other devices, such as a printer or plotter, connect them with the help of the chapters ahead. After installing your system, turn to your *DESKTOP GENERATION Systems Operator's Guide* to verify your system's operation with diagnostic software.

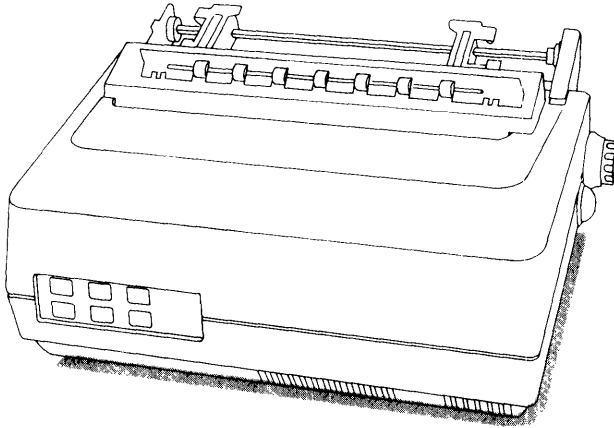
If you have any questions about the operation of the devices in your system, refer to the *DESKTOP GENERATION Peripherals Operator's Guide* or to the manual shipped with the device.



6

**Model 4434 Multifunction
Dot Matrix Printer**

This chapter tells you how to unpack, inspect, and connect your Model 4434 or multifunction dot matrix printer.



DG-25879

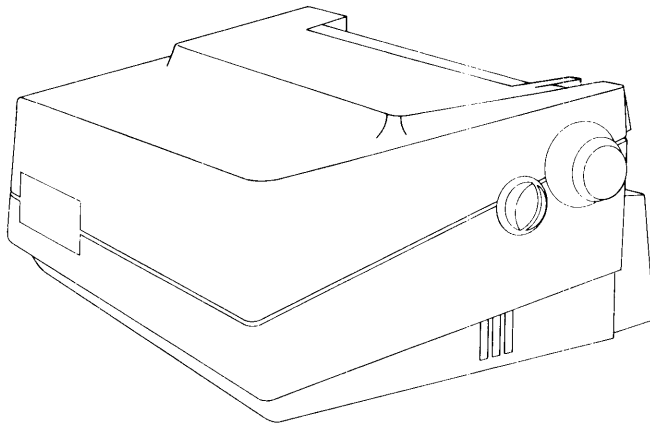
Getting Started

Before you unpack your printer, a review of the site you have chosen for it will help to ensure that it operates correctly. The temperature of your site should stay within 50 and 100 degrees F (10 and 38 degrees C). Relative humidity should be between 20 and 80 percent.

Because the printer emits some noise during operation, avoid installing it in an area where its sound would be disturbing.

Although the printer requires little space beyond its own dimensions, you should allow 20 in. (50.8 cm) around it for ventilation, power and device cables, and routine maintenance.

Place the printer on the edge of a table or other surface so that the paper feeds properly.



DG-25581

You will need to place the printer within 25 ft (7.6 m) of your computer to connect it with the standard-length device cable. You will also need to place it within 6 ft (2 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source.

WARNING *To prevent injury to yourself or damage to the printer, use only a three-pronged ac receptacle for ac power.*

The printer requires that ac voltage, current, and line frequency be within a certain range for correct operation and reliability. Your main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special equipment.) You will find general electrical requirements for your system in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you install the printer in your computer system.

Electrical Specifications

Power type	100 V	120 V	220/240 V
Voltage range	90-110 V	102-132 V	187-242V 204-264V
Line frequency	47-63 Hz	47-63 Hz	47-63 Hz
Current (maximum)	0.45 A	0.45 A	0.3 A
Power consumed (maximum)	120 W	120 W	120 W
Inrush current (maximum)	10 A	10 A	10 A
Power cord	7.5 ft	7.5 ft	None supplied

Mechanical Specifications

Height:	6.2 in	(15.8 cm)
Width:	13.7 in	(34.8 cm)
Depth:	9.64 in	(24.5 cm)
Weight:	18 lbs	(8 kg)

Unpacking and Inspecting Your Printer

1. Open the shipping carton and remove the printer and accessory box.
2. Gently remove the foam pieces from the printer and the accessories from the box.
3. Review the inventory checklist below to make sure you have received all items. You will find some items, such as the device cable, in other cartons. You can find the device cable's part number at the end of this manual under "Cables." The manuals supplied with the printer apply to several types of computer systems; for this reason, we recommend that you install, operate, and test the printer using this and other DESKTOP GENERATION manuals written specifically for your system.

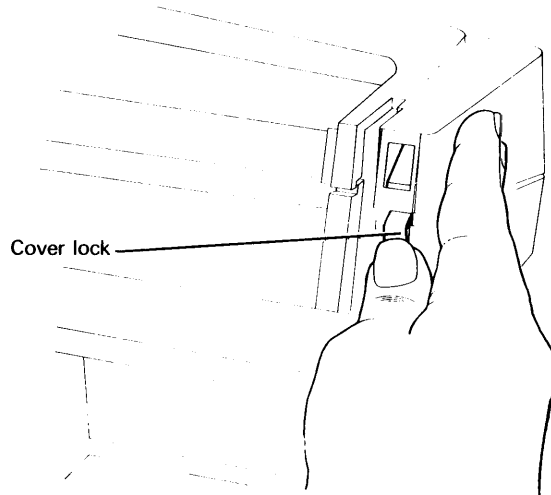
Inventory Checklist

- Printer
- Paper separator
- Forms tractor
- Acrylic dust cover
- Ribbon
- Power cable
- Device cable
- Documentation

DG-26186

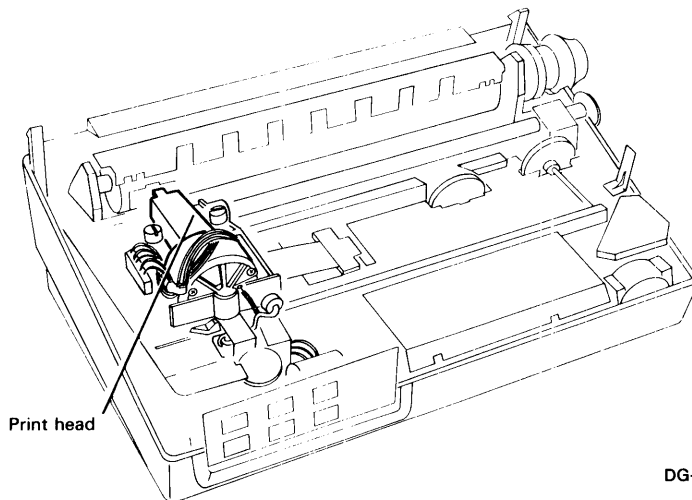
4. Save the cartons and all packing materials in case you move or must return your printer.

5. Remove the printer's cover by pressing the two cover locks on the back of the printer, and lifting the cover up.



DG-25583

6. Remove the plastic tie securing the print head.



DG-25584

7. Carefully inspect the printer for any visible damage. If the printer appears damaged or contains any loose hardware or parts, call your nearest Service Operations Center and report the problem. If you need to return your printer, repack it as it was shipped to you.
8. Enter information about your printer on the system configuration sheet.

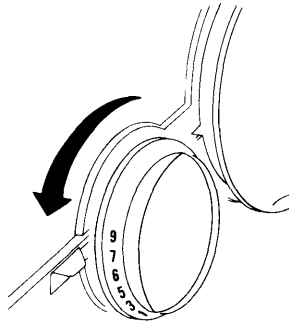
Installing Your Printer

The sections ahead guide you through the installation of your printer. If you are removing the printer from your system, follow these procedures in reverse.

Installing the Ribbon

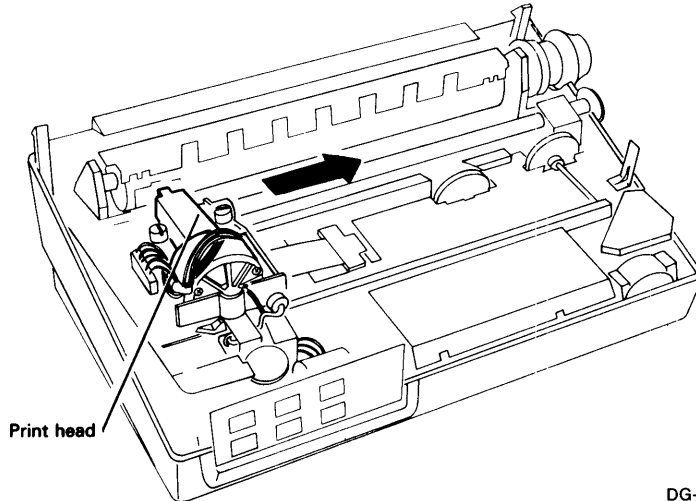
Take the following steps to install a ribbon in your printer.

1. Turn the paper thickness adjustment knob counterclockwise to position 9.



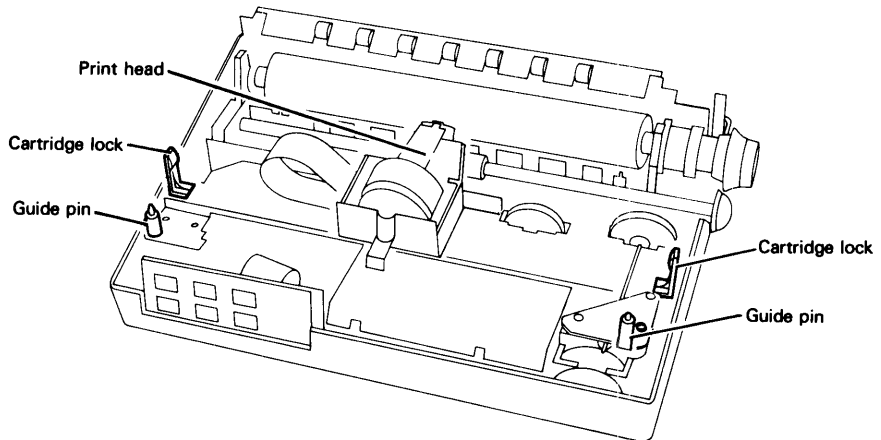
DG-25421

2. Slide the print head to the middle of its track.



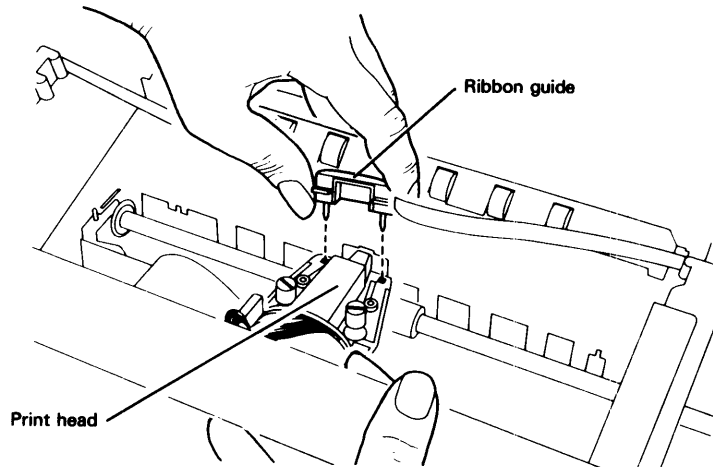
DG-26187

3. Locate the two guide pins on which the ribbon cartridge will rest.



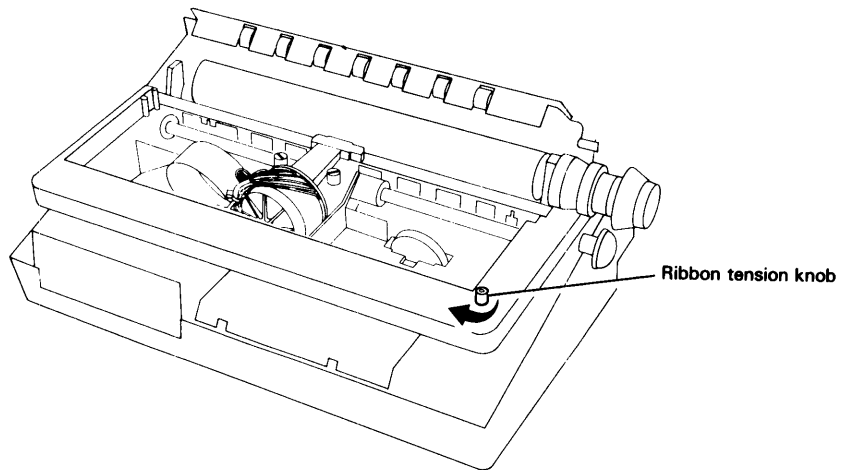
DG-25586

4. Remove the ribbon cartridge from its box and insert the ribbon guide of the ribbon cartridge into the print head. Fit the cartridge onto the guide pins and press down until the ribbon cartridge snaps into place.



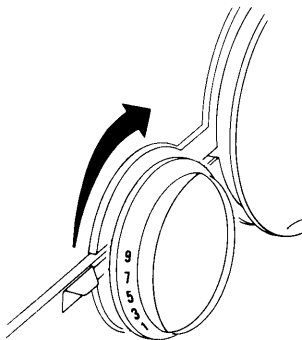
DG-25587

5. Tighten the ribbon by turning the ribbon tension knob clockwise. Turn the knob a few additional times to make sure the ribbon is not twisted or its path blocked.



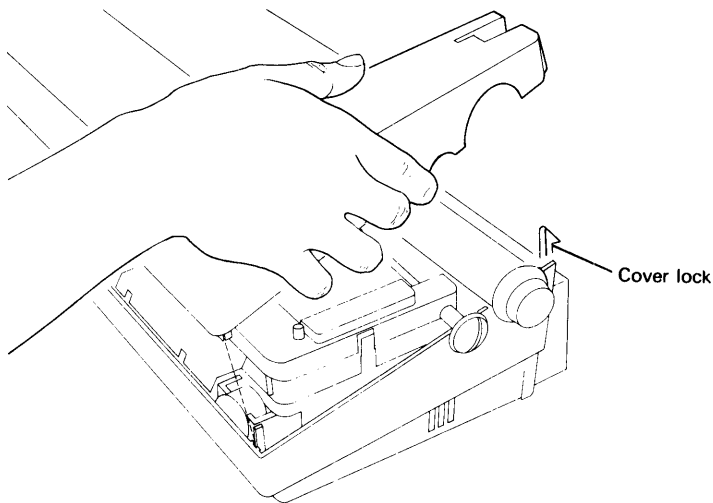
DG-25588

6. Turn the paper thickness adjustment knob to the desired position. Try position 5 for normal printing and a higher number for multiple-part forms.



DG-25427

7. Hook the front of the cover into place; then lower the back of the cover over the cover locks until it snaps shut.

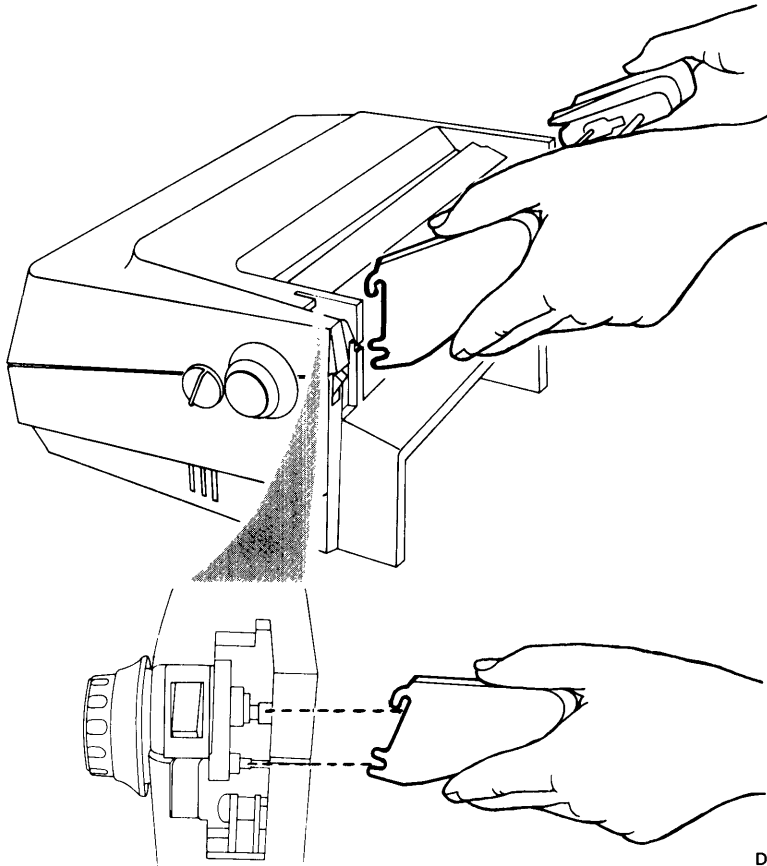


DG-25589

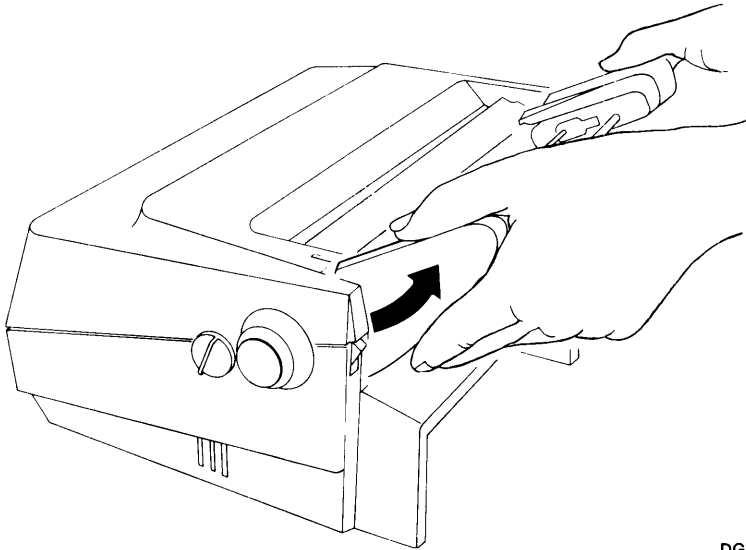
Installing the Forms Tractor and Dust Cover

Take the following steps to install the forms tractor and dust cover. If you are removing these items from the printer, you may find it easier to remove the dust cover on some models if you remove the forms tractor first.

1. Install the forms tractor by hooking the tractor's left and right top notches onto the top studs on the back of the printer. Then hook the bottom notches onto the bottom studs. The tractors should click into place.

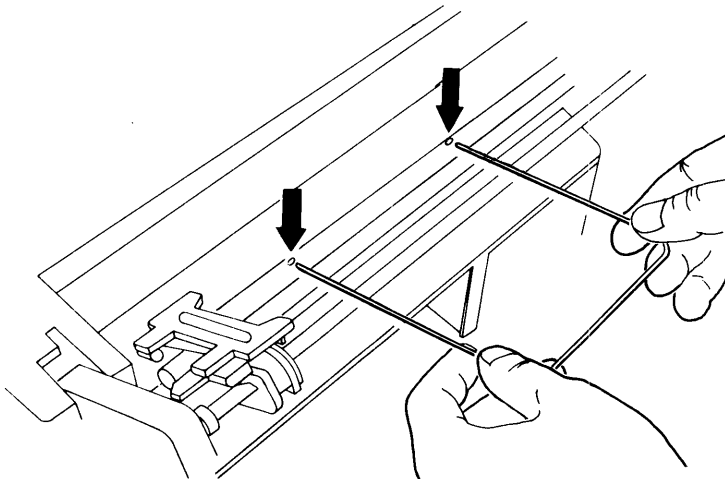


To remove the tractor, unhook the bottom notches and then lift the tractor up.



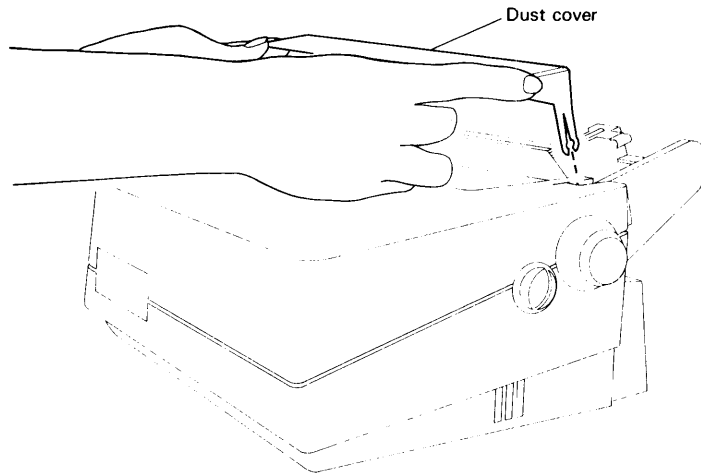
DG-25591

2. Install the metal paper separator by inserting it into the holes on the back of the printer.



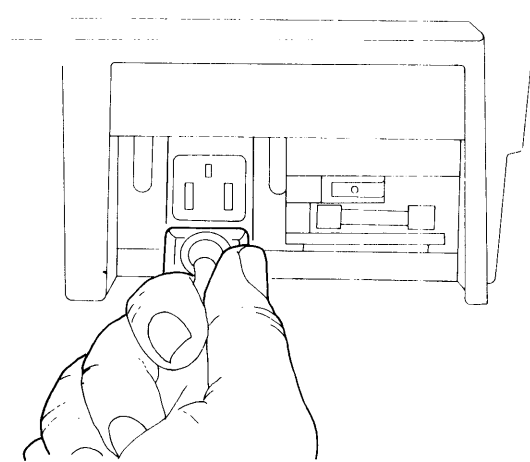
DG-25592

3. Install the acrylic dust cover by fitting the left and right notches onto the top studs behind the printer.



DG-25420

4. Plug the power cord into the power connector on the back of the printer. If the printer is a 220/240 V model, make sure the switch on the bottom of the printer is set correctly.



DG-25593

5. Plug the power cord into an ac outlet.

Configuring Your Printer

Printer characteristics such as form length, lines per inch, and data transmission rates are set at the factory to the values required for a printer in a standard DESKTOP GENERATION system that uses a Data General operating system. We advise against changing these preset values (called *default values*) unless you are using the printer in a custom application or with a non-Data General operating system. If you need to change the printer's data transmission characteristics, refer to the documentation you received with the printer.

On occasion, you may want to override the default values; for example, when you load paper with a different form length or when you want to change the appearance of the print on the page. To change form length, print format, or use a different character set, refer to the DESKTOP GENERATION *Peripherals Operator's Guide* or to the manual shipped with the printer.

Checking Default Values

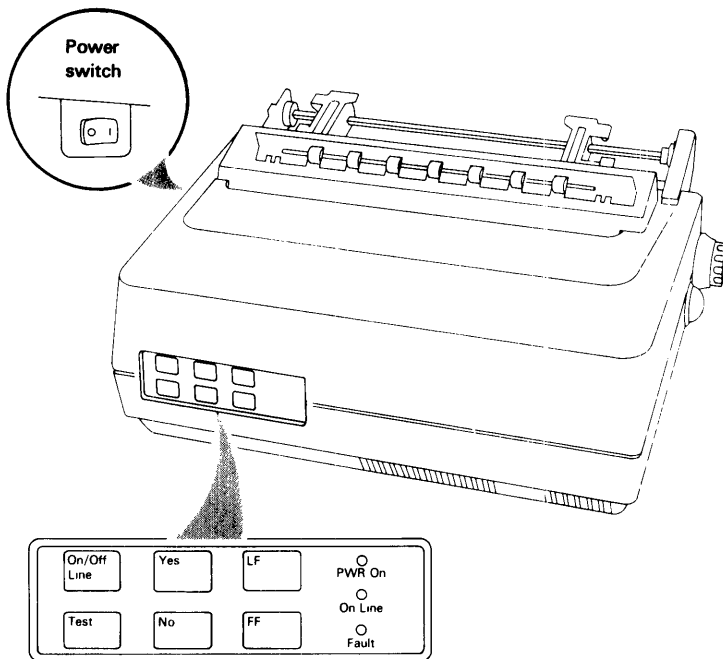
The following table lists the printer characteristics and their default values. The characteristics you might want to change during normal operation are marked with an asterisk (*).

Form length:*	11 inches (66 lines)
Lines per inch (LPI):*	6
Characters per inch (CPI):*	10
Character set:*	USA
Interface type:	Serial
Baud rate:	9600
Number of data bits:	8
Parity:	None

Your printer helps you ensure that its default values have been set correctly by providing a printout of its current characteristics. To obtain this printout, you must first load paper into the printer according to the instructions in the DESKTOP GENERATION *Peripherals Operator's Guide* or to the manual shipped with the printer.

After loading the printer with paper, take the following steps to check its default values.

1. Turn the printer on by turning on the Power switch. Make sure the printer is off line by pressing the On/Off Line switch. The printer is off line when the yellow On Line light is off.



DG-25594

2. Press the No switch. The printer then prints out a list similar to the one shown in the table earlier.

If the printer prints a list that does not agree with the factory-set default values, you must enter interactive mode and change these values to their proper default settings.

When the printer is in interactive mode, it prints out a menu of questions that permit you to change its characteristics. Take the following steps to enter interactive mode.

1. Place the printer off line by pressing the On/Off Line switch. The printer is off line when the yellow On Line light is off.

2. Press the Yes switch and, while still pressing that switch, press the No switch momentarily. The printer lists a series of questions that you answer in order to change its characteristics. Right now your only concern is the first question:

RESTORE DEFAULTS?

To learn about the remaining questions, refer to the documentation shipped with the printer.

3. Press the Yes switch to set the printer characteristics to the default values listed earlier in the table. The printer then prints END OF MENU and leaves interactive mode. Press the On/Off Line switch to resume normal operation. If you answer no by mistake, press the Test switch to terminate interactive mode; reenter interactive mode according to steps 1 and 2 above; and try again.

Connecting Your Printer

You install the printer in your system by connecting it to the printed circuit card which controls it. Depending on the model, the printer is controlled by a line on a USAM card, a 4207 card, or the SPU 1 card. The table below lists the models with the cards that can control the printer, the location of the card, and the adapter cable for each card.

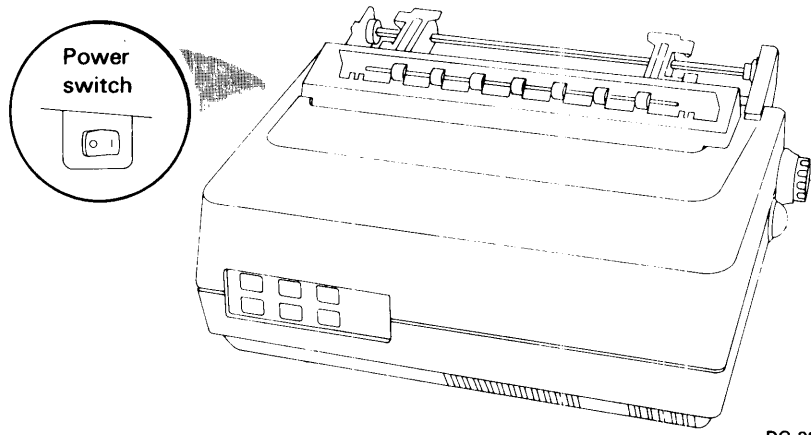
Refer to this table before installing your printer.

Models	Card	Card Location	Adapter Cable
All	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
Model 20 and 30	4207	CPU logic or logic expansion, I/O slot	005-021148
Model 10 and 10/SP	SPU 1 (printer port)	CPU logic, slot 1	005-021148

NOTE *If you are adding a printer to a previously installed system without a USAM line or Model 10 and 10/SP printer port available, you must add a card to your system. You can add a 4207 card (Model 20 or 30 systems only) or USAM card. Install this card before connecting the printer, using information in the system installation manual.*

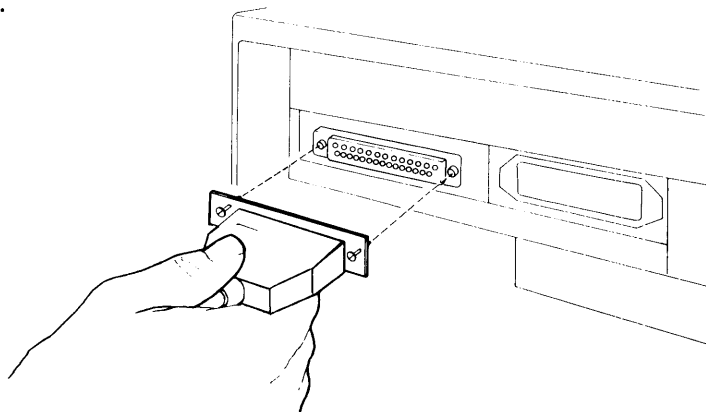
Take the following steps to connect the printer, keeping a small Phillips screwdriver and flat screwdriver handy.

1. Make sure the computer is turned off.
2. Turn the printer off. Remove the power cord from its ac outlet.



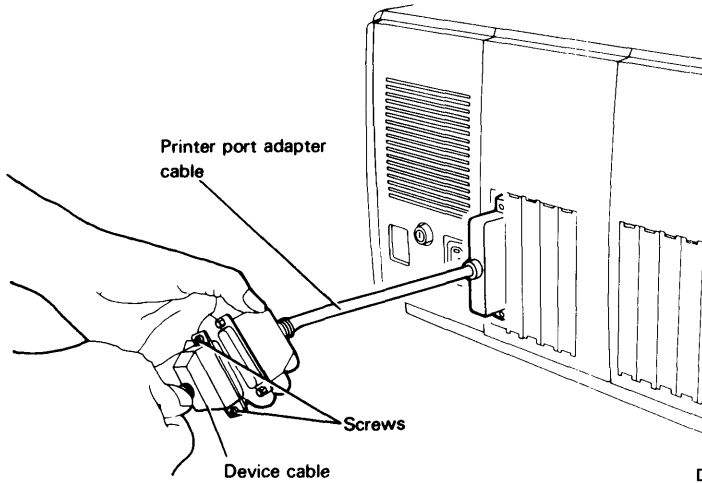
DG-26188

3. Plug one end of the printer's device cable into the connector behind the printer. Tighten the two screws that hold the cable in place.



DG-25595

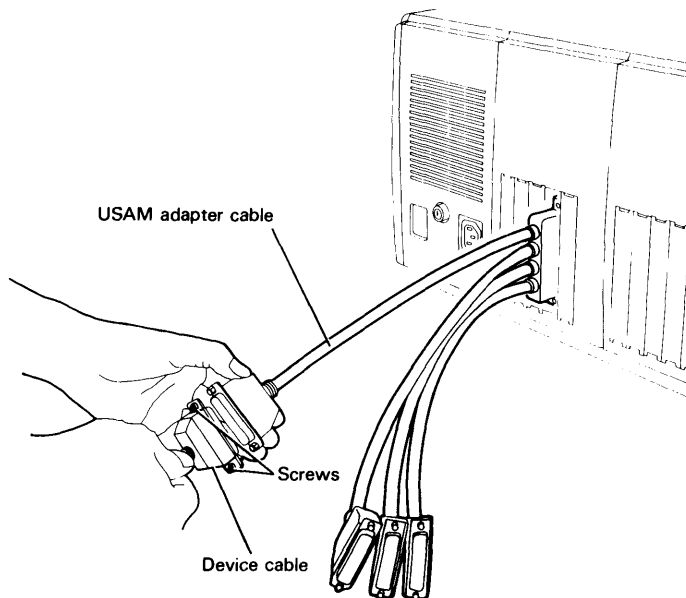
4. To connect the printer on the Model 10 and 10/SP printer port, plug the other end of the printer's device cable into the connector for the printer port adapter cable. Tighten the two screws that hold the cables in place.



DG-26189

5. To connect the printer on a USAM line (or 4207 card), locate the adapter cable connector for the line that controls the printer and plug it into the other end of the printer's device cable. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.)

NOTE *If you do not remember which line of the USAM card controls the printer, check the installation sheet for connecting peripherals.*



DG-26155

6. Plug the power cord into ac outlet.

The Next Step

If your system includes any other devices, such as a plotter, connect them with the help of the chapters ahead. After installing your system, turn to your *DESKTOP GENERATION System Operator's Guide* to verify your system's operation with diagnostic software.

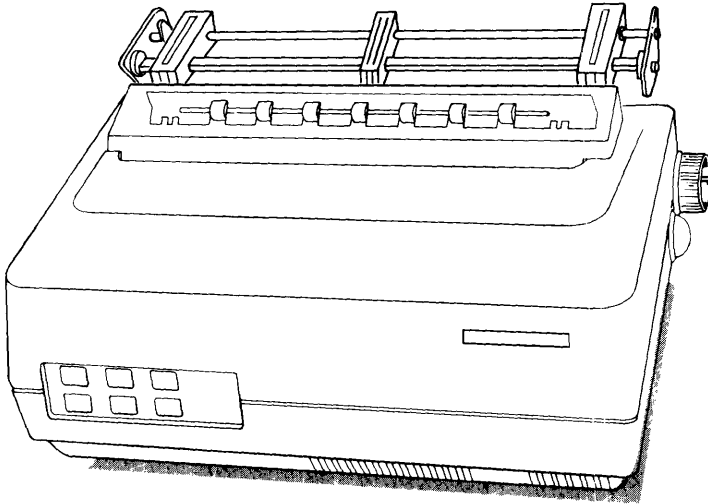
If you have any questions about the operation of the devices in your system, refer to the *DESKTOP GENERATION Peripherals Operator's Guide* or to the manual shipped with the device.



7

**Model 4531 Multifunction
Dot Matrix Printer**

This chapter tells you how to unpack, inspect, and connect your Model 4531 multifunction dot matrix printer.



DG-25879

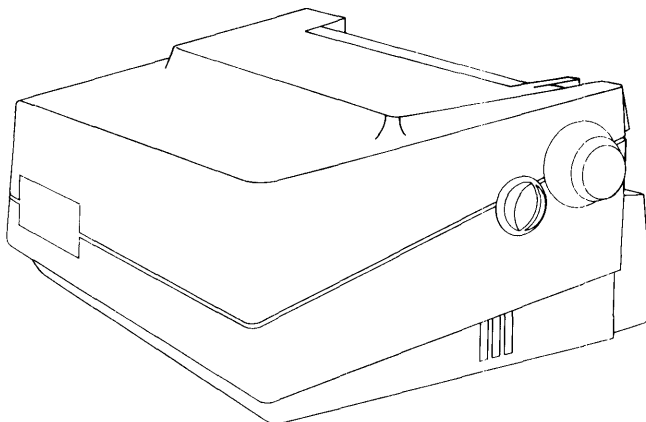
Getting Started

Before you unpack your printer, a review of the site you have chosen for it will help to ensure that it operates correctly. The temperature of your site should stay within 50 and 100 degrees F (10 and 38 degrees C). Relative humidity should be between 20 and 80 percent.

Because the printer emits some noise during operation, avoid installing it in an area where its sound would be disturbing.

Although the printer requires little space beyond its own dimensions, you should allow 20 in. (50.8 cm) around it for ventilation, power and device cables, and routine maintenance.

Place the printer on the edge of a table or other surface so that the paper feeds properly.



DG-25581

You will need to place the printer within 25 ft (7.6 m) of your computer to connect it with the standard-length device cable. You will also need to place it within 6 ft (2 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source.

WARNING *To prevent injury to yourself or damage to the printer, use only a three-pronged ac receptacle for ac power.*

The printer requires that ac voltage, current, and line frequency be within a certain range for correct operation and reliability. Your main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special equipment.) You will find general electrical requirements for your system in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you install the printer in your computer system.

Electrical Specifications

Power type	100 V	120 V	220	240 V
Line frequency	50 Hz	60 Hz	50 Hz	50 Hz
Current (maximum)	1.2 A	1.2 A	0.6 A	0.6 A
Power cord	6 ft	6 ft	None	supplied

Mechanical Specifications

Height:	6.1 in	(15.5 cm)
Width:	19.1 in	(48.5 cm)
Depth:	9.57 in	(24.3 cm)
Weight:	23.5 lbs	(10.7 kg)

Unpacking and Inspecting Your Printer

1. Open the shipping carton and remove the printer and accessory box.
2. Gently remove the foam pieces from the printer and the accessories from the box.
3. Review the inventory checklist below to make sure you have received all items. You will find some items, such as the device cable, in other cartons. You can find the device cable's part number at the end of this manual under "Cables." The manuals supplied with the printer apply to several types of computer systems; for this reason, we recommend that you install, operate, and test the printer using this and other DESKTOP GENERATION manuals written specifically for your system.

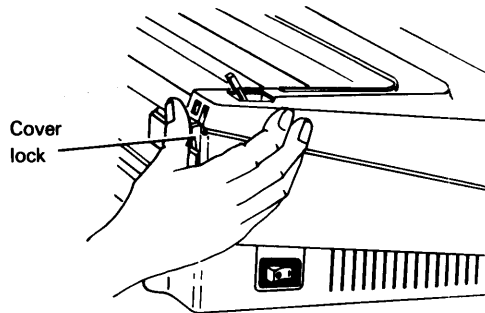
Inventory Checklist

- Printer
- Paper separator
- Forms tractor
- Acrylic dust cover
- Ribbon
- Power cable
- Device cable
- Documentation

DG-26186

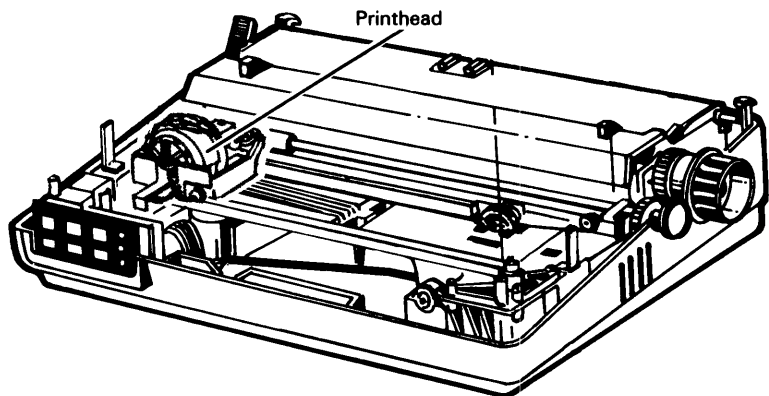
4. Save the cartons and all packing materials in case you move or must return your printer.

5. Remove the printer's cover by pressing the two cover locks on the back of the printer, and lifting the cover up.



DG-26667

6. Remove the plastic tie securing the print head.



7. Carefully inspect the printer for any visible damage. If the printer appears damaged or contains any loose hardware or parts, call your nearest Service Operations Center and report the problem. If you need to return your printer, repack it as it was shipped to you.
8. Enter information about your printer on the system configuration sheet.

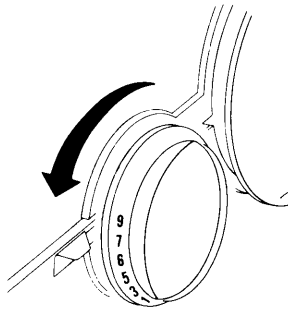
Installing Your Printer

The sections ahead guide you through the installation of your printer. If you are removing the printer from your system, follow these procedures in reverse.

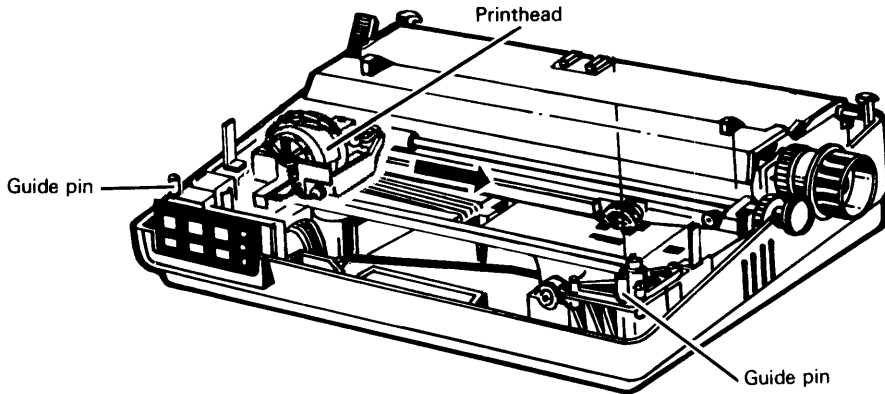
Installing the Ribbon

Take the following steps to install a ribbon in your printer.

1. Turn the paper thickness adjustment knob counterclockwise to position 9.

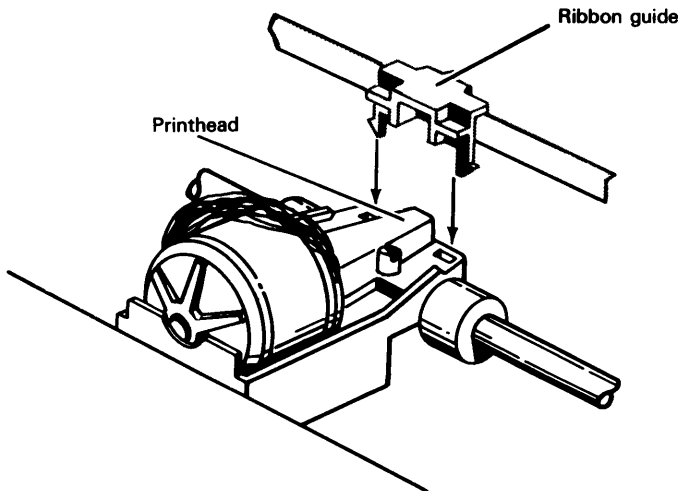


- Slide the print head to the middle of its track.



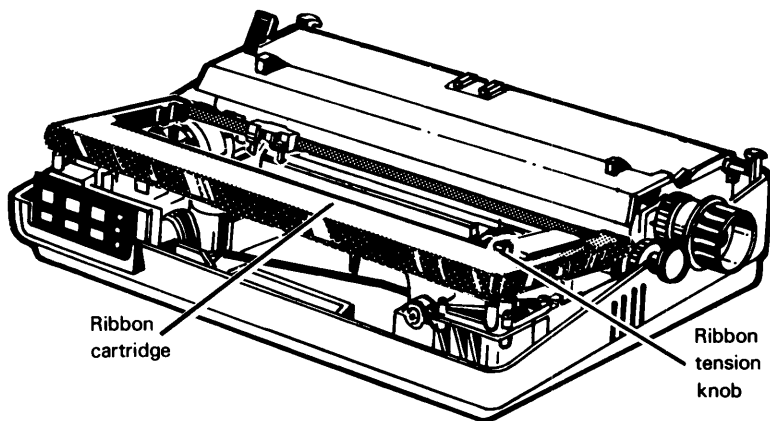
DG-25586

- Locate the two guide pins on which the ribbon cartridge will rest.
- Remove the ribbon cartridge from its box and insert the ribbon guide of the ribbon cartridge into the print head. Fit the cartridge onto the guide pins and press down until the ribbon cartridge snaps into place.



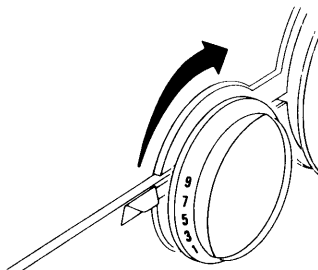
DG-26672

5. Tighten the ribbon by turning the ribbon tension knob clockwise. Turn the knob a few additional times to make sure the ribbon is not twisted or its path blocked.



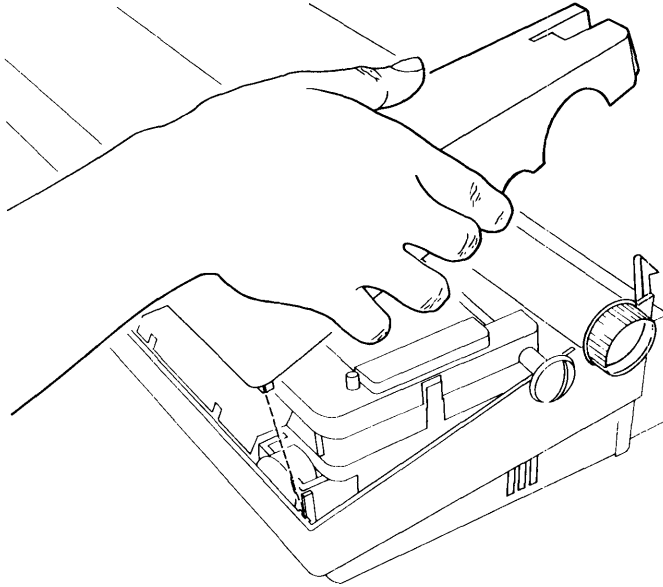
DG-26673

6. Turn the paper thickness adjustment knob to the desired position. Try position 5 for normal printing and a higher number for multiple-part forms.



DG-25427

7. Hook the front of the cover into place; then lower the back of the cover over the cover locks until it snaps shut.

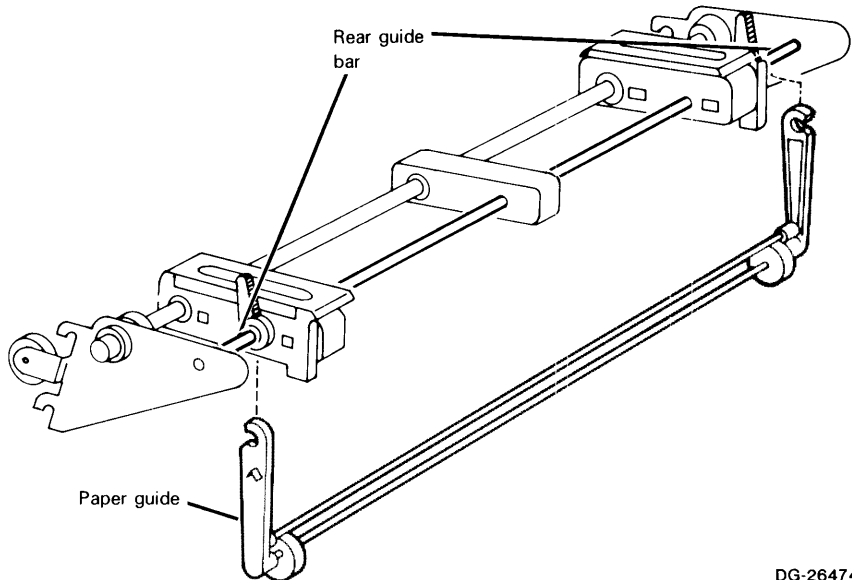


DG-25589

Installing the Paper Guide and Forms Tractor

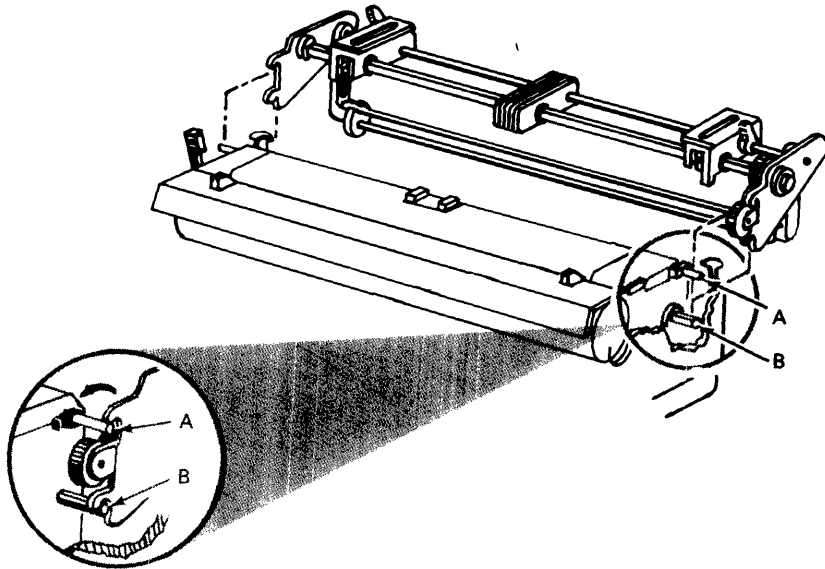
Take the following steps to install the forms tractor and dust cover. If you are removing these items from the printer, you may find it easier to remove the dust cover on some models if you remove the forms tractor first.

1. Install the paper guide by clipping it into the rear guide bar of the tractor feed.

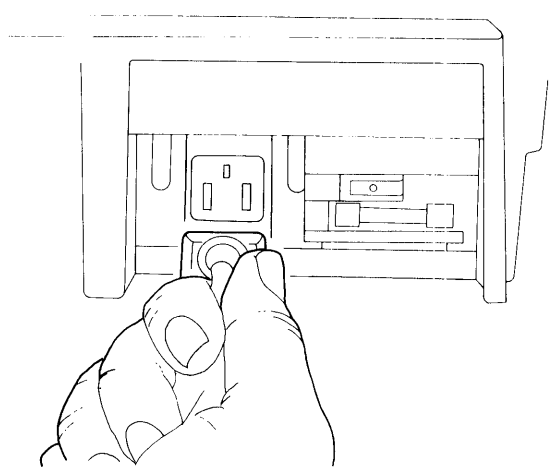


DG-26474

2. Install the forms tractor by hooking the tractor's left and right top notches onto the top studs on the back of the printer. Then hook the bottom notches onto the bottom studs. The tractors should click into place.



3. Plug the power cord into the power connector on the back of the printer. If the printer is a 220/240 V model, make sure the switch on the bottom of the printer is set correctly.



DG-25593

4. Plug the power cord into an ac outlet.

Configuring Your Printer

Printer characteristics such as form length, lines per inch, and data transmission rates are set at the factory to the values required for a printer in a standard DESKTOP GENERATION system that uses a Data General operating system. We advise against changing these preset values (called *default values*) unless you are using the printer in a custom application or with a non-Data General operating system. If you need to change the printer's data transmission characteristics, refer to the documentation you received with the printer.

On occasion, you may want to override the default values; for example, when you load paper with a different form length or when you want to change the appearance of the print on the page. To change form length, print format, or use a different character set, refer to the DESKTOP GENERATION *Peripherals Operator's Guide* or the manual shipped with the printer.

Checking Default Values

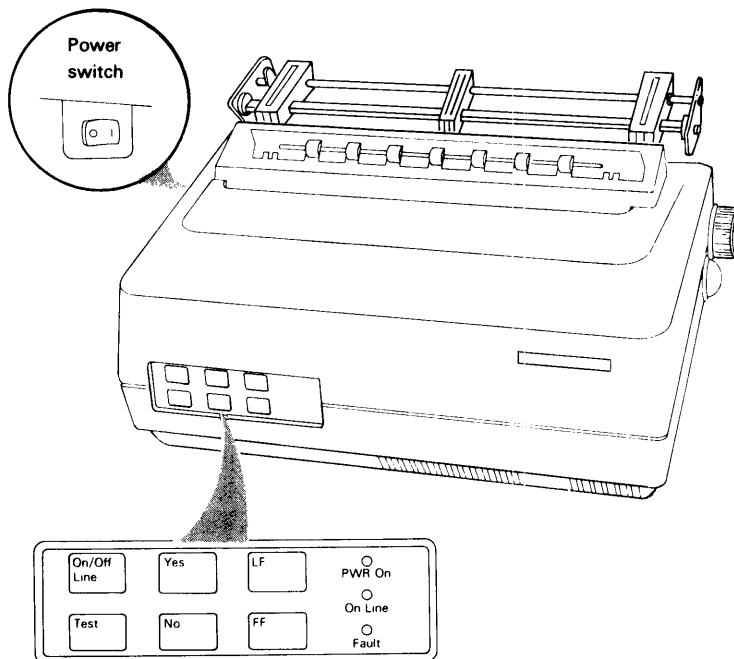
The following table lists the printer characteristics and their default values. The characteristics you might want to change during normal operation are marked with an asterisk (*).

Form length:*	11 inches (66 lines)
Lines per inch (LPI):*	6
Characters per inch (CPI):*	10
Character set:*	USA
Interface type:	Serial
Baud rate:	9600
Number of data bits:	8
Parity:	None

Your printer helps you ensure that its default values have been set correctly by providing a printout of its current characteristics. To obtain this printout, you must first load paper into the printer according to the instructions in the *DESKTOP GENERATION Peripherals Operator's Guide* or to the manual shipped with the printer.

After loading the printer with paper, take the following steps to check its default values.

1. Turn the printer on by turning on the Power switch. Make sure the printer is off line by pressing the On/Off Line switch. The printer is off line when the yellow On Line light is off.



DG-25594

2. Press the No switch. The printer then prints out a list similar to the one shown in the table earlier.

Changing Printer Characteristics

If the printer prints a list that does not agree with the factory-set default values, you must enter interactive mode and change these values to their proper default settings.

When the printer is in interactive mode, it prints out a menu of questions that permit you to change its characteristics. Take the following steps to enter interactive mode.

1. Place the printer off line by pressing the On/Off Line switch. The printer is off line when the yellow On Line light is off.

2. Press the Yes switch and, while still pressing that switch, press the No switch momentarily. The printer lists a series of questions that you answer in order to change its characteristics. Right now your only concern is the first question:

RESTORE DEFAULTS?

To learn about the remaining questions, refer to the documentation shipped with the printer.

3. Press the Yes switch to set the printer characteristics to the default values listed earlier in the table. The printer then prints END OF MENU and leaves interactive mode. Press the On/Off Line switch to resume normal operation. If you answer no by mistake, press the Test switch to terminate interactive mode; reenter interactive mode according to steps 1 and 2 above; and try again.

Connecting Your Printer

You install the printer in your system by connecting it to the printed circuit card which controls it. Depending on the model, the printer is controlled by a line on a USAM card, a 4207 card, or the SPU 1 card. The table below lists the models with the cards that can control the printer, the location of the card, and the adapter cable for each card.

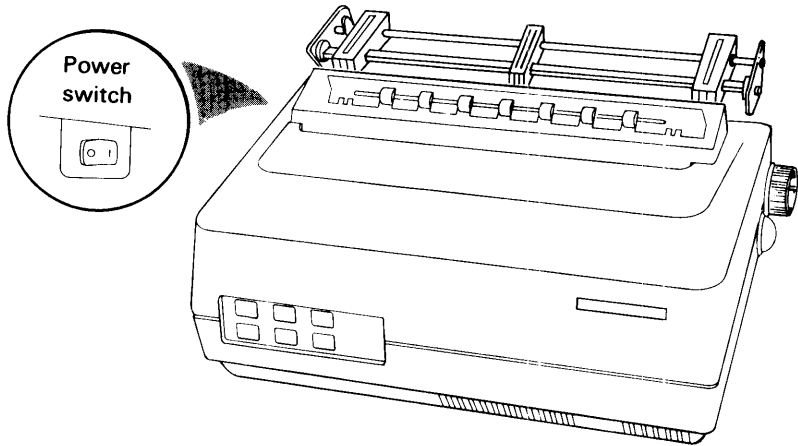
Refer to this table before installing your printer.

Models	Card	Card Location	Adapter Cable
All	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
Model 20 and 30	4207	CPU logic or logic expansion, I/O slot	005-021148
Model 10 and 10/SP	SPU 1 (printer port)	CPU logic, slot 1	005-021148

NOTE *If you are adding a printer to a previously installed system without a USAM line or Model 10 and 10/SP printer port available, you must add a card to your system. You can add a 4207 card (Model 20 and 30 systems only) or USAM card. Install this card before connecting the printer, using information in the system installation manual.*

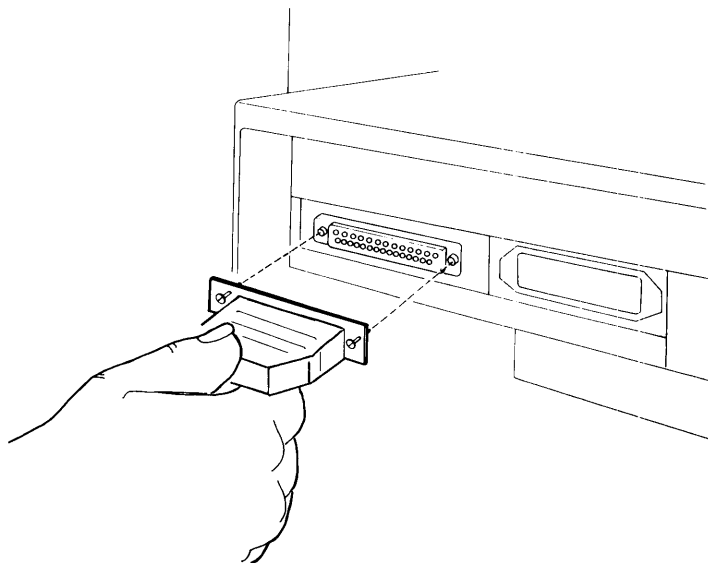
Take the following steps to connect the printer, keeping a small Phillips screwdriver and flat screwdriver handy.

1. Make sure the computer is turned off.
2. Turn the printer off. Remove the power cord from its ac outlet.



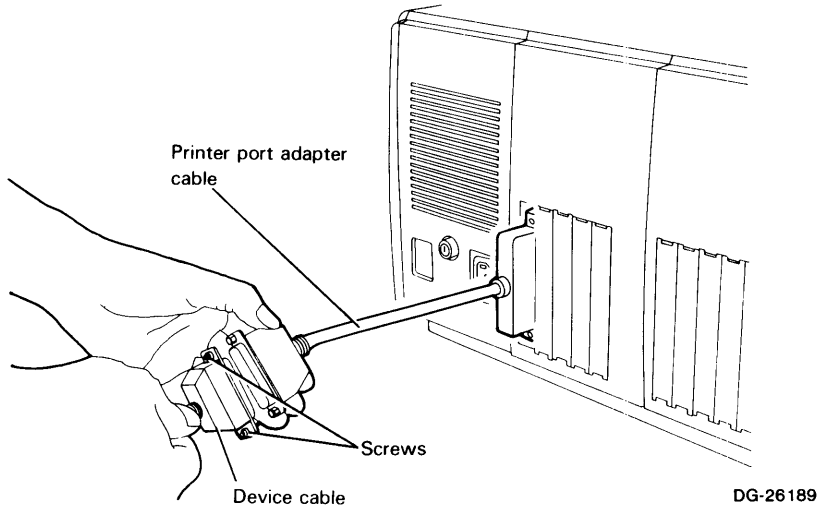
DG-26188

3. Plug one end of the printer's device cable into the connector behind the printer. Tighten the two screws that hold the cable in place.



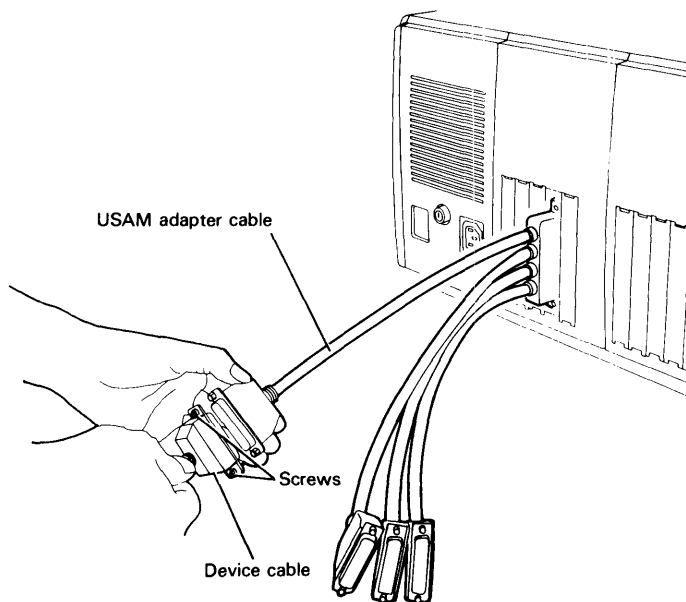
DG-25595

4. To connect the printer on the printer port, plug the other end of the printer's device cable into the connector for the printer port adapter cable. Tighten the two screws that hold the cables in place.



5. To connect the printer on a USAM line (or 4207 card), locate the adapter cable connector for the line that controls the printer and plug it into the other end of the printer's device cable. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.)

NOTE If you do not remember which line of the USAM card controls the printer, check the installation sheet on connecting peripherals.



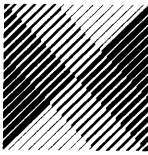
DG-26155

6. Plug the power cord into ac outlet.

The Next Step

If your system includes any other devices, such as a plotter, connect them with the help of the chapters ahead. After installing your system, turn to the *DESKTOP GENERATION Systems Operator's Guide* to verify your system's operation with diagnostic software.

If you have any questions about the operation of the devices in your system, refer to the *DESKTOP GENERATION Peripherals Operator's Guide* or to the manual shipped with the device.



8

**Model 4433 Data
Processing Dot Matrix
Printer**

3. Review the inventory checklist below to make sure you have received all items. You will find some items, such as the device cable, in other cartons. The device cable's part number is at the end of this manual under "Cables." The manual supplied with the printer applies to several types of computer systems; for this reason, we recommend that you install, operate, and test the printer using this and other DESKTOP GENERATION manuals written specifically for your system.

Inventory Checklist

- Printer with power cord
- Cover
- Anti-static clip
- Device cable
- Documentation

DG-26194

4. Save the cartons and all packing materials to use if you move or must return the printer.

5. Carefully inspect the printer for any visible damage and make sure the print head moves freely in both directions. If the printer appears damaged or contains any loose parts, call your nearest Service Operations Center and report the problem. If you need to return your printer, repack it as shown in the packing diagram.

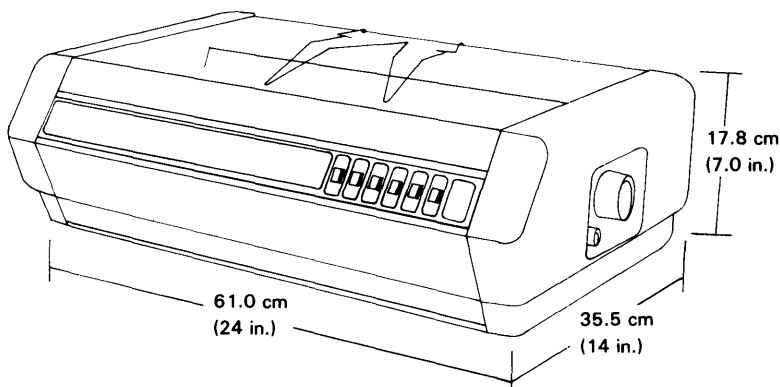
Getting Started

Before you unpack your printer, a review of the site you have chosen for it will help to ensure that it operates correctly. The temperature of your site should stay within 50 and 100 degrees F (10 and 38 degrees C). Relative humidity should be between 20 and 80 percent.

Because the printer emits some noise during operation, avoid installing it in an area where its sound may be disturbing.

Install your printer in a space approximately 27 by 20 in. (68.6 by 50.8 cm). These dimensions permit access to all printer controls and power and device cables. Allow a 20 in. (50.8 cm) access area above the printer for ventilation.

You can install the printer on any sturdy desk or table top. However, if you plan to feed paper through the bottom, you will need a slotted-top table or print stand.



DG-25692

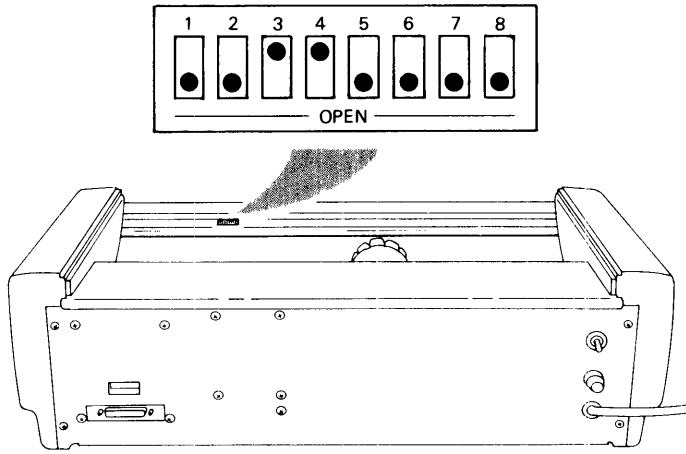
You should place the printer within 25 ft (7.5 m) of your computer in order to connect it with the standard-length device cable. The printer should also be within 7.5 ft (2.25 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source.

WARNING *To prevent injury to yourself or damage to the printer, use only a three-pronged ac receptacle for ac power.*

The printer requires that ac voltage, current, and line frequency be within a certain range for correct operation and reliability. Your

Operating Switches

The operating switches are set at the factory as shown below.



DG-25701

The following table shows the characteristics selected by these switch settings.

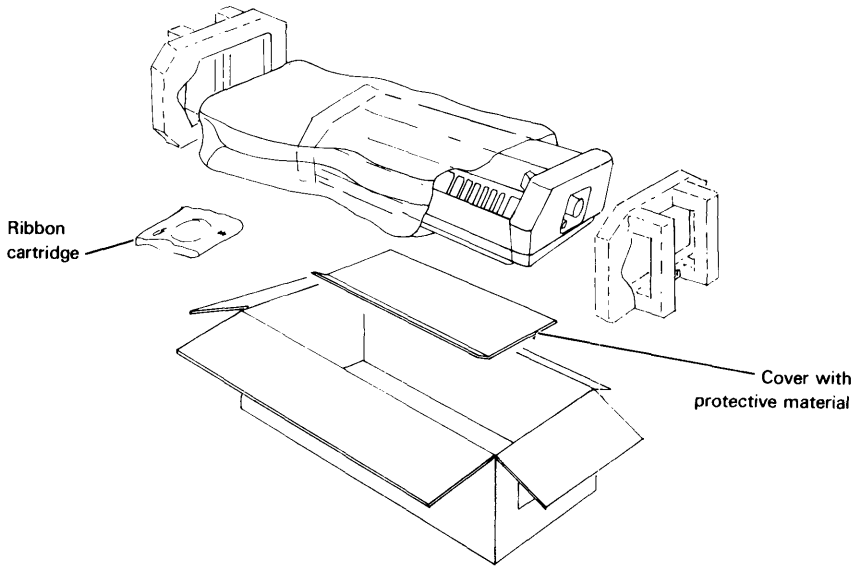
Character set:	US ASCII
Line feed after carriage return:	Disabled
Perforation skipover:	Disabled
Print format (normal or compressed):	Normal

You may want to change these switches on occasion — for example, when you want to change paper or print formats. The *DESKTOP GENERATION Peripherals Operator's Guide* or the manual shipped with your printer tells you how to change your printer's switch settings.

Unpacking and Inspecting Your Printer

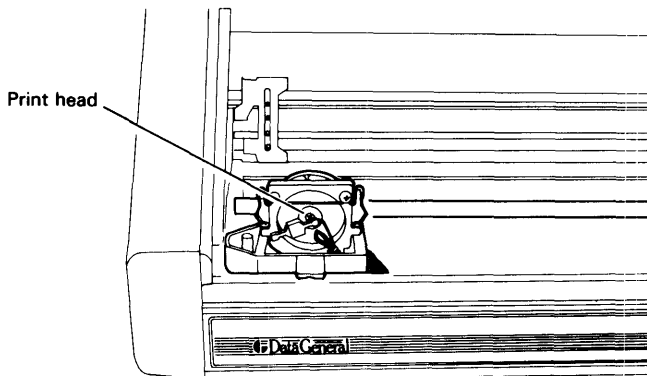
Take the following steps to unpack and inspect your printer.

1. Open the shipping carton and remove the printer and other items.



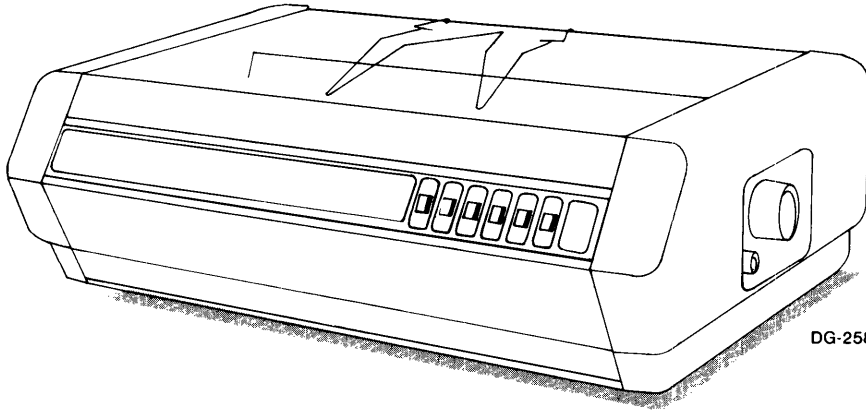
DG-25693

2. Remove all protective padding and print head tie-downs.



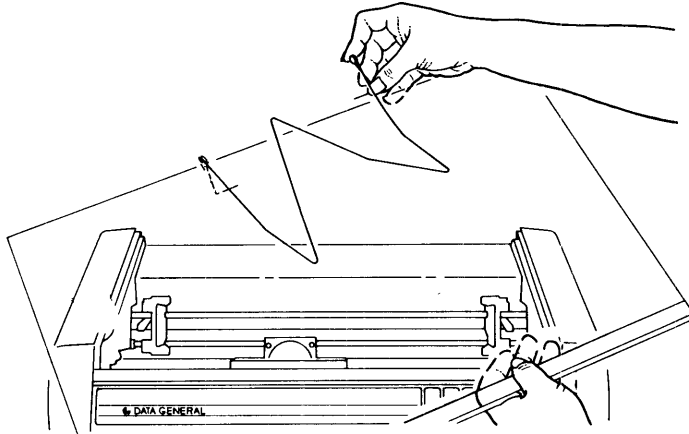
DG-26120

This chapter tells you how to unpack, inspect, and connect your Model 4433 data processing dot matrix printer.



DG-25871

6. Remove the protective material from the cover and install the anti-static clip.



DG-25699

7. Attach the model number tag (from the blister pack on the side of the shipping carton) to the center of the printer's rear panel.
8. Enter information about your printer on the system configuration sheet.

Configuring Your Printer

Printer characteristics are determined by two sets of switches, one inside the printer and the other on the printer's rear panel. The switches inside the printer are the *operating switches*: they set operating characteristics such as character set and print appearance. The switches on the printer's rear panel are the *serial interface switches*: they set data transmission characteristics such as baud rate and parity.

These switches are set at the factory to the values required for a printer in a standard DESKTOP GENERATION system that uses a Data General operating system.

main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special equipment.) You will find general electrical requirements for your system in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you to install the printer in your computer system.

Electrical Specifications

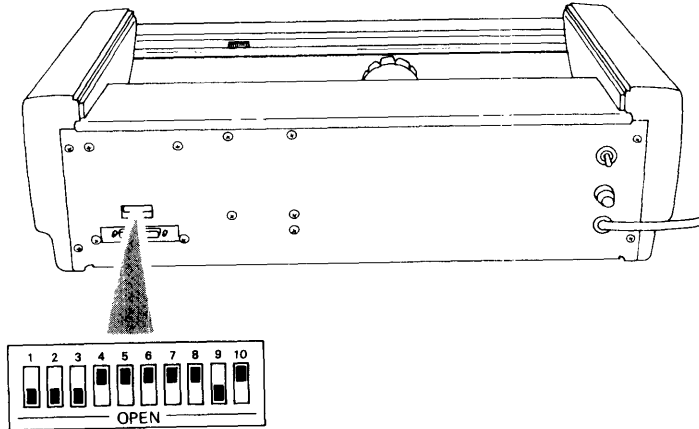
Power type	120 V	220 V	240V
Voltage range	102-132 V	187-242 V	204-264 V
Line frequency	59.4-60.6 Hz	45.5-50.5 Hz	45.5-50.5 Hz
Current (maximum)	1.8 A	0.9 A	0.9 A
Inrush surge (maximum)	13 A	7 A	7 A
Power cord	7.5 ft (2.25m)	None supplied	None supplied

Mechanical Specifications

Height:	7 in	(17.8 cm)
Depth:	14 in	(35.5 cm)
Width:	24 in	(61.0 cm)
Weight:	35 lbs	(15.9 kg)

Serial Interface Switches

The serial interface switches are set at the factory as shown below.



DG-26477

The following table shows the characteristics selected by these switch settings.

Baud rate:	9600
Parity:	None
Number data bits:	8 bits
Software busy:	Enabled
Error handling procedure:	? substituted for incorrect character

We advise against changing these switch settings unless you are using the printer in a custom application or with a non-Data General operating system that requires different characteristics. If you must change the values, refer to *Enhanced 150 CPS Dot Matrix Printer User's Manual* (DGC no. 014-000728), which was shipped with your printer.

Installing Your Printer

You install the printer in your system by connecting it to the printed circuit card which controls it. Depending on the model, the printer is controlled by a line on a USAM card, a 4207 card, or the SPU 1 card. The table below lists the models with the cards that can control the printer, the location of the card, and the adapter cable for each card.

Refer to this table before installing your printer.

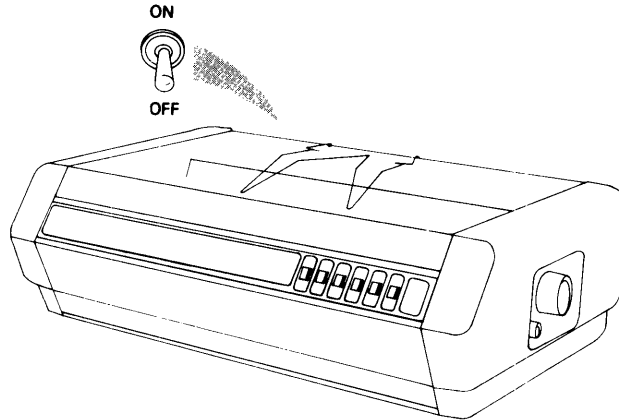
Models	Card	Card Location	Adapter Cable
All	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
Model 20 and 30	4207	CPU logic or logic expansion, I/O slot	005-021148
Model 10 and 10/SP	SPU 1 (printer port)	CPU logic, slot 1	005-021148

NOTE *If you are adding a printer to a previously installed system without a USAM line or Model 10 and 10/SP printer port available, you must add a card to your system. You can add a 4207 card (Model 20 and 30 systems only) or a USAM card. Install this card before connecting the printer, using information in the system installation manuals.*

Take the following steps to install your printer, keeping a small Phillips screwdriver and a small flat screwdriver handy. If you are removing the printer from your system, follow these steps in reverse.

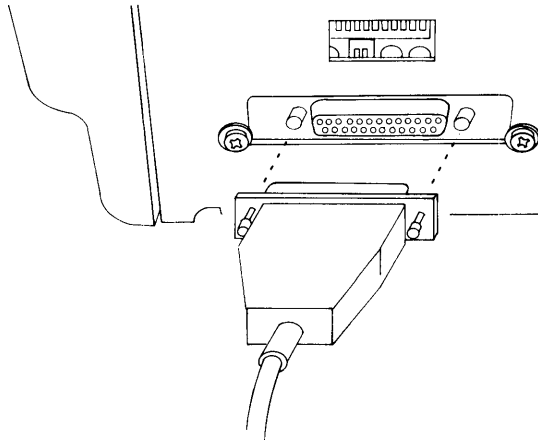
1. Turn off the computer.

2. Make sure the printer is turned off.



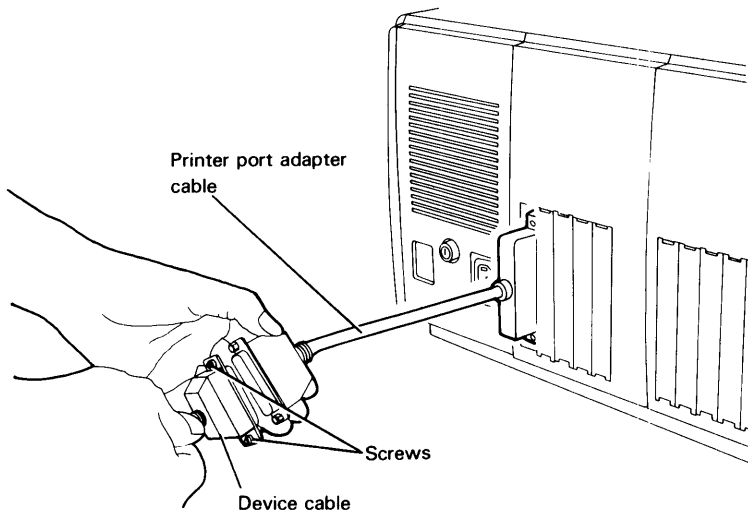
DG-25736

3. Plug the printer's device cable into the cable connector behind the printer. Tighten the two screws that hold the device cable in place.



DG-25706

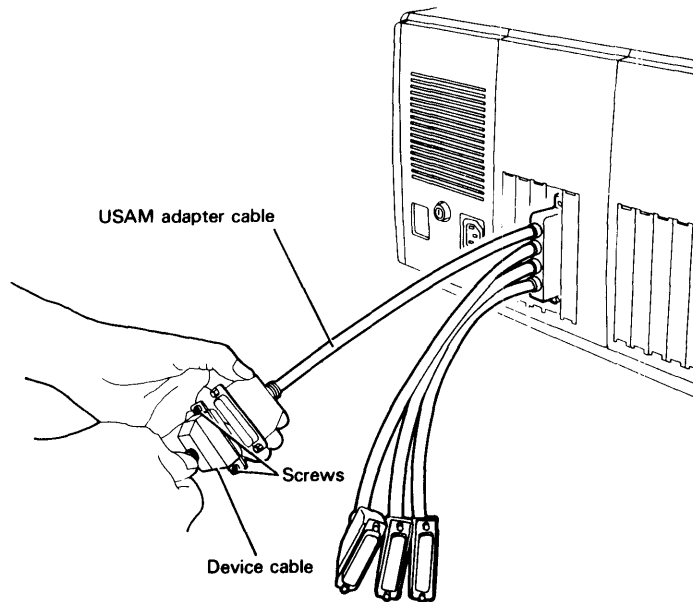
4. To connect the printer on the Model 10 and 10/SP printer port, plug the other end of the printer's device cable into the connector for the printer port adapter cable. Tighten the two screws that hold the cables in place.



DG-26189

5. Locate the adapter cable connector for the USAM line card (or 4207) that controls the printer and connect it to the other end of the printer's device cable. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.)

NOTE *If you do not remember which line of the USAM card controls the printer, check the installation sheet for connecting peripherals.*



DG-26155

6. Plug the power cord into an ac outlet.

The Next Step

If your system includes any other devices such as a plotter, connect them with the help of the chapters ahead. After installing your system, turn to your **DESKTOP GENERATION Systems Operator's Guide** to verify your system's operation with diagnostic software.

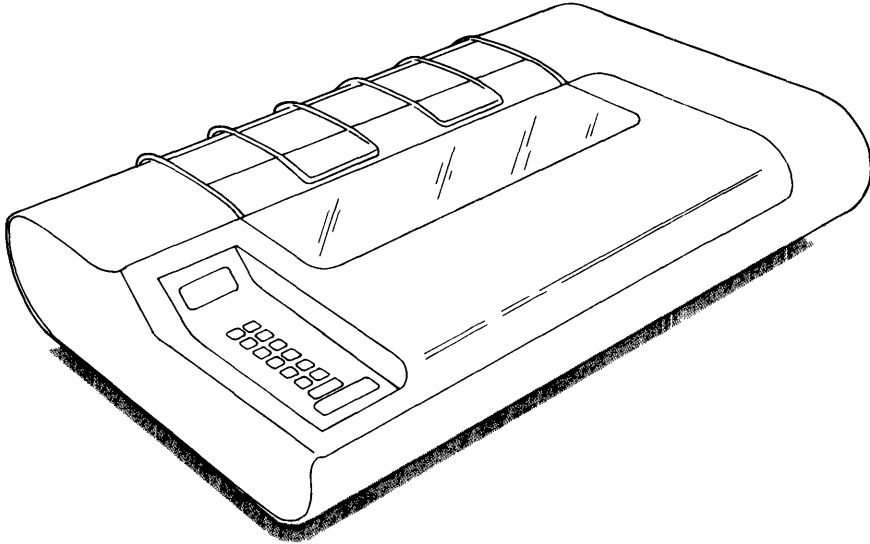
If you have any questions about the operation of the devices in your system, refer to the **DESKTOP GENERATION Peripherals Operator's Guide** or to the manual shipped with the device.



9

**Model 6215 Data
Processing Dot Matrix
Printer**

This chapter tells you how to unpack, and connect your Model 6215 data processing dot matrix printer.



DG-26475

Getting Started

Before you unpack your printer, a review of the site you have chosen for it will help to ensure that it operates correctly. The temperature of your site should stay within 50 and 100 degrees F (10 and 38 degrees C). Relative humidity should be between 20 and 80 percent.

Install your printer in a space approximately 27 by 20 in. (68.6 by 50.8 cm). These dimensions permit access to all printer controls and power and device cables. Allow a 20 in. (50.8 in. cm) access area above the printer for ventilation.

You can install the printer on a level work surface such as a sturdy desk or table top or on the (optional) pedestal assembly.

You should place the printer within 25 ft (7.5 m) of your computer in order to connect it with the standard-length device cable. The printer should also be within 7.5 ft (2.25 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source.

WARNING *To prevent injury to yourself or damage to the printer, use only a three-pronged ac receptacle for ac power.*

The printer requires that ac voltage, current, and line frequency be within a certain range for correct operation and reliability. Your main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special equipment.) You will find general electrical requirements for your system in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you to install the printer in your computer system.

Electrical Specifications

Power type	100 V	120 V,	220/240 V
Voltage range	90-110 V	102-132 V	187-264 V
Line frequency	50/60 Hz	60 Hz	50 Hz
Current (maximum)	2.4 A	2 A	1.4 A @ 220 V 1 A @ 240 V
Inrush surge (maximum)	7.5 A	12 A	7 A
Power cord	7.5 ft (2.25 m)	7.5 ft (2.25 m)	None supplied

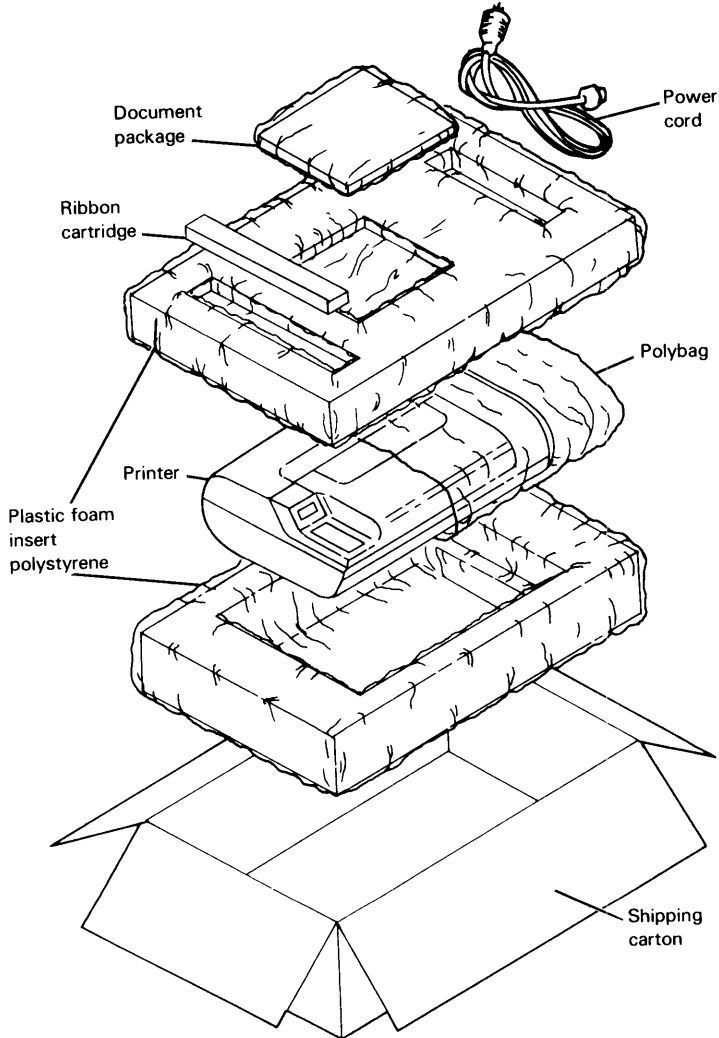
Mechanical Specifications

Height:	7.7 in	(17.8 cm)
Depth:	18.2 in	(35.5 cm)
Width:	27.7 in	(61.0 cm)
Weight:	50 lbs	(22.7 kg)

Unpacking and Inspecting Your Printer

Take the following steps to unpack and inspect your printer.

1. Open the shipping carton and remove the printer and other items.



2. Remove all protective padding.
3. Review the inventory checklist below to make sure you have received all items. You will find some items, such as the device cable, in other cartons. You can find the device cable's part number at the end of this manual under "Cables." The manual supplied with the printer applies to several types of computer systems; for this reason, we recommend that you install, operate, and test the printer using this and other DESKTOP GENERATION manuals written specifically for your system.

Inventory Checklist

- Printer with power cord
- Cover
- Anti-static clip
- Device cable
- Documentation

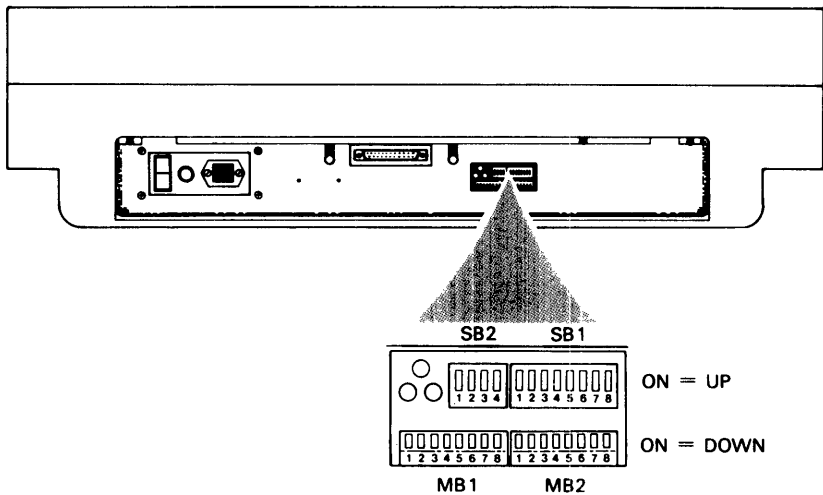
DG-26194

4. Save the cartons and all packing materials to use if you move or must return the printer.
5. Carefully inspect the printer for any visible damage and make sure the print head moves freely in both directions. If the printer appears damaged or contains any loose parts, call your nearest Service Operations Center and report the problem. If you need to return your printer, repack it as shown in the packing diagram.
6. Enter information about your printer on the system configuration sheet.

Configuring Your Printer

Printer characteristics are determined by controls on the front of the printer and two sets of switches on the printer's rear panel. The controls on the front of the printer are the *operating controls*: they set operating conditions such as print character width and self-test mode.

The two sets of switches on the printer's rear panel are the serial interface switches — SB1 and SB2 — and the configuration switches — MB1 and MB2. The serial interface switches set data transmission characteristics such as baud rate and parity; the configuration switches set operating characteristics at power-up.

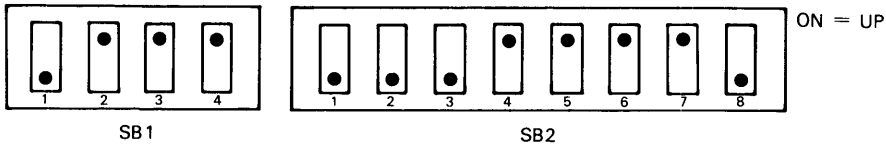


DG-26482

The serial interface and configuration switches are set at the factory to the values required for a printer in a standard DESKTOP GENERATION system that uses a Data General operating system.

Serial Interface Switches

The serial interface switches, SB1 and SB2, are set at the factory as shown below.



DG-26477

The following table shows the characteristics selected for the serial interface.

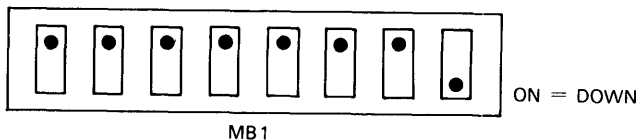
Error handling:	substitute ? for error character
Software busy:	enabled
Baud rate:	9600
Parity:	None
Data bits:	8

We advise against changing these switch settings unless you are using the printer in a custom application or with a non-Data General operating system that requires different characteristics. If you must change the values, refer to *Dot Matrix Printer Models 6215/6216* (DGC no. 014-000732), which was shipped with your printer.

Configuration Switches

The following table shows the printer characteristics selected by the MB1 switch settings. Characteristics you might want to change during normal operation are marked with an asterisk (*).

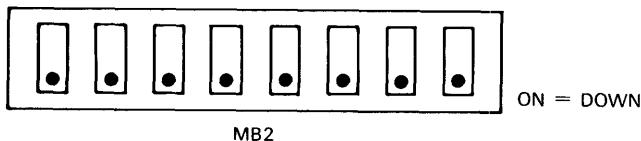
Testing mode:	Off
Power up state:	Off-line
Lines per inch (LPI)*:	6
Form length*:	12 inches
Software error trap:	Enabled
Characters per line (CPL)*:	136
Bottom margin:	Equal to form length
Data bits:	8



DG-26479

To change the switch settings check the user's manual shipped with the system, *Dot Matrix Printer Models 6215/6216*, (DGC 014-000732).

The MB2 switch selects the main and alternate character sets. The default value is the USA character set: all switches ON (down). If you would like to select another character set, check the user's manual.



DG-26480

We advise against changing these switch settings unless you are using the printer in a custom application or with a non-Data General operating system that requires different characteristics. If you must change the values, refer to *Dot Matrix Printer Models 6215/6216* (DGC no. 014-000732), which was shipped with your printer.

Installing Your Printer

You install the printer in your system by connecting it to the printed circuit card which controls it. Depending on the model, the printer is controlled by a line on a USAM card, a 4207 card, or the SPU 1 card. The table below lists the models with the cards that can control the printer, the location of the card, and the adapter cable for each card.

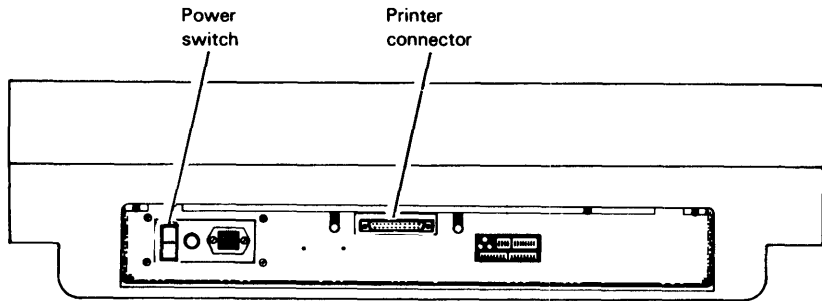
Refer to this table before installing your printer.

Models	Card	Card Location	Adapter Cable
All	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
Model 20 and 30	4207	CPU logic or logic expansion, I/O slot	005-021148
Model 10 and 10/SP	SPU 1 (printer port)	CPU logic, slot 1	005-021148

NOTE *If you are adding a printer to a previously installed system with a device already on the Model 10 and 10/SP printer port and without an available USAM card, you must add a card to your system. You can add a 4207 card (Model 20 and 30 systems only) or a USAM card. Install this card before connecting the printer, using information in the system installation manual.*

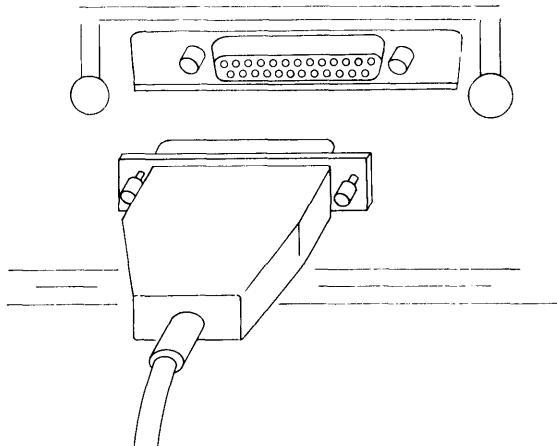
Take the following steps to install your printer, keeping a small Phillips screwdriver and a small flat screwdriver handy. If you are removing the printer from your system, follow these steps in reverse.

1. Turn off the computer.
2. Make sure the printer is turned off.



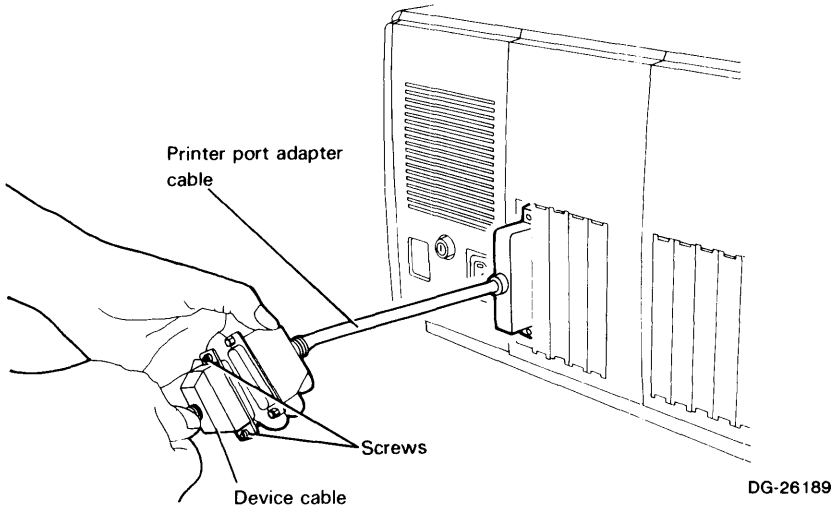
DG-26483

3. Plug the printer's device cable into the cable connector behind the printer. Tighten the two screws that hold the device cable in place.



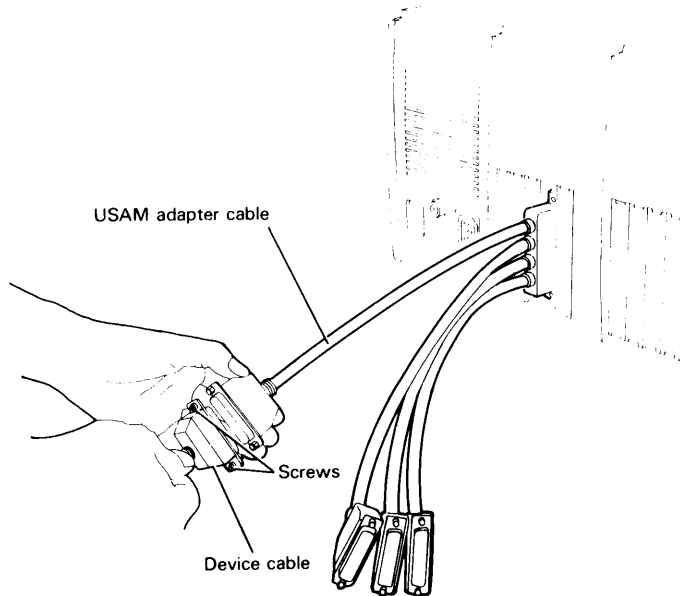
DG-26481

4. To connect the printer on the Model 10 and 10/SP printer port, plug the other end of the printer's device cable into the connector for the printer port adapter cable. Tighten the two screws that hold the cables in place.



5. To connect the printer on a USAM line (or 4207 card), locate the adapter cable connector for the line that controls the printer and connect it to the other end of the printer's device cable. Tighten the two screws that hold the cables in place.

NOTE *If you do not remember which line of the USAM card controls the printer, check the installation sheet on connecting peripherals.*



DG-26155

6. Plug the power cord into an ac outlet.

The Next Step

If your system includes any other devices such as a plotter, connect them with the help of the chapters ahead. After installing your system, turn to your *DESKTOP GENERATION Systems Operator's Guide* to verify your system's operation with diagnostic software.

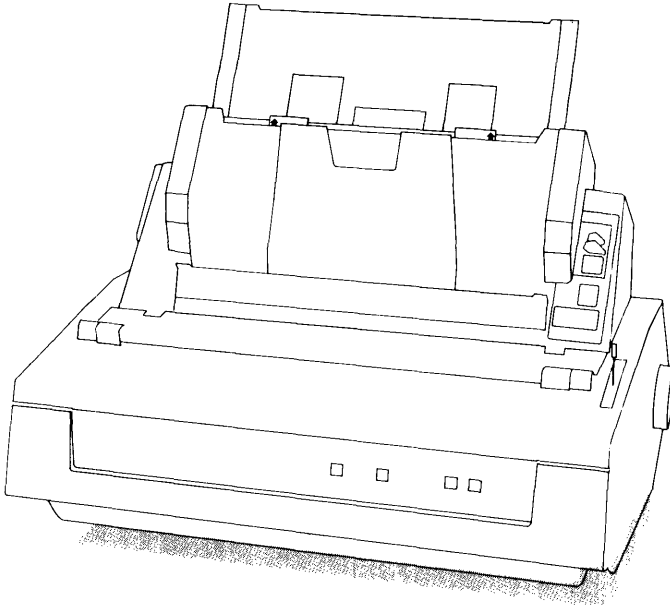
If you have any questions about the operation of the devices in your system, refer to the *DESKTOP GENERATION Peripherals Operator's Guide* or to the manual shipped with the device.



10

**Model 4518 Letter-Quality
Printer**

This chapter tells you how to unpack, inspect, configure, and connect your Model 4518 letter-quality printer and any of the forms handling options — cut sheet guide, single or dual-bin cut sheet feeder, bidirectional forms tractor, or envelope adapter — that make paper handling easier.



DG-25526

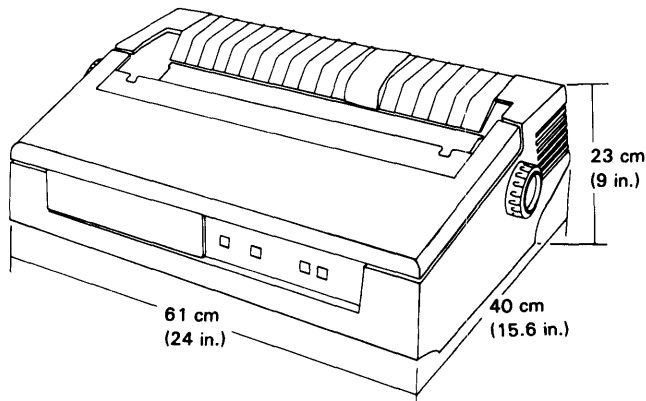
Getting Started

Install the printer in a clean, dust-free environment on a sturdy table or surface capable of supporting at least 50 lbs. If you use the bidirectional forms tractor option, place the printer on the edge of the surface to permit proper paper handling.

Before you unpack your printer, a review of the site you have chosen for it will help to ensure that it operates correctly. The temperature of your site should stay within 50 and 100 degrees F (10 and 38 degrees C). Relative humidity should be between 20 and 80 percent.

Remember that the printer emits some noise during operation, so you should avoid installing it in an area where its sound would be disturbing.

Your letter-quality printer does not need much space beyond its own dimensions and those of any forms handling option. You should allow a 20 in. (51 cm) access area around and above the printer and forms handling option for ventilation, power and device cables, and routine maintenance.



DG-25760

You will need to place your printer within 50 ft (15.2 m) of your computer to connect it with the standard-length device cable. You will also need to place the printer within 6 ft (2 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source.

WARNING *To prevent injury to yourself or damage to the printer, use only a three-pronged ac receptacle for ac power.*

The printer requires that ac voltage, current, and line frequency be within a certain range for correct operation and reliability. Your main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special equipment.) You will find general electrical requirements for your system in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you to install the printer in your computer system.

Electrical Specifications

Power type	100 V	120 V	220/240 V
Voltage range	90-110 V	105-130 V	205-250 V
Line frequency	47-63 Hz	47-63 Hz	47-63 Hz
Current (maximum)	1.3 A	1.3 A	0.7 mA
Power consumed (maximum)	170 W	170 W	170 W
Inrush surge (maximum)	24 A	24 A	24 A
Power cord	7.5 ft	7.5 ft	7.5 ft

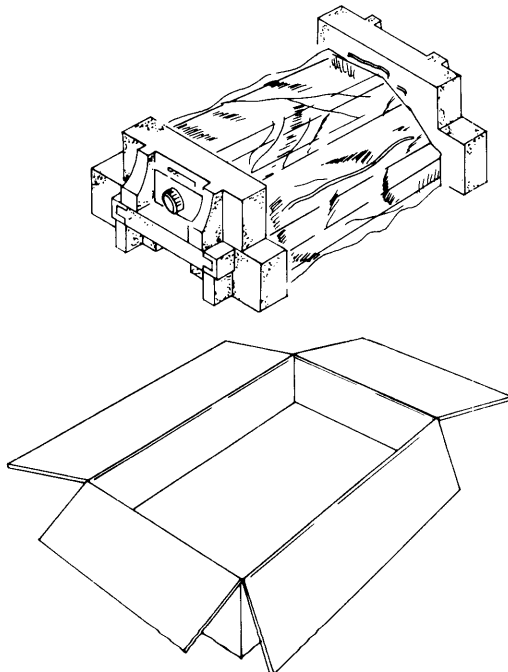
Mechanical Specifications

Height:	9 in	(23 cm)	without forms options
	14 in	(34 cm)	with cut sheet guide
	16 in	(41 cm)	with single cut sheet feeder
	19 in	(48 cm)	with dual cut sheet feeder
Width:	14 in	(34 cm)	with bidirectional forms tractor
	24 in	(61 cm)	with or without forms option
Depth:	15.6 in	(40 cm)	with or without forms option
Weight:	37.4 lbs	(17 kg)	without forms option

Unpacking and Inspecting Your Printer

Take the following steps to unpack and inspect your printer.

1. Open the shipping carton and remove the printer and other items.
2. Gently remove all packing materials.



3. Review the inventory checklist below to make sure you have received all items.

Inventory Checklist

- Cut sheet guide with sensor cable
- Acrylic cover
- Limited warranty card

DG-26198

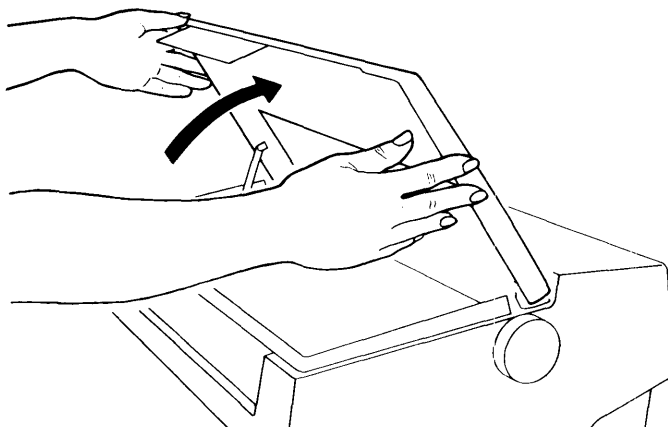
4. Save all materials to use if you move or must return the cut sheet guide.
5. Carefully inspect the cut sheet guide for any visible damage. If parts appear to be missing or damaged, call your Service Operations Center and report the problem.
6. Enter information about the cut sheet guide on your system configuration sheet.

Single or Dual Cut Sheet Feeder

Take the following steps to unpack and inspect the single or dual cut sheet feeder, if you have either of these forms handling options; if not, unpack and inspect any other option or skip ahead to "Configuring Your Printer."

1. Open the shipping cartons and remove the cut sheet feeder and any other items.

6. Remove the restraining tape from the top of the cover.
7. Open the hinged top of the printer's cover by lifting it up at the front.



DG-25557

8. Remove any restraining tape from inside the printer. If any plastic material covers the operator switches, remove it.

CAUTION *You must perform the next step or the printer will not operate properly.*

3. Review the inventory checklist below to make sure you have received all items.

Inventory Checklist

- Single cut sheet feeder
- Dual bin adapter (optional)
- Option cable
- Paper stacker
- Paper hopper
- Main unit cover plate (installed)
- Limited warranty card

DG-26199

4. Save all packing materials to use if you move or must return the cut sheet feeder.
5. Carefully inspect the cut sheet feeder for any visible damage. If parts appear to be missing or damaged, contact your nearest Service Operations Center immediately.
6. Enter information about the cut sheet feeder on your system configuration sheet.

Bidirectional Forms Tractor

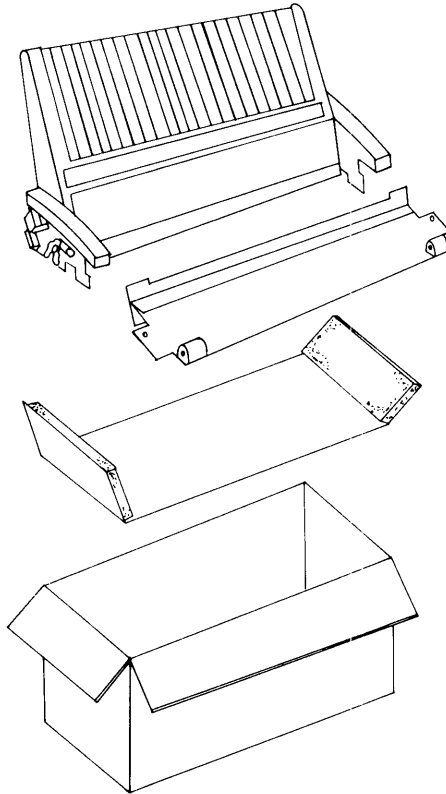
Take the following steps to unpack and inspect the bidirectional forms tractor, if you have this forms handling option; if not, skip ahead to "Configuring Your Printer."

1. Open the shipping carton and remove the bidirectional forms tractor and any other items.

Cut Sheet Guide

Take the following steps to unpack and inspect the cut sheet guide, if you have this forms handling option; if not, unpack and inspect any other option or skip ahead to "Configuring Your Printer."

1. Open the shipping carton and remove the cut sheet guide and any other items.
2. Gently remove any packing materials.



3. Review the inventory checklist below to make sure you have received all items. You will find some items, such as the device cable, in other cartons. The device cable's part number is at the end of this manual under "Cables." The manuals supplied with the printer apply to many different types of computer systems; for this reason, we recommend that you install, operate, and test the printer using this and other DESKTOP GENERATION books written specifically for your system.

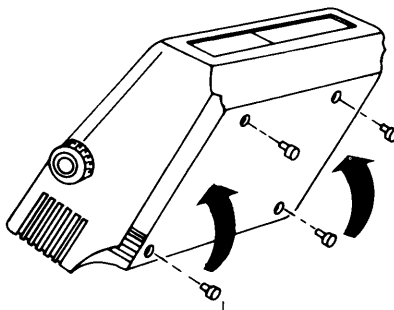
Inventory Checklist

- Printer
- Acrylic cover
- Ribbon cartridge
- Print thimble
- Power cord
- Device cable
- Documentation

DG-26196

4. Tilt the printer up on its back to expose the base. Keep one hand on it to prevent it from falling.

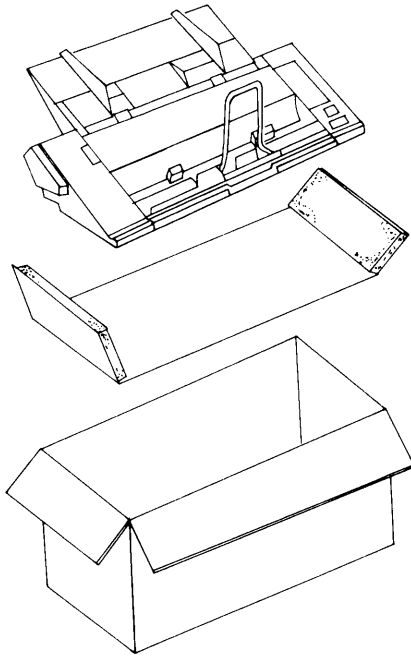
5. Remove four shipping screws and spacers by turning them counterclockwise.



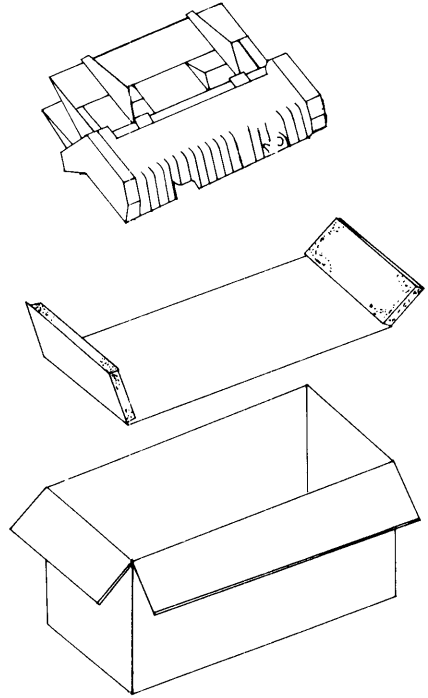
DG-25768

2. Gently remove any packing materials.

Single cut sheet feeder



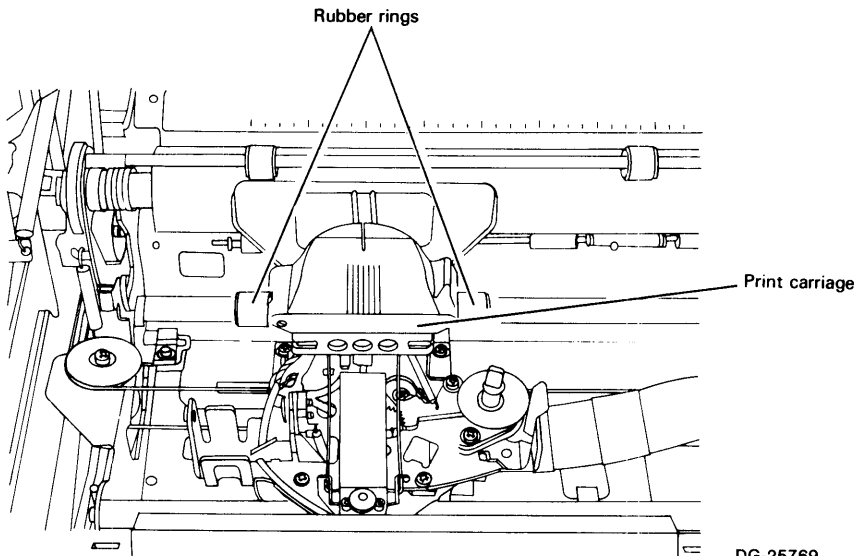
Dual bin adapter



Note: The paper hopper is shown installed.

DG-25800

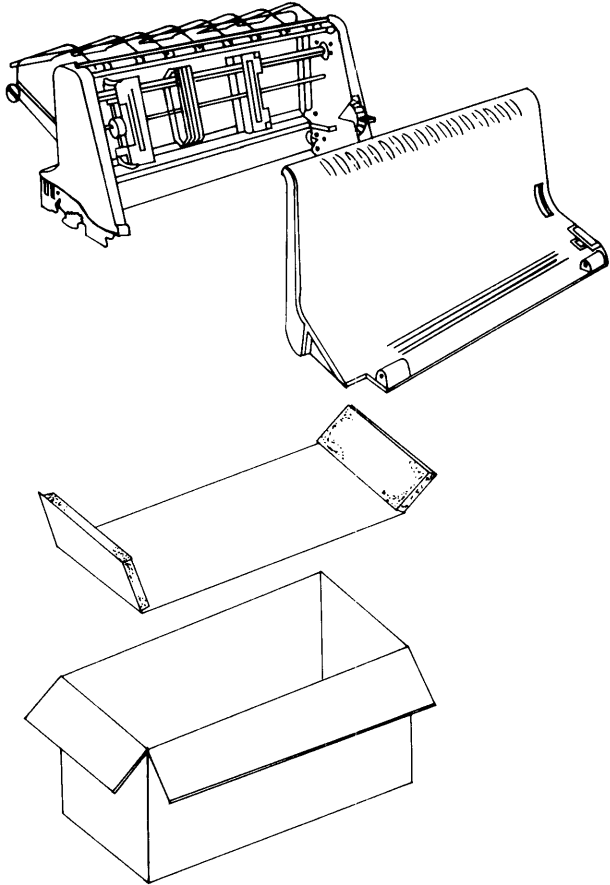
9. Remove the two rubber rings holding the print carriage in place.



DG-25769

10. Save the cartons and all packing materials to use if you move or must return your printer.
11. Carefully inspect the printer for any visible damage. If the printer appears damaged or contains any loose parts, call your nearest Service Operations Center and report the problem. If you need to return your printer, repack it as shown in the packing diagram.
12. Enter information about your printer on the system configuration sheet.

2. Gently remove any packing materials.



DG-25819

3. Review the inventory checklist below to make sure you have received all items.

Inventory Checklist

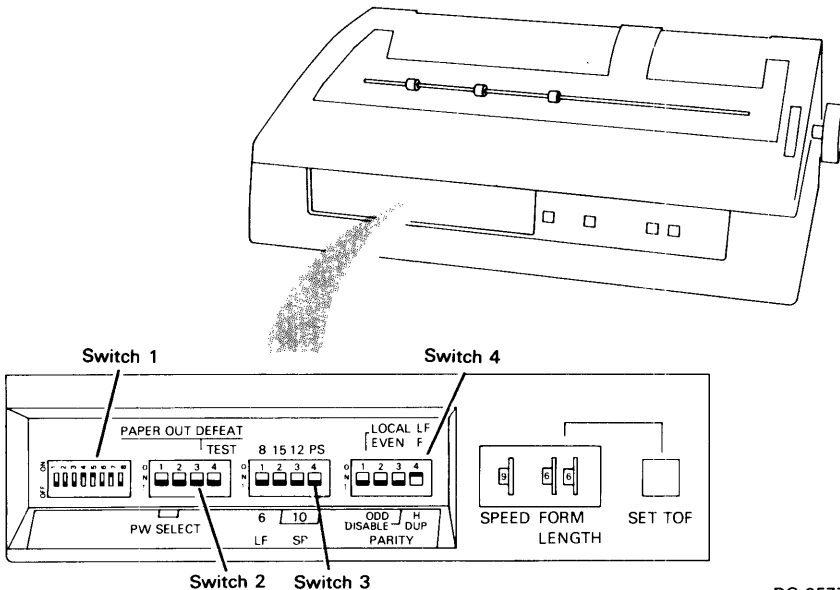
- Bidirectional forms tractor
- Silencer hood

DG-26200

4. Save all packing materials to use if you move or must return the bidirectional forms tractor.
5. Carefully inspect the bidirectional forms tractor for any visible damage. If parts appear to be missing or damaged, contact your nearest Service Operations Center.
6. Enter information about the bidirectional forms tractor on your system configuration sheet.

Configuring Your Printer

Printer characteristics such as data transmission rates and operating status are selected by switches on the printer's front panel. These switches are set at the factory to the values required for a printer in a standard DESKTOP GENERATION system using a Data General operating system. Make sure the switches are set as shown below.



The following table shows the characteristics selected by these switch settings.

Switch 1

Power-up state:	On-line
Form feed:	Form feed on form feed switch
Horizontal tabs:	Individual tabs cleared
Carriage return:	Auto carriage return
Protocol:	XON/XOFF protocol
Alarm:	Break on alarm
Form length switch:	Ignore form length switch
Operation mode:	Normal

Switch 2

Print type:	Constant pitch (10/12/15)
Paper out conditions:	Paper sensing enabled
Self-test mode:	Self-test enabled

Switch 3

Lines per inch:	6
Characters per inch:	10

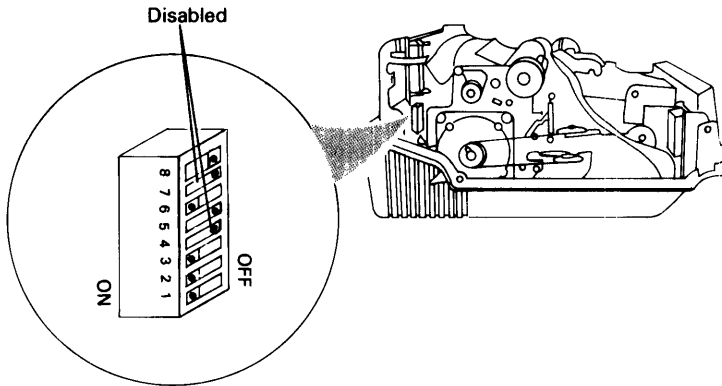
Switch 4

Line feed switch:	Enabled
Parity:	Parity off, mark
Transmission:	Full duplex

Speed Switch

Baud rate:	9600
------------	------

The printer's PC card also contains switches whose values are set at the factory.



DG-26914

The following table shows the characteristics selected by these switch settings.

Data Set Ready signal:	Enabled
Clear to Send signal:	Enabled
DCD signal (modem):	Disabled
Reverse Channel:	Disabled
Loopback test:	Disabled
2K buffer:	Enabled
Not used:	Disabled
Hammer drive:	Enabled

We advise against changing the switch settings on the operator panel and PC card — especially the data transmission characteristics — unless you are using the printer in a custom application or with a non-Data General operating system. On occasion, you may need to change some of the switches on the operator panel — for example, when you run the printer's self-test, change paper, or change print thimbles. Instructions for changing operator switch settings can be found in the *DESKTOP GENERATION Peripherals Operator's Guide* or the manual shipped with the printer.

If you must change other printer characteristics — those of data transmission and others not routinely changed while operating the printer — refer to the documentation shipped with the printer.

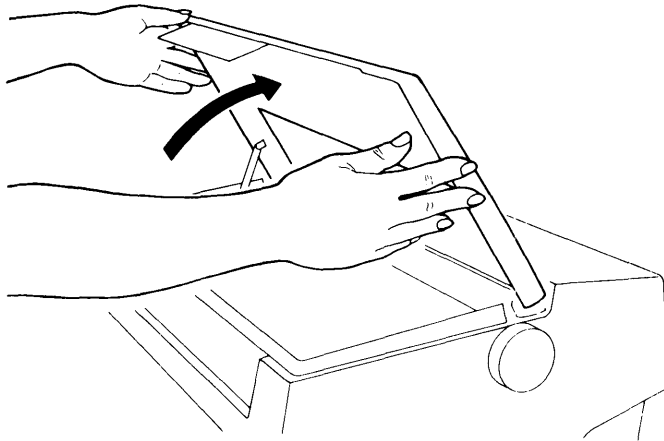
Installing Your Printer

The procedures ahead guide you through installing a print thimble, inserting a ribbon cartridge, and connecting your printer to the rest of the system. Later sections explain how to install any forms handling option(s) you may have ordered.

Print Thimble

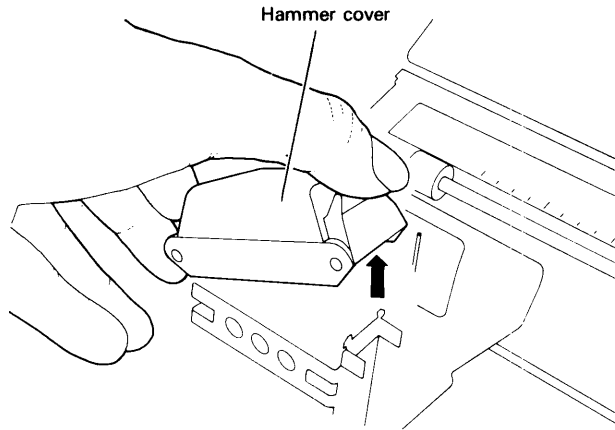
Take the following steps to install the print thimble.

1. Raise the hinged part of the printer's cover.



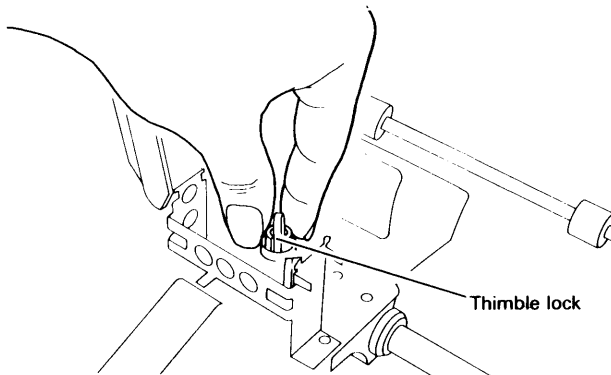
DG-25557

2. Gently lift open the hammer cover, which is hinged on the left side.



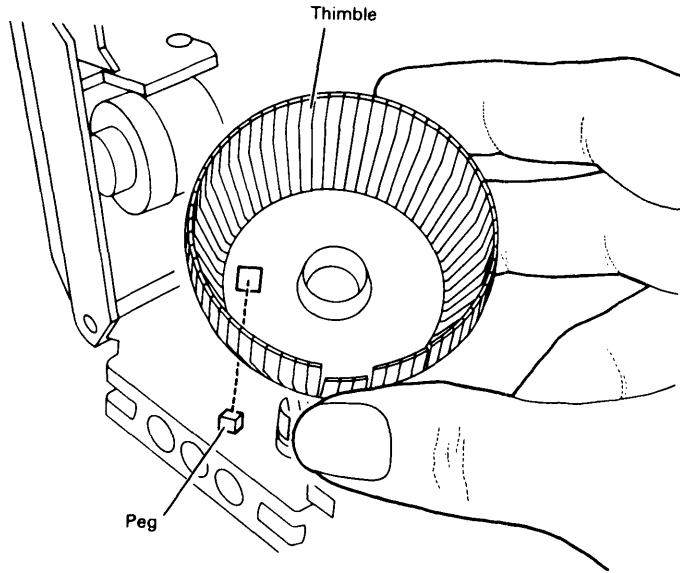
DG-25779

3. Slide the thimble lock to one side and lift it up to a vertical position.



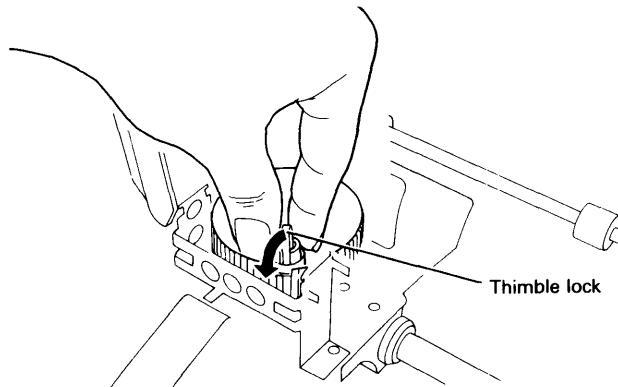
DG-25780

4. Align the square hole in the bottom of the thimble with the square peg on the thimble holder. Slip the thimble over the thimble lock.



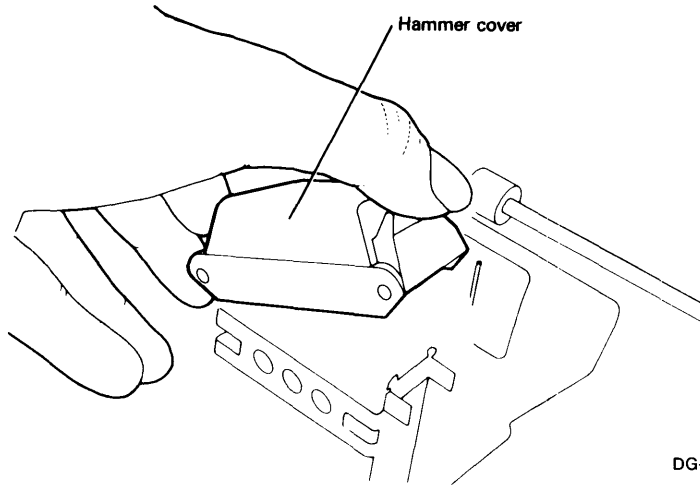
DG-25572

5. Gently press down on the thimble to make sure it is in place. Then lay the thimble lock flat and slide it back into its original position.



DG-25781

6. Lower the hammer cover and snap it closed.



DG-25574

Print thimbles produce characters in densities of 10, 12, or 15 characters per inch (CPI) or use proportional spacing (PS). The manual shipped with the printer tells you how to set the switches on the printer's front panel according to the type of print thimble you install.

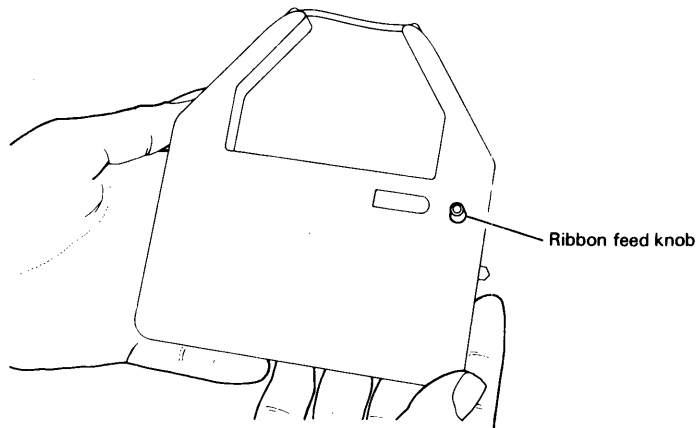
Ribbon Cartridge

The letter-quality printer accepts either a fabric ribbon or multistrike film cartridge. You install both in the same way. For more information on both types of ribbon cartridges, along with instructions for loading paper and operating the printer, see the manual shipped with the printer.

Take the following steps to load the ribbon cartridge.

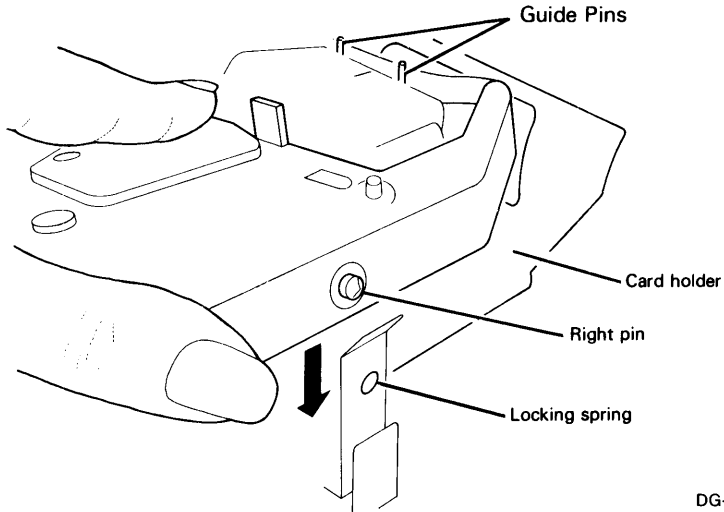
1. Turn the ribbon feed knob in the direction indicated on the cartridge to put tension on the ribbon.

CAUTION *Do not turn the knob in the opposite direction; to do so destroys the internal winding mechanism of the ribbon.*



2. Insert the pin on the left side of the ribbon cartridge into the hole on the left side of the cartridge frame. Then insert the right pin into the locking spring, snapping the cartridge into place. Make sure that the ribbon rests between the two guide pins and the card holder.

NOTE If you have difficulty snapping the cartridge into place, turn the ribbon feed knob a little further in the direction indicated on the ribbon cartridge. In any case, you should turn the ribbon feed knob after inserting the cartridge to put tension on the ribbon.



DG-25566

3. Close the printer cover's hinged top.

Connecting the Printer

You install the printer in your system by connecting it to the printed circuit card that controls it. Depending on the model, the printer is controlled by a line on a USAM card, a 4207 card, or the SPU 1 card. The table below lists the models with the cards that can control the printer, the location of the card, and the adapter cable for each card.

Refer to this table before installing your printer.

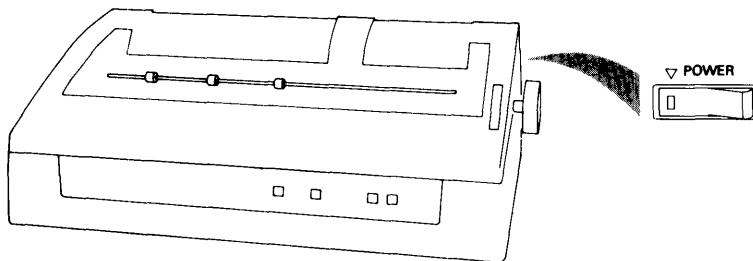
Function	Card	Card Location	Adapter Cable
All	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
Model 20 and 30	4207	CPU logic or logic expansion, I/O slot	005-021148
Model 10 and 10/SP	SPU 1 (printer port)	CPU logic, slot 1	005-021148

NOTE *If you are adding a printer to a previously installed system without a USAM line or Model 10 and 10/SP printer port available, you must add a card to your system. You can add a 4207 card (Model 20 and 30 systems only) or a USAM card. Install this card as described the DESKTOP GENERATION Systems Installation Guide before connecting the printer.*

Take the following steps to connect your printer, keeping a small Phillips screwdriver and a small flat screwdriver handy. If you are removing the printer from your system, follow these steps in reverse.

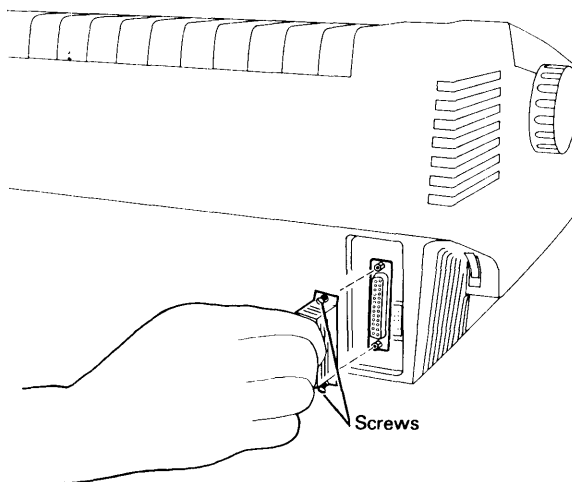
1. Turn off the computer.

2. Make sure the printer is turned off.



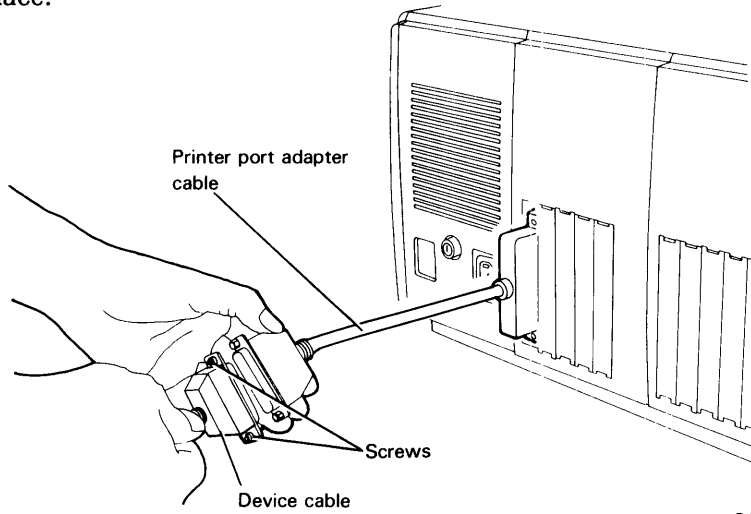
DG-25524

3. Plug the printer's device cable into the connector behind the printer. Tighten the two screws that hold the cable in place.



DG-25786

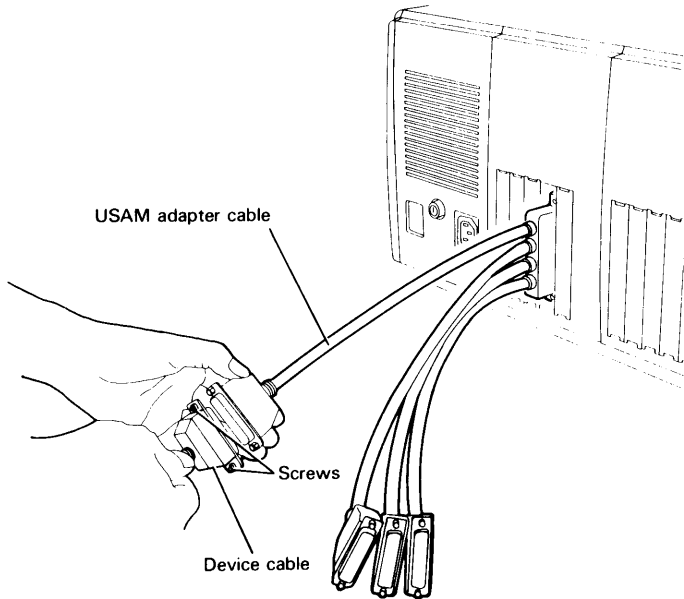
4. To connect the printer on the Model 10 and 10/SP printer port, plug one end of the printer's device cable into the connector for the printer port adapter cable. Tighten the two screws that hold the cables in place.



DG-26189

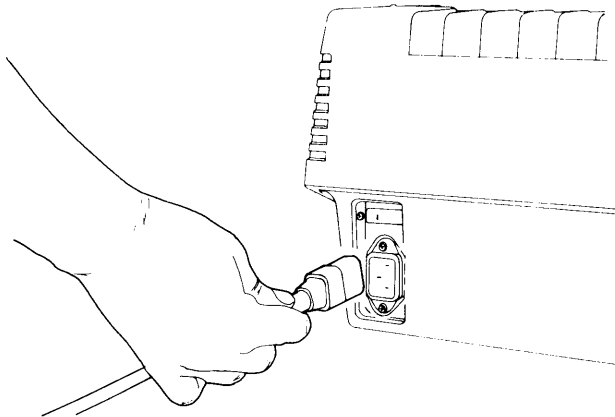
5. To connect the printer to a USAM line (or 4207 card) locate the adapter cable for the line that controls the printer and plug it into the other end of the printer's device cable. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.)

NOTE *If you do not remember which line of the USAM card controls the printer, check the installation sheet for connecting peripherals.*



DG-26155

6. Plug one end of the power cord into the ac connector on the back of the printer.



DG-25788

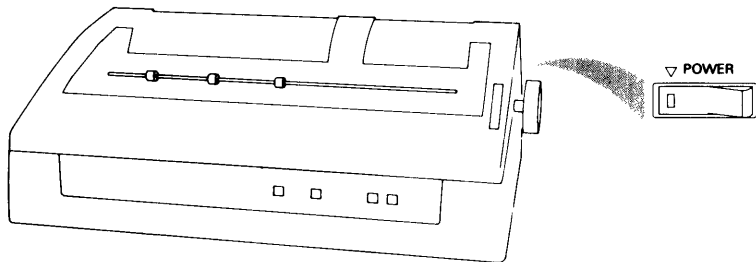
7. Plug the other end of the power cord into an ac outlet.
8. If your printer includes one or more forms handling options, install them with the help of the instructions ahead. Otherwise, skip to the end of the chapter and read "The Next Step."

Installing the Cut Sheet Guide

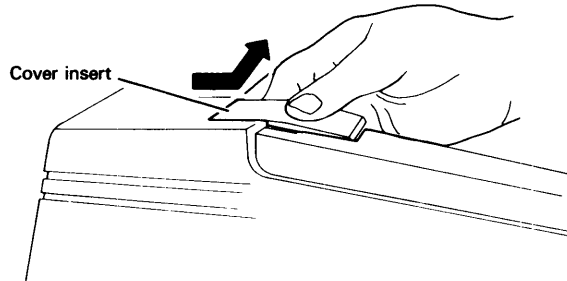
The cut sheet guide allows you to load, print, and eject a single cut sheet of paper automatically. The cut sheet guide also monitors the paper supply. It indicates a paper out condition by sounding the Paper Out buzzer on the printer's front control panel.

Take the following steps to install the cut sheet guide if you have this forms handling option; otherwise, continue to install other options or skip ahead to "The Next Step."

1. Turn off the printer.

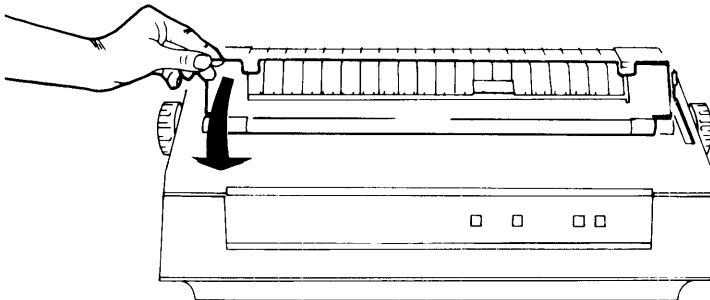


2. If your letter-quality printer has two cover inserts installed, remove them by grasping them on the inside bottom edge and pulling them gently sideways away from the printer cover.



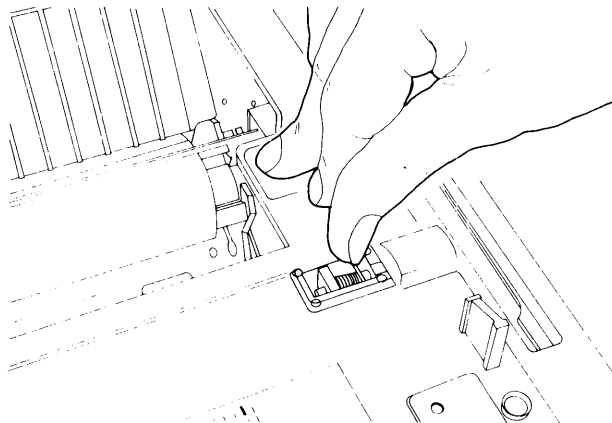
DG-25792

3. Open the printer's acrylic cover.



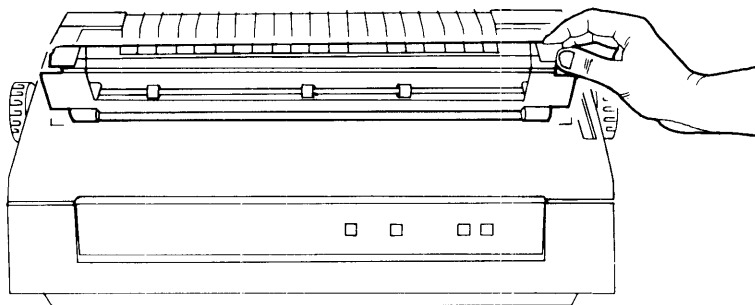
DG-25793

4. Slide the hinge pin in the right corner of the printer's acrylic cover to the left and remove the acrylic cover.



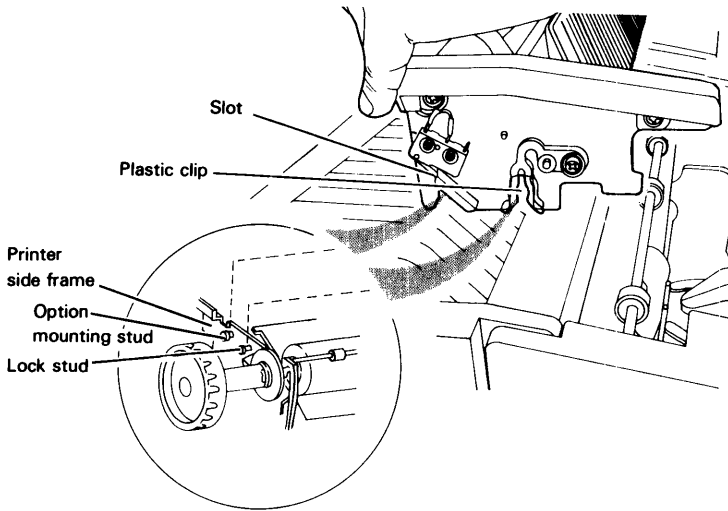
DG-25794

5. Install the cut sheet guide's acrylic cover on the printer by reversing the procedure in the step 4. Leave the cover open.



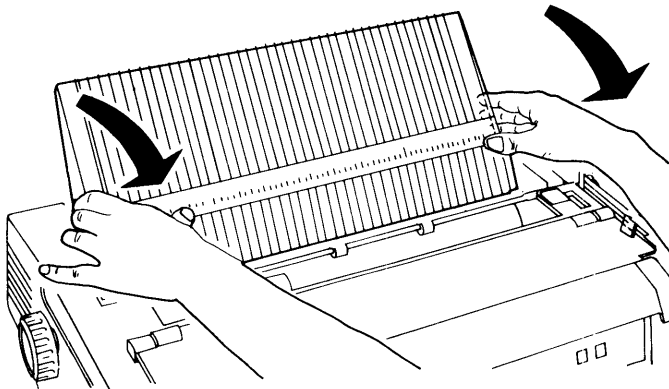
DG-25795

6. Hold both sides of the cut sheet guide and fit the slot in the cut sheet guide frames onto the option mounting studs on the printer side frames.



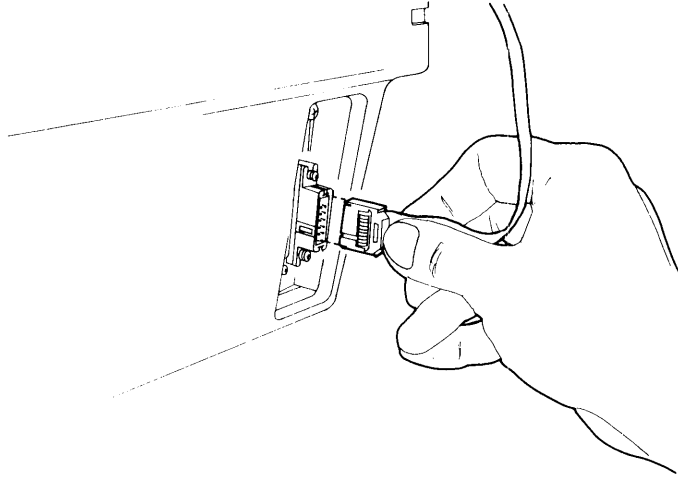
DG-25796

7. Push down on the guide to clamp it into place. The plastic clips fit onto the lock stud on the printer's side frame.



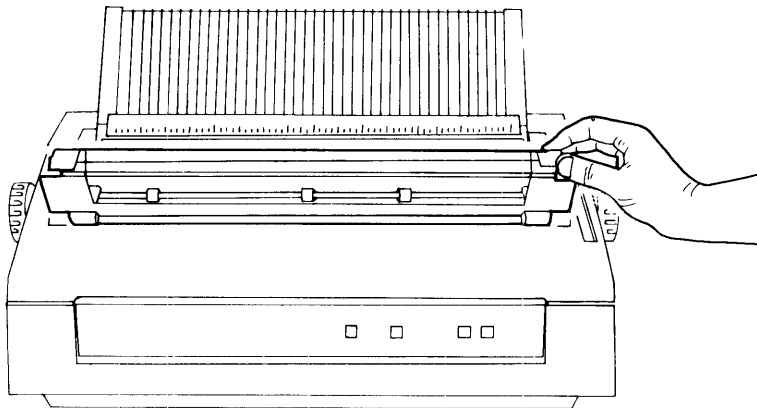
DG-25797

8. Connect the paper out sensing cable to the back of the printer.



DG-25798

9. Close the cut sheet guide's acrylic cover.

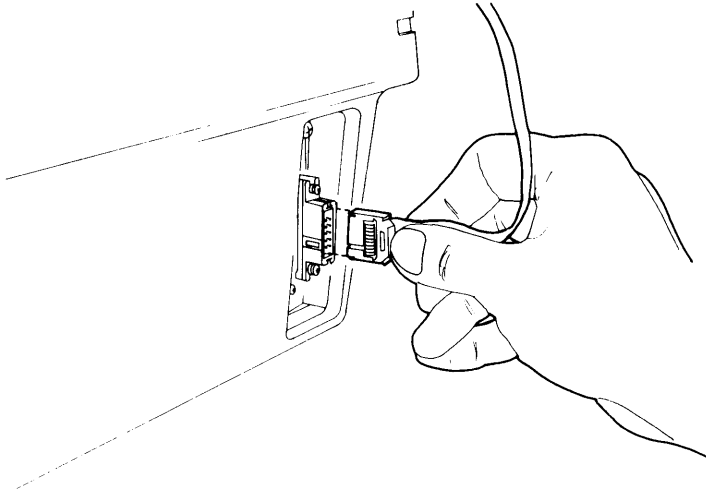


DG-25799

Removing the Cut Sheet Guide

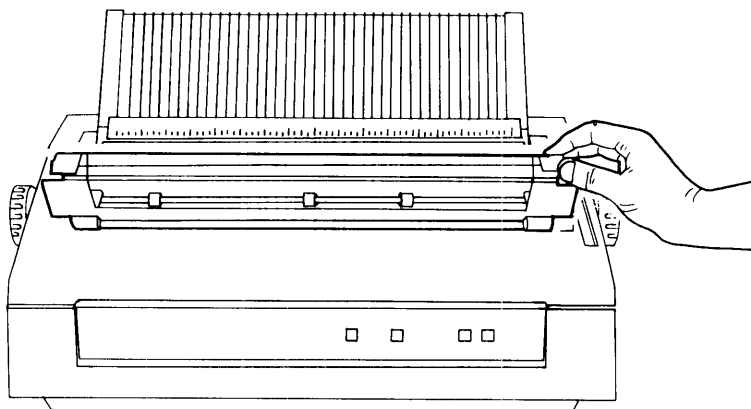
Take the following steps when removing the cut sheet guide from your printer.

1. Disconnect the paper out sensing cable from the back of the printer.



DG-25798

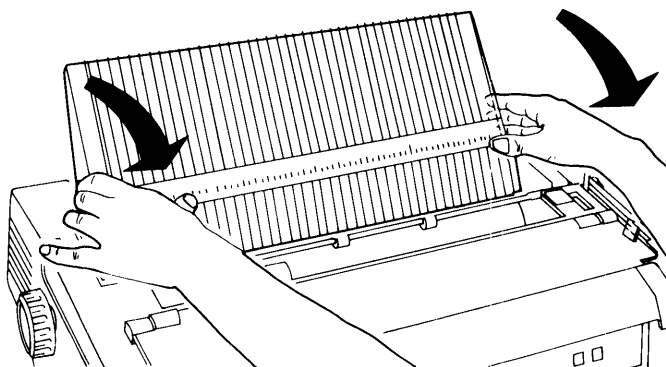
2. Open the acrylic cover.



DG-25799

CAUTION *Never try to remove the cut sheet guide by forcing it upwards or from side to side.*

3. Grasp both sides of the cut sheet guide's paper tray and rotate the whole unit forward to remove it.



DG-25797

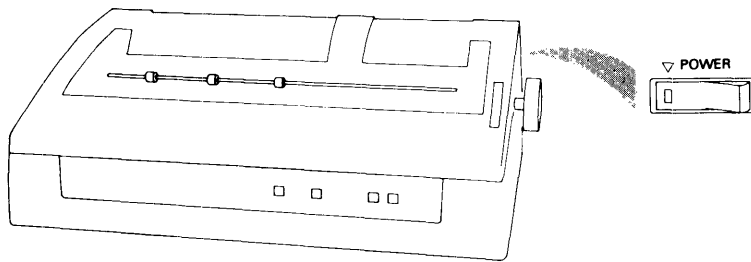
Installing the Cut Sheet Feeder

The cut sheet feeder allows you to insert, print, and stack cut sheets automatically. You can add the dual bin adapter to double the feeder's paper handling capacity. This adapter allows you to load two different types of paper and select either type for printing. Indicator lights on the cut sheet feeder panel tell you which paper type you have selected.

The cut sheet feeder also monitors the paper supply. It indicates a paper out condition or paper jams by lighting an alarm lamp on its control panel.

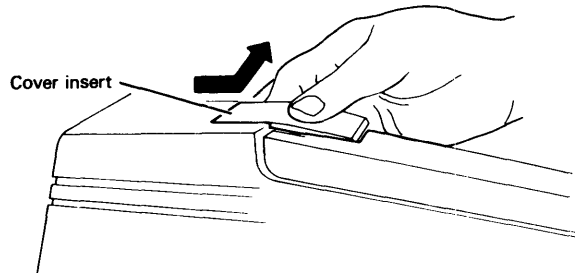
Take the following steps to install first an internal option cable and then the cut sheet feeder, if you have this forms handling option; otherwise, continue to install other options or skip ahead to "The Next Step.")

Make sure the printer is turned off and its power cord unplugged from its ac outlet.



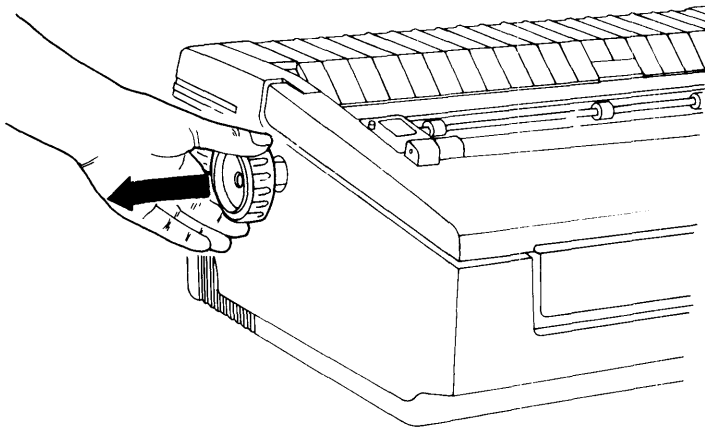
DG-25524

2. If your letter-quality printer has two cover inserts installed, remove them by grasping them on the inside bottom edge and pulling gently sideways away from the printer cover.



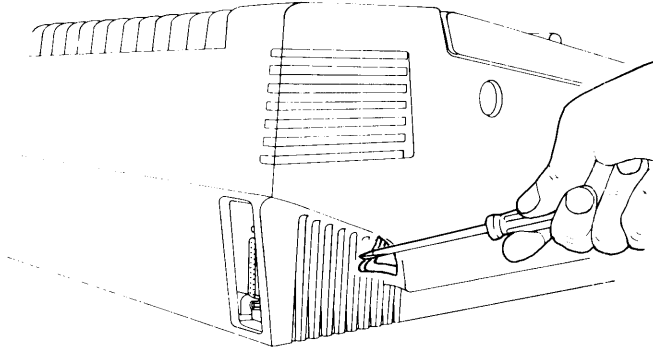
DG-25792

3. Pull off the right and left paper advance knobs.



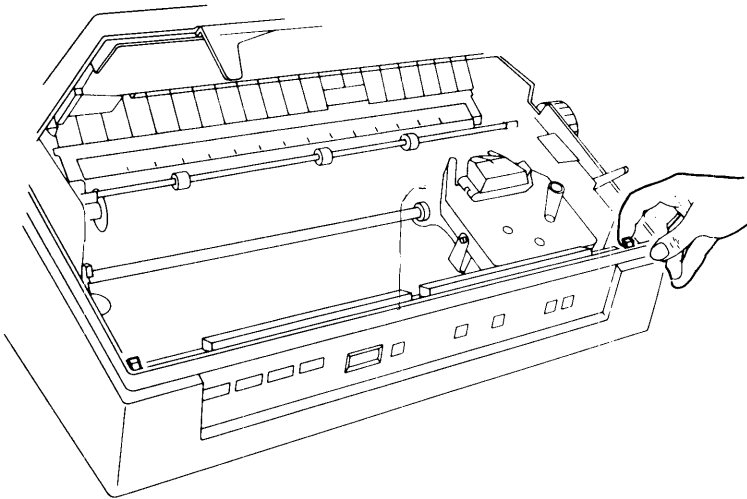
DG-25770

4. Using a screwdriver or similar tool, push down the right and left cover release levers at the rear of the printer.



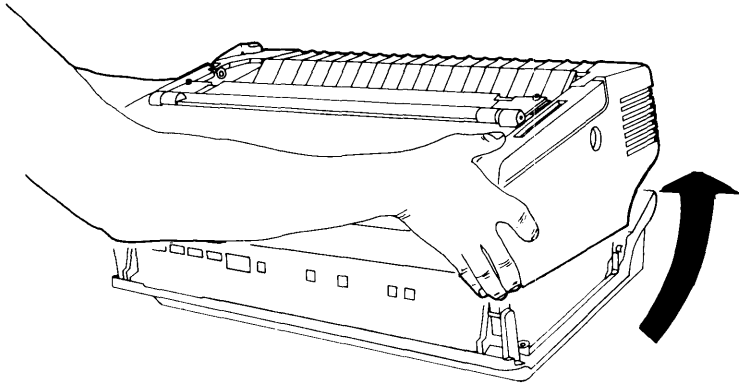
DG-25771

5. Open the hinged top of the cover and pull the right and left cover release levers inside the printer forward.



DG-26121

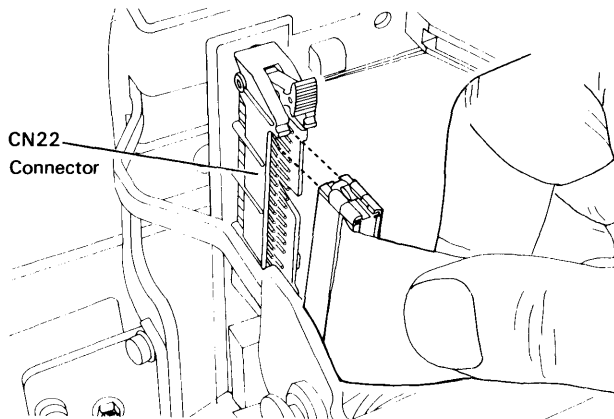
6. Close the hinged top of the cover and then lift the cover up and remove it. The hinged top of the cover will come along with it. Be careful not to hit any parts inside the printer.



DG-25772

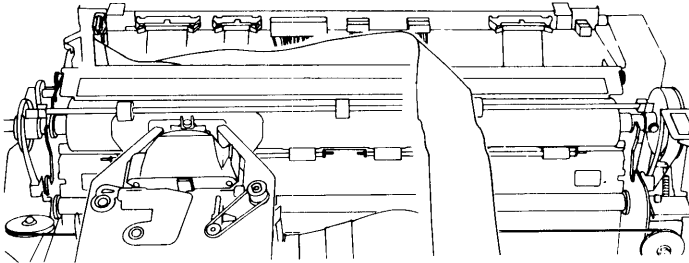
7. Plug one end of the cut sheet feeder's option cable into the CN22 connector on the printer's printed circuit card (PC card), and press it until it snaps into place.

NOTE *Only one end of the cable fits onto the PC card. If you have trouble inserting one end of the cable's connector, try inserting the other end.*



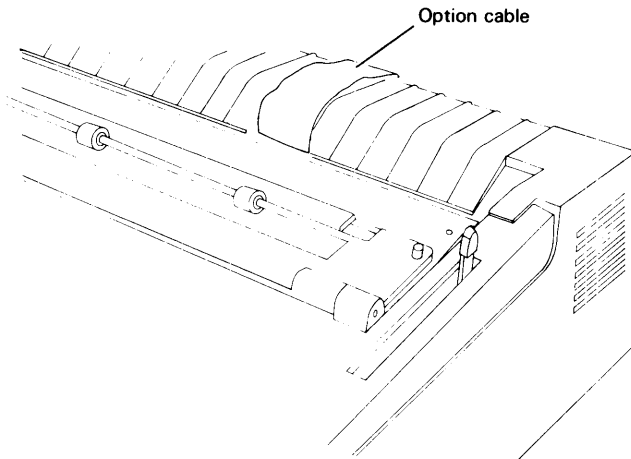
DG-25806

- 8.** Position the option cable as shown below.



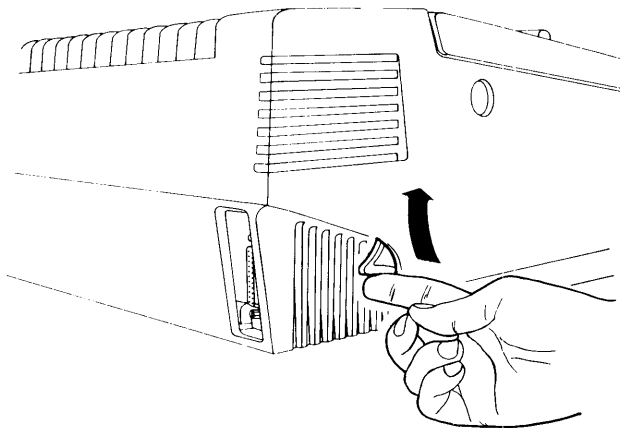
DG-25807

- 9.** Replace the cover with the option cable fitting through the slot in the top of the cover.



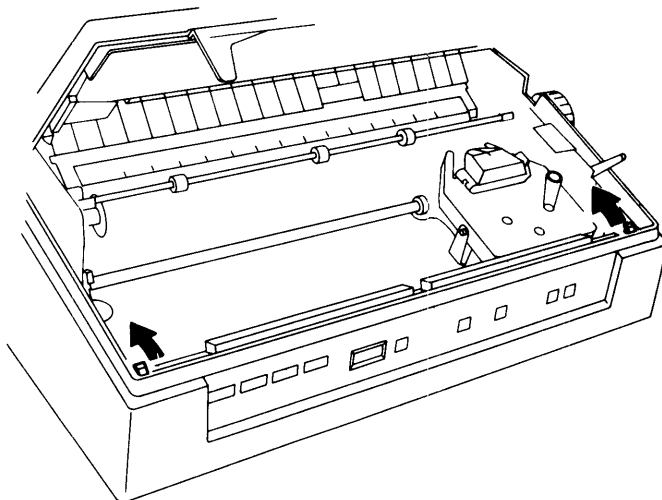
DG-25808

10. Press the left and right cover release levers until they snap into place.



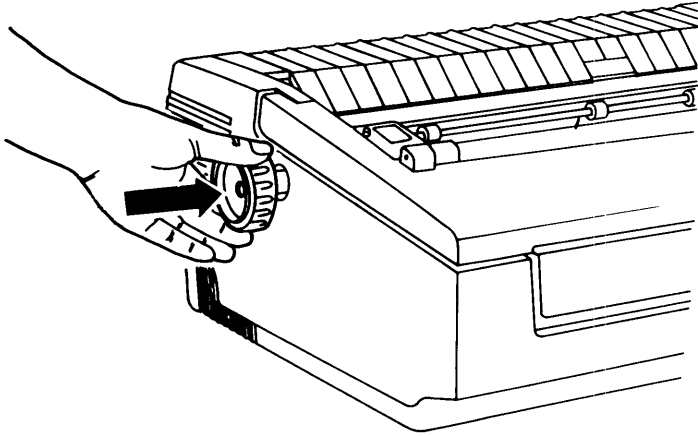
DG-25775

11. Open the hinged top of the cover and push the left and right inside cover release levers back.



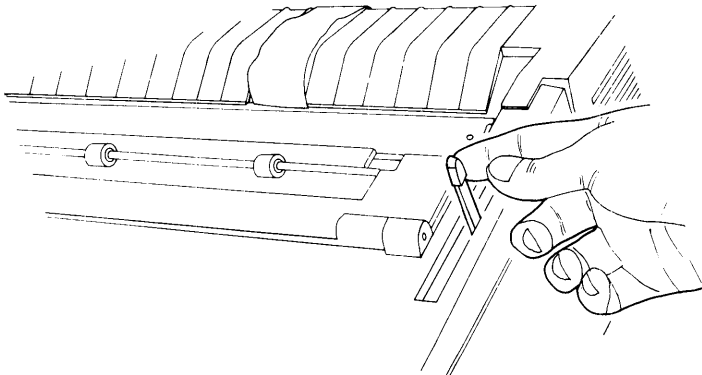
DG-26197

- 12.** Replace the right and left paper advance knobs. Make sure the knobs are on securely; otherwise, the platen will not turn when you turn the knobs.



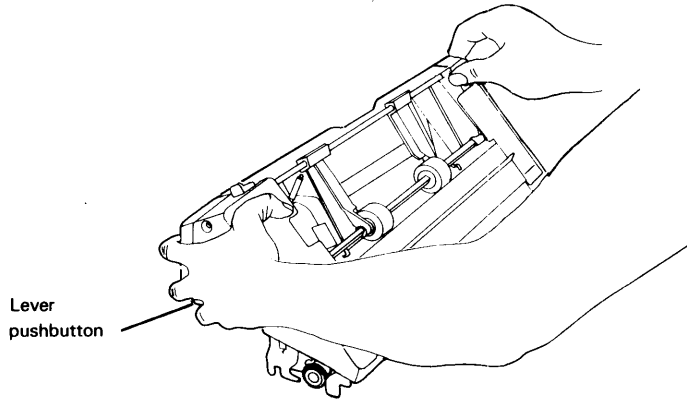
DG-25776

- 13.** Now that you have installed the option cable, you are ready to install the cut sheet feeder. First place the printer paper release lever in the center position.



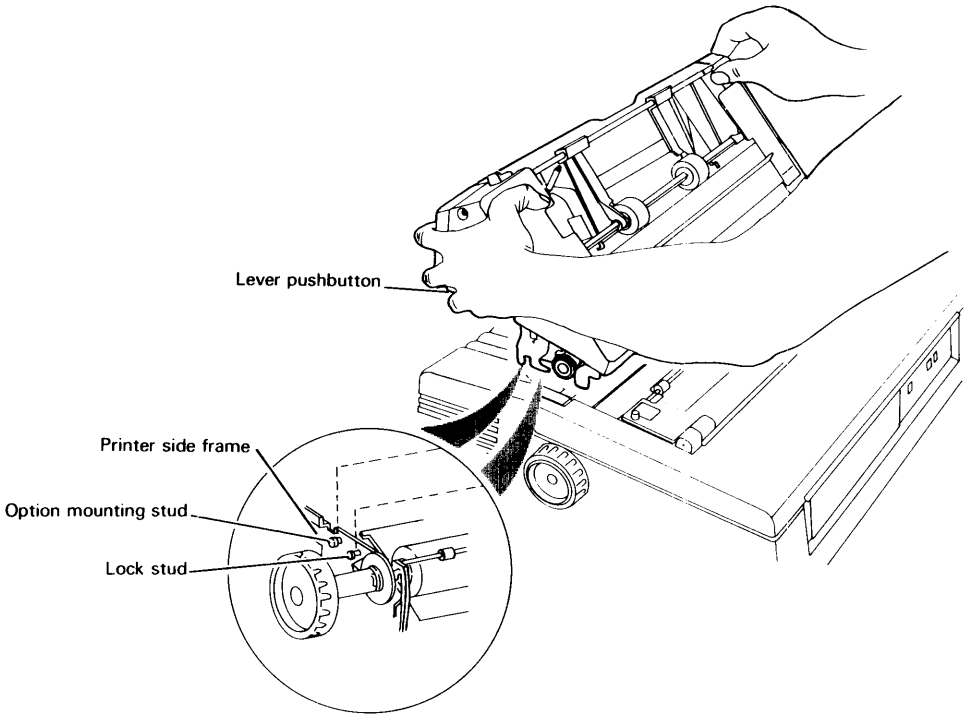
DG-25809

14. Hold the cut sheet feeder on both ends, pressing in on the right and left lever pushbuttons.



DG-25810

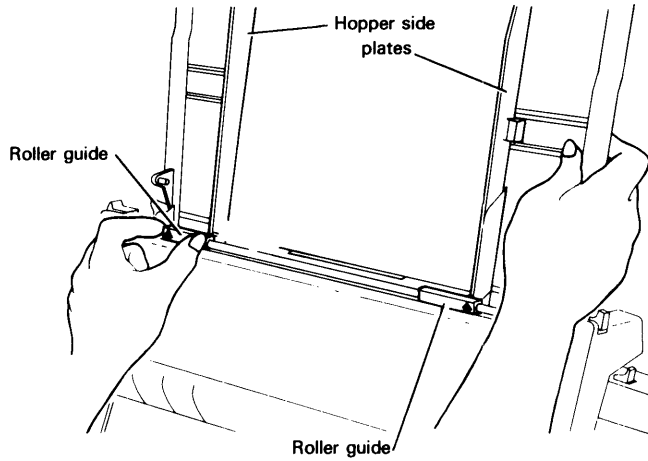
15. Fit the cut sheet feeder onto the option mounting studs on the printer side frame and press the feeder into place. When it is in place, release the right and left lever push buttons.



DG-25811

NOTE *Make sure the switches on the back plate of the cut sheet feeder are set for 3500 Series machines.*

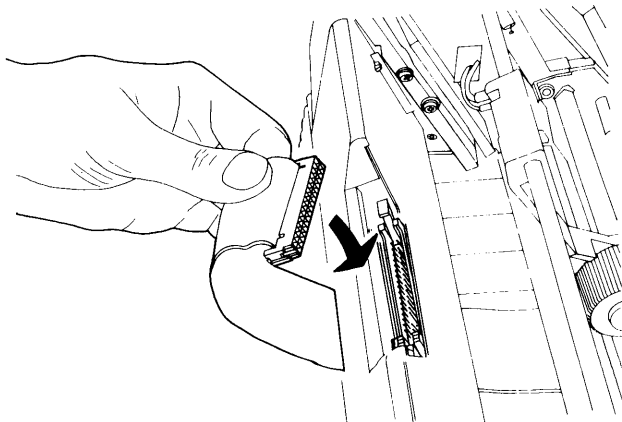
16. Install the paper hopper by resting it on top of the feeder and supporting it with one hand. With the other hand, push the roller guides along the rail until the arrows on the guides line up with the hopper side plates. Then push down to insert the hopper into the feeder.



DG-25520

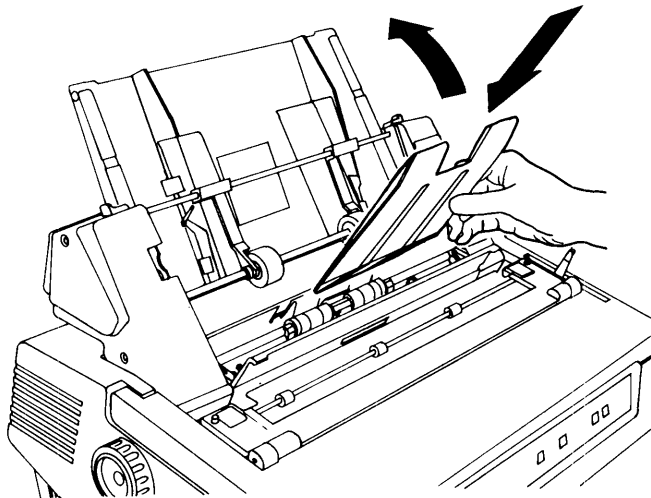
17. Connect the option cable to the connector at the rear of the cut sheet feeder by pressing it until it snaps into place.

NOTE *Removing the hopper tray makes it easier to connect the option cable to the rear of the cut sheet feeder. To remove the hopper tray, lift it straight up and out.*



DG-25812

18. Install the plastic paper stacker and swing it toward the cut sheet feeder.

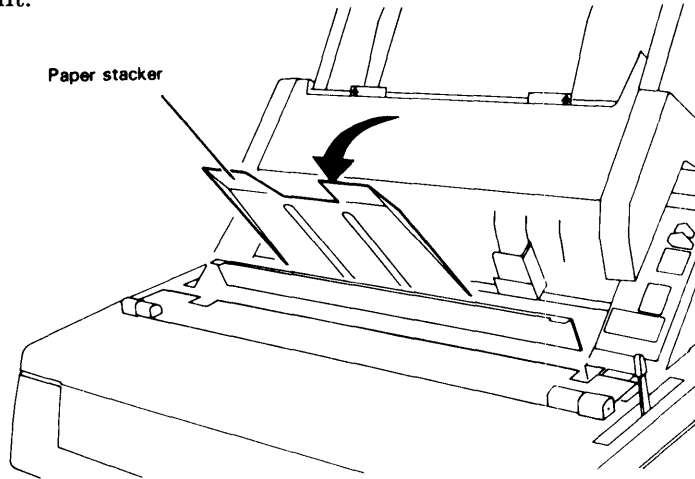


DG-25813

19. If you are using only a single cut sheet feeder, skip ahead to "The Next Step." If you are installing the dual bin adapter or the envelope adapter option, continue with the following steps.

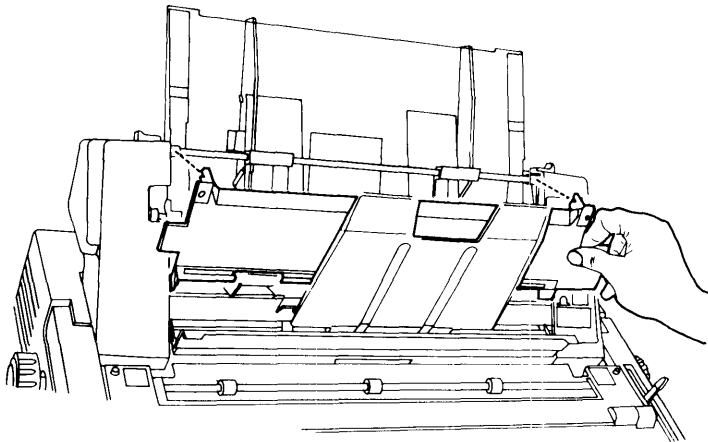
To install the dual bin adapter:

1. Swing the plastic paper stacker away from the cut sheet feeder unit.



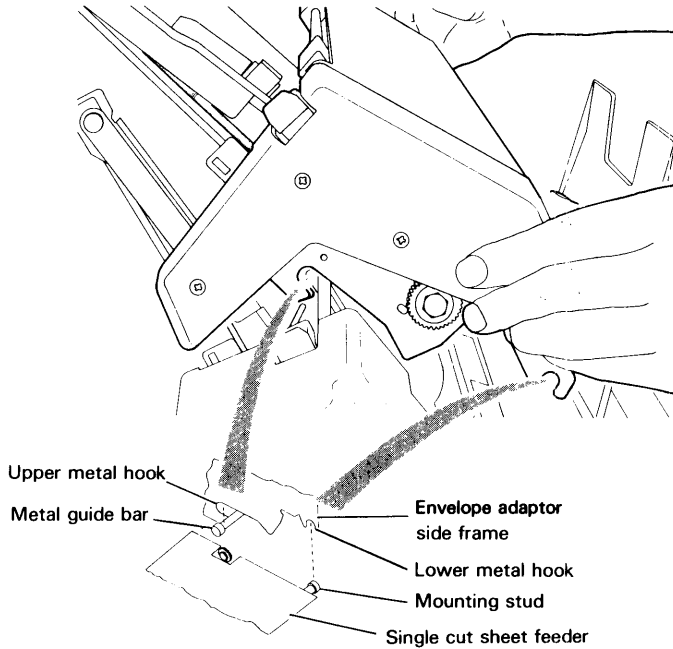
DG-25522

2. Remove the plastic cover plate from the main unit.



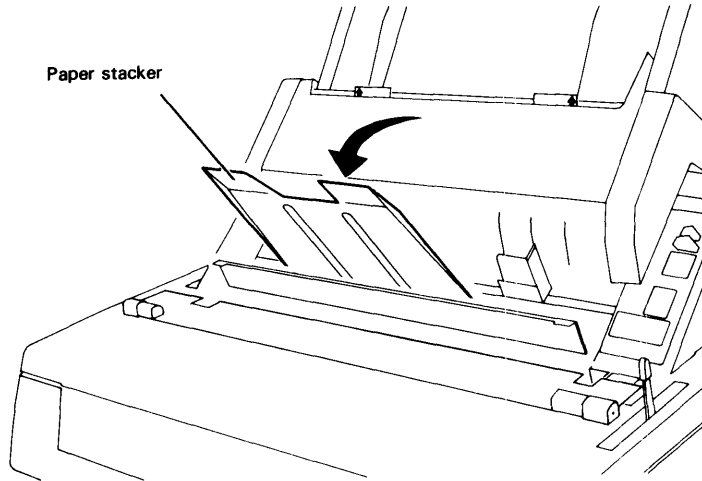
DG-25814

3. Holding the dual bin adapter by the sides, position it over the single cut sheet feeder, as shown in the figure. Fit the upper left and right metal hooks on the adapter onto the black mounting rings on the metal guidebar and press the adapter into place. The adapter's lower metal hooks will hook onto the left and right cut sheet feeder mounting studs.



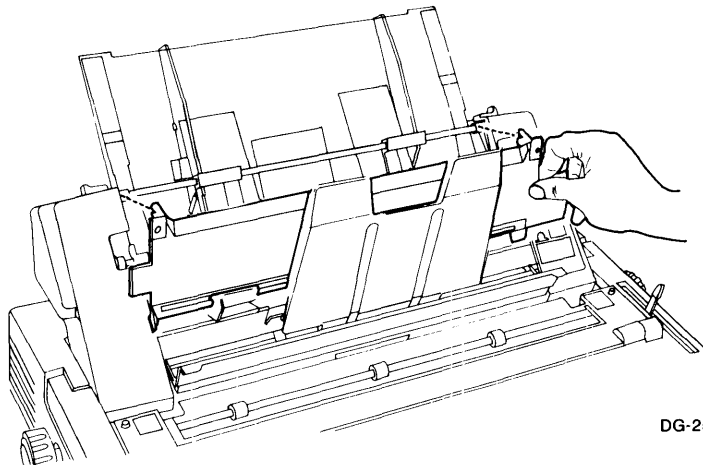
To install the envelope adapter:

1. Swing the plastic paper stacker away from the cut sheet feeder unit.



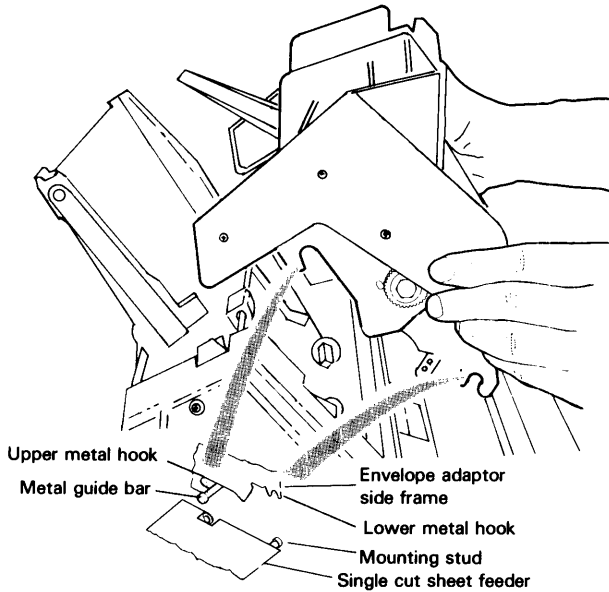
DG-25522

2. Remove the plastic cover plate from the main unit.



DG-25814

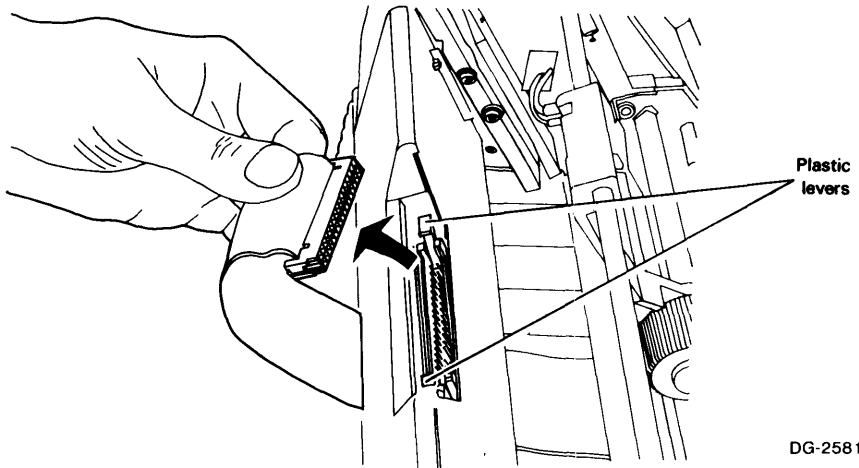
3. Holding the envelope adapter by the sides, position it over the single cut sheet feeder, as shown in the figure. Fit the upper left and right metal hooks on the adapter onto the black mounting rings on the metal guidebar and press the adapter into place. The adapter's lower metal hooks will hook onto the left and right cut sheet feeder mounting studs.



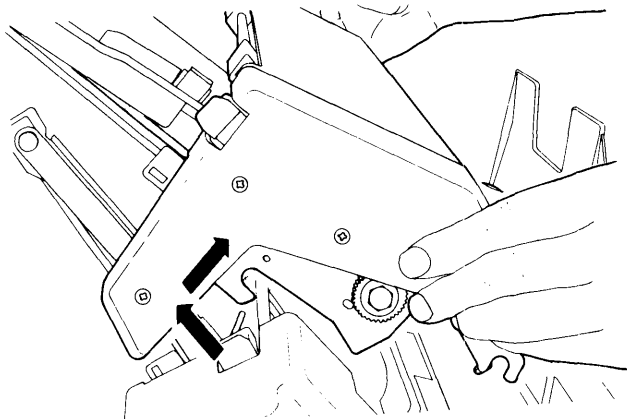
Removing the Cut Sheet Feeder

Take the following steps when removing the cut sheet feeder from your printer.

1. Disconnect the option cable from the cut sheet feeder by pressing the two plastic levers on both sides of the cable's connector.



2. Remove the dual bin adapter option, if present, by gently lifting and pulling the sides of the adapter up and away from the unit.



NOTE *You may want to leave the option cable installed if you periodically use different options.*

3. Remove the option cable from the printer by following the cable installation steps (1 through 9 under "Installing the Cut Sheet Feeder") in reverse.
4. Remove the cut sheet feeder by following the feeder installation steps (11 through 19 under "Installing the Cut Sheet Feeder") in reverse.

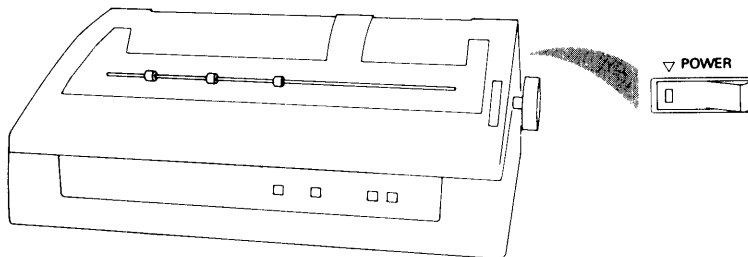
Installing the Bidirectional Forms Tractor

The bidirectional forms tractor allows you to use continuous fanfold paper with your letter-quality printer. In addition, the bidirectional forms tractor option enables the printer to perform precise forward and reverse paper motion.

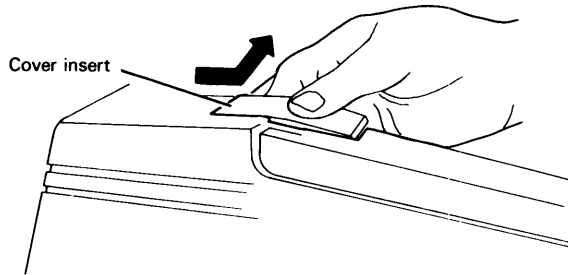
The bidirectional forms tractor has a monitor that can tell you when the paper is out. It does this by lighting the Paper light on the printer's front panel and sounding a buzzer.

Take the following steps to install the bidirectional forms tractor, if you have this forms handling option; otherwise, skip ahead to "The Next Step."

1. Turn off the printer.

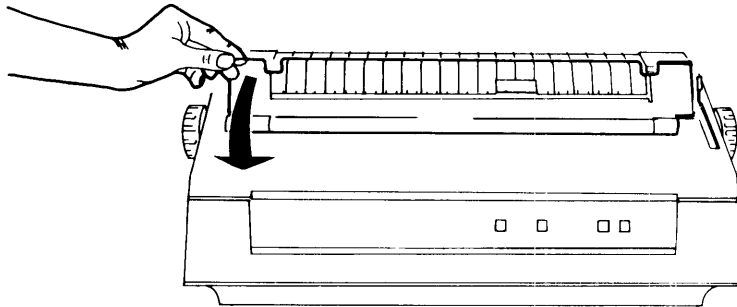


2. If your letter-quality printer has two cover inserts installed, remove them by grasping them on the inside bottom edge and pulling them gently sideways away from the printer cover.



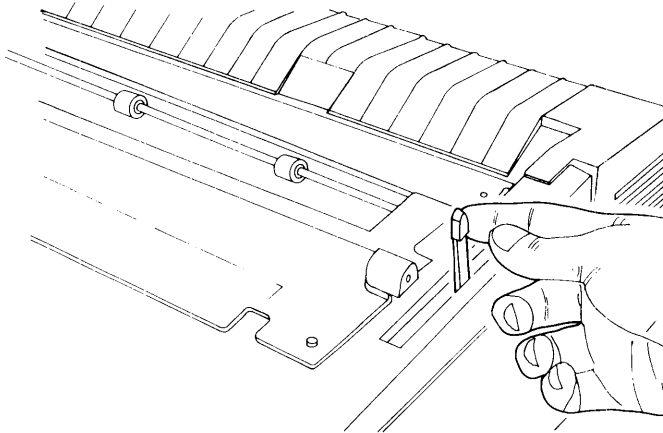
DG-25792

3. Open the printer's acrylic cover.



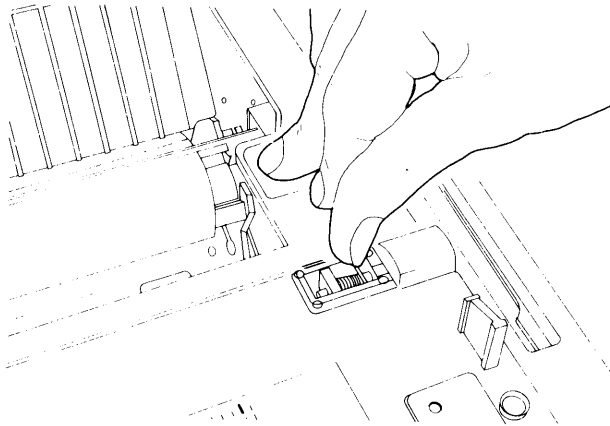
DG-25793

4. Move the paper release lever to the center position.



DG-25822

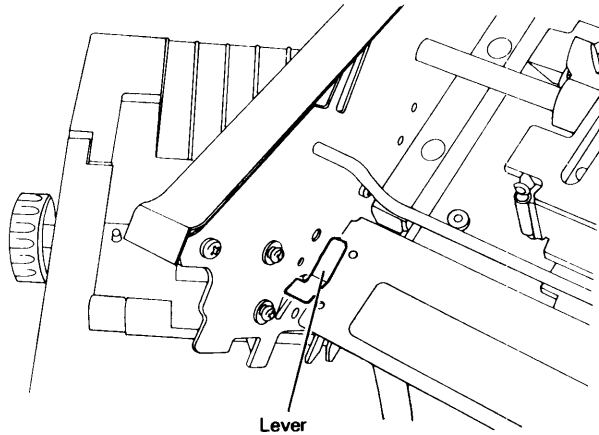
5. Slide the hinge pin in the right corner of the acrylic cover to the left. Remove the acrylic cover.



DG-25794

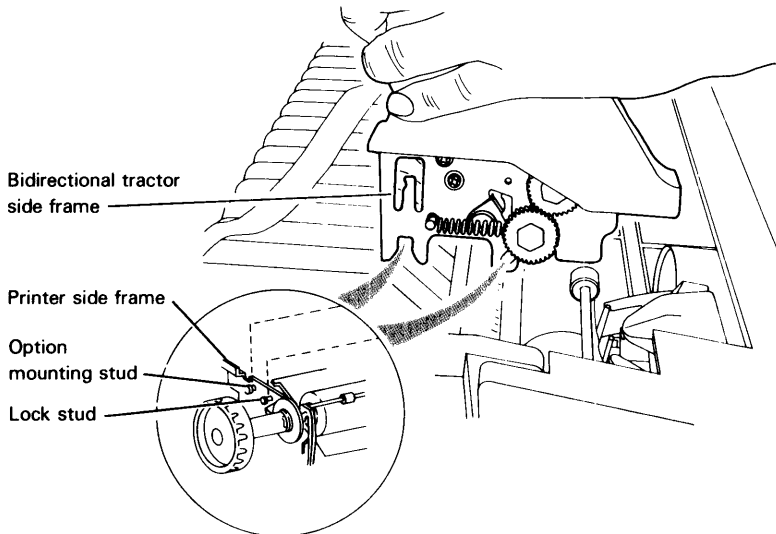
6. Install the bidirectional tractor silencer hood in place of the acrylic cover by reversing the procedure in step 5. Leave the new cover open.

7. Make sure the left and right levers on the bidirectional forms tractor are pushed toward the rear of the tractor.



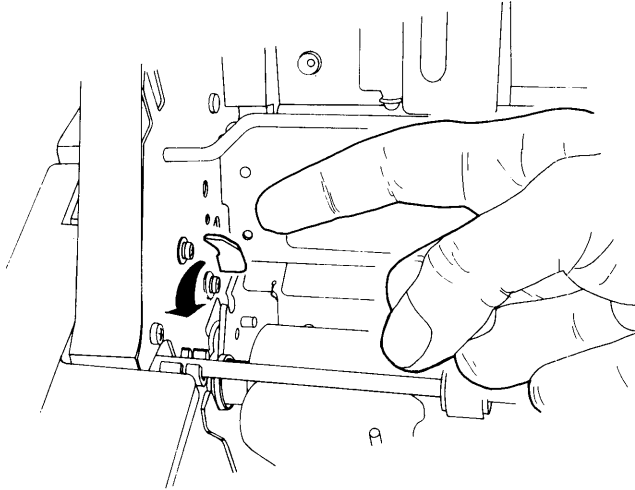
DG-25823

8. Fit the left and right slots in the bidirectional tractor frame onto the option mounting studs on the printer's side frames.



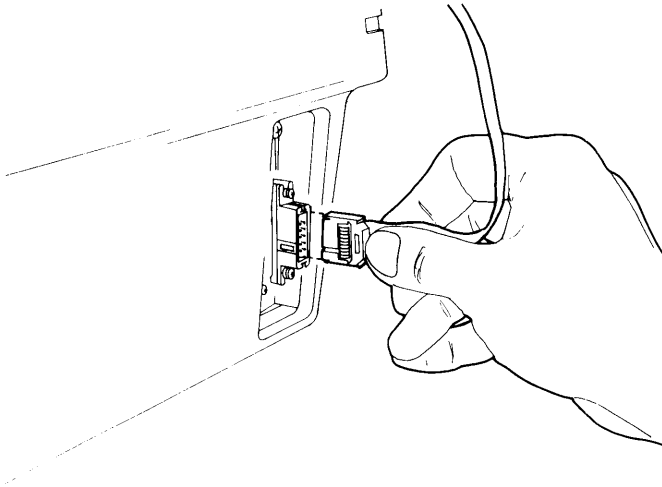
DG-25824

- 9.** Pull the mounting lock levers forward to clamp the bidirectional forms tractor into place on the printer. Close the acrylic cover.



DG-25825

- 10.** Connect the sensor cable to the rear of the printer.

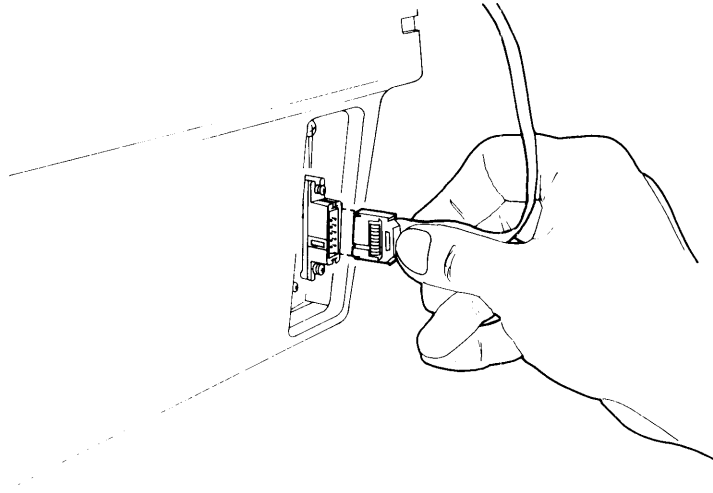


DG-25798

Removing the Bidirectional Forms Tractor

Take the following steps when you remove the bidirectional forms tractor from the printer.

1. Disconnect the sensor cable from the the rear of the printer.



DG-25798

2. Remove the bidirectional forms tractor by following its installation steps in reverse.

The Next Step

If your system includes a plotter, connect it with the help of the next chapter. After your system is completely installed, turn to your *DESKTOP GENERATION Systems Operator's Guide* to test your system's operation with diagnostic software.

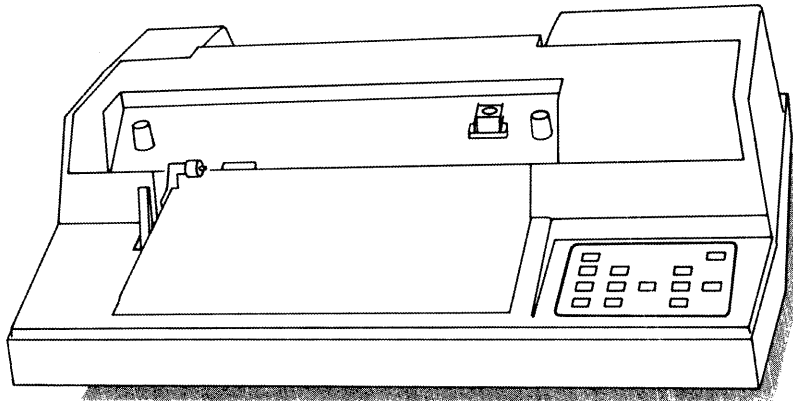
If you have any questions about the operation of the devices in your system, refer to the *DESKTOP GENERATION Peripherals Operator's Guide* or to the manual shipped with the device.



11

Color Graphics Plotter

This chapter tells you how to unpack, inspect, configure, and connect your Model 4435 color graphics plotter.

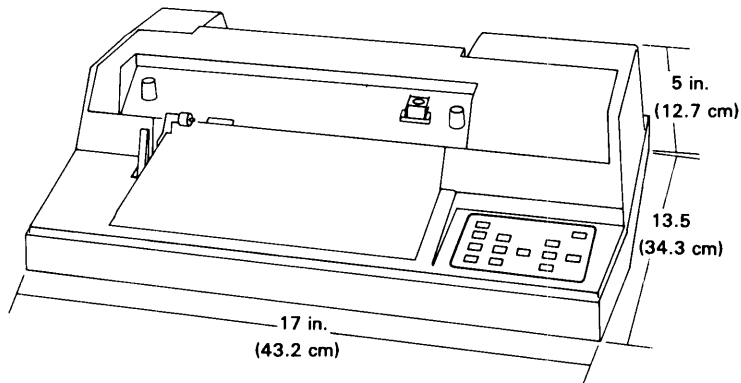


Getting Started

Before you unpack your plotter, a review of the site you have chosen for it will help to ensure that it operates correctly. The temperature of your site should stay within 32 and 131 degrees F (0 and 55 degrees C). Relative humidity should be between 20 and 80 percent.

Because the plotter emits some noise during operation, install it in an area where its sound would be not be disturbing.

Although you can install your color graphics plotter in a space approximately 1.5 by 1.5 ft (45.7 cm) with an overhead clearance of 10 in. (25 cm), you should allow 20 in. (50.8 cm) around and above the plotter for ventilation, power and device cables, and routine maintenance.



DG-25498

You will need to place the plotter within 25 ft (7.6 m) of your computer to connect it with the standard-length device cable. You must also place the plotter within 7 ft (2.1 m) of a grounded, three-pronged ac outlet in order to connect it to an ac power source.

WARNING *To prevent injury to yourself or damage to the plotter, use only a three-pronged ac receptacle for ac power.*

The plotter requires that ac voltage, current, and line frequency be within a certain range for correct operation and reliability. Your main concern will be to supply the proper voltage and current. (You have little or no control over the line frequency unless you install special

equipment.) You will find general electrical requirements for your system in the system installation manual shipped with your equipment. If you have any doubts about the wiring at your site, a licensed electrician can answer your questions.

The following electrical and mechanical specifications will help you install the plotter in your computer system.

Electrical Specifications

	100 V	120 V	220 V	240 V
Power type	90-105 V	108-126 V	198-231 V	216-252 V
Voltage range	47-63 Hz	47-63 Hz	47-63 Hz	47-63 Hz
Line frequency	.36 A	.30 A	.15 A	.14 A
Current (maximum)	25 W	25 W	25 W	25 W
Power consumed (maximum)	4 A	4 A	4 A	4 A
Inrush surge (maximum, 1/2 cycle)	7.5 ft (2.1 m)	7.5 ft (2.1 m)	None supplied	None supplied
Power cord				

Mechanical Specifications

Height:	5 in	(12.7 cm)
Width:	17 in	(43.2 cm)
Depth:	13.5 in	(34.3 cm)
Weight:	13.5 lbs	(6.1 Kg)

Unpacking and Inspecting Your Plotter

Take the following steps to unpack the color plotter and inspect it for damage.

1. Open the shipping carton and remove the plotter and other items.
2. Gently remove all packing materials.
3. Review the inventory checklist below to make sure you have received all items. You will find some items, such as the device cable, in other cartons. The device cable's part number is at the end of this manual under "Cables." The manuals supplied with your plotter apply to many different types of computer systems; for this reason, we recommend that you install, operate, and test the plotter using this and other DESKTOP GENERATION books written specifically for your system.

Inventory Checklist

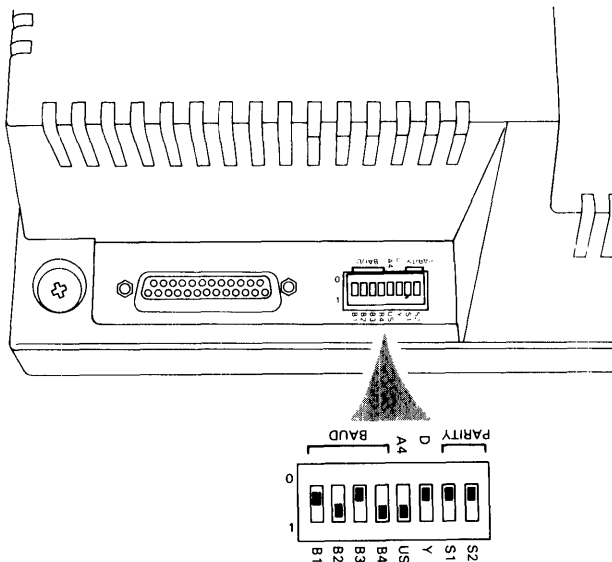
- Plotter
- Set of four fiber-tip pens, assorted colors
- Power cord
- Device cable
- Documentation

DG-26190

4. Save the cartons and all packing materials to use if you move your system or must return your plotter.
5. Carefully inspect the plotter for any visible damage. If the plotter appears damaged or contains any loose parts, call your nearest Service Operations Center and report the problem. If you need to return your plotter, repack it as it was shipped to you.
6. Enter information about your plotter on the system configuration sheet. We advise against changing these switch settings unless you are using the plotter in a custom application or with a non-Data General operating system that requires different characteristics. If you must change the values, refer to the manual shipped with your plotter.

Configuring Your Plotter

Plotter characteristics such as data transmission rates, operating status, and plotting limits are selected by switches on the plotter's rear panel. These switches are set at the factory to the values required for a plotter in a standard DESKTOP GENERATION system using a Data General operating system. Make sure the switches are set as shown below.



DG-25499

The following table shows the characteristics selected by these switch settings.

Paper/film size: ¹	8.5 by 11 inches
Baud rate:	9600
Parity:	Disabled
Power-up state:	On-line

¹To use paper sized 210 by 297 mm, set switch US/A4 to the A4 position.

We advise against changing these switch settings unless you are using the plotter in a custom application or with a non-Data General operating system that requires different characteristics. If you must change the values, refer to the manual shipped with your plotter.

Installing Your Plotter

You install the plotter in your system by connecting it to the printed circuit card that controls it. Depending on the model, the plotter is controlled by a line on a USAM card, a 4207 card, or the SPU 1 card. The table below lists the models with the cards that can control the plotter, the location of the card, and the adapter cable for each card.

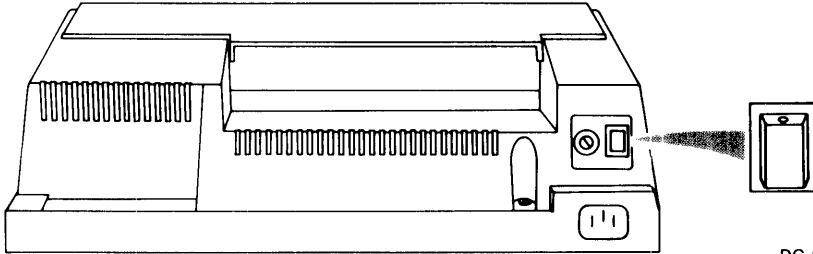
Refer to this table before installing your plotter.

Models	Card	Card Location	Adapter Cable
All	USAM 4	CPU logic or logic expansion,	005-021041
	USAM 1	I/O slot	005-020688
Model 20 and 30	4207	CPU logic or logic expansion, I/O slot	005-021148
Model 10 and 10/SP	SPU 1 (printer port)	CPU logic, slot 1	005-021148

NOTE *If you are adding a plotter to a previously installed system without a USAM line or Model 10 and 10/SP printer port available, you must add a card to your system. You can add a 4207 card (Model 20 and 30 systems only) or a USAM card. Install this card before connecting the plotter, using information in the system installation manual.*

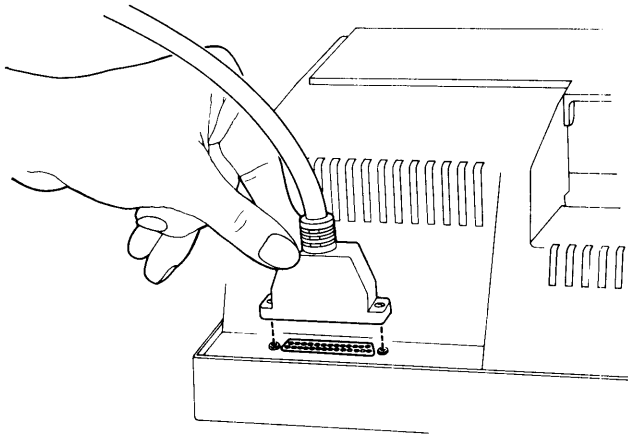
Take the following steps to connect your plotter, keeping a small Phillips screwdriver and a small flat screwdriver handy. If you are removing the plotter from your system, follow these steps in reverse.

1. Turn off the computer.
2. Make sure the plotter is turned off.



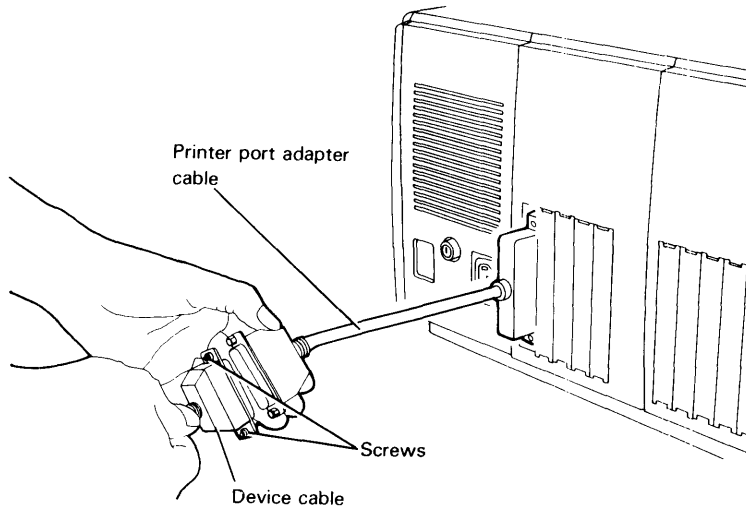
DG-25501

3. Plug one end of the plotter's device cable into the cable connector behind the plotter. Tighten the two screws that hold the cable in place.



DG-25502

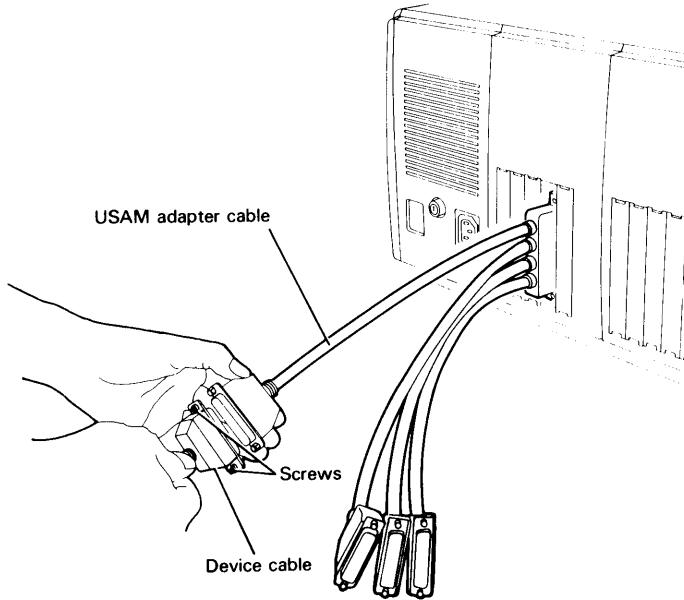
4. To connect the plotter on the Model 10 and 10/SP printer port, plug the other end of the plotter's device cable into the connector for the printer port adapter cable. Tighten the two screws that hold the cables in place.



DG-26189

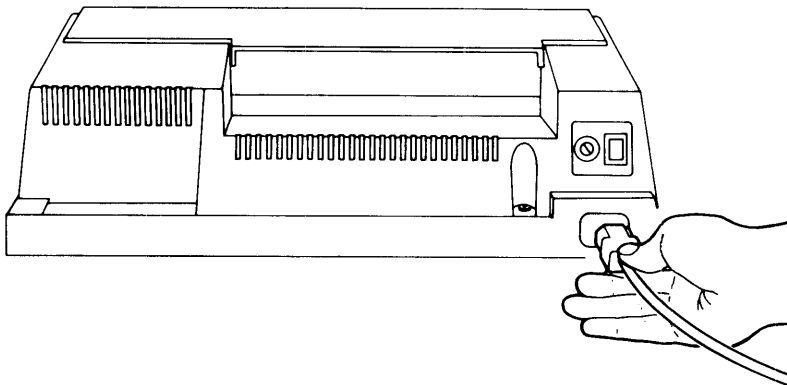
5. To connect the plotter to the USAM line (or 4207 card), locate the cable connector for the line that controls the plotter and plug it into the other end of the plotter's device cable. Tighten the two screws that hold the cables in place. (The figure below shows a typical connection to a USAM card in slot 4 of the CPU logic module.)

NOTE *If you do not remember which line of the USAM card controls the plotter, check the installation sheet for connecting peripherals.*



DG-26155

6. Plug one end of the power cord into the ac connector on the back of the plotter.



DG-25503

7. Plug the other end of the power cord into an ac outlet.

The Next Step

After connecting all the equipment in your system, your turn to the DESKTOP GENERATION *Systems Operator's Manual* to verify your system's operation with diagnostic software.

If you have questions about the operation of the devices in your system, refer to the DESKTOP GENERATION *Peripherals Operator's Guide* or to the manual shipped with the device.

Related Documentation

A comprehensive documentation set supports all the hardware and software products available for the DESKTOP GENERATION computer system. The documentation listed below is meant to be read in sequence by anyone who owns a DESKTOP GENERATION system.

DESKTOP GENERATION System Operator's Guide

Tells operator how to use system, perform routine cleaning and maintenance, load Customer Diagnostics, and perform simple troubleshooting tasks. DGC ordering no. 014-001117.

DESKTOP GENERATION Peripherals Operator's Guide

Provides operator with information on care and usage of DESKTOP GENERATION supported terminals, printers, plotters, data tablet, and mouse. DGC ordering no. 014-001133.

DESKTOP GENERATION Systems Installation Guide

Provides the user with system specifications, configuration charts, and instructions on adding and removing modules and cards. DGC ordering no. 014-001118.

How to Install a DESKTOP GENERATION Computer

This is a multi-sheet, installation guide, containing an illustrated description of the steps needed to install the basic DESKTOP GENERATION computer modules, the cartridge tape module, and the expansion disk module. DGC ordering no. 014-001132.

How to Connect Peripherals to a DESKTOP GENERATION Computer

This is a single-sheet, illustrated summary of the steps needed to connect peripherals to the system. It includes information on connector and adapter cables. DGC ordering no. 014-001131.

Using DG/RDOS on DESKTOP GENERATION Systems

Follows the installation and operating guides with instructions for loading and using the DG/RDOS operating system and other software. Exercises and examples get you started with DG/RDOS. DGC ordering no. 069-000056.

Using AOS on DESKTOP GENERATION Systems

Follows the installation and operating guides with instructions for loading and using the AOS operating system and other software. Exercises and examples lay the groundwork for working with AOS and with several programming languages. DGC ordering no. 069-000058.

/UX Family Operator Guide

Follows the installation and operating guides with instructions for loading and using the DESKTOP/UX operating system on DESKTOP GENERATION Model 45 systems. DGC ordering no. 093-701015.

Your source for other DESKTOP GENERATION and Data General publications is TIPS: the Technical Information and Publications Service. To order the TIPS catalog of publication, obtain order forms or information, write or call:

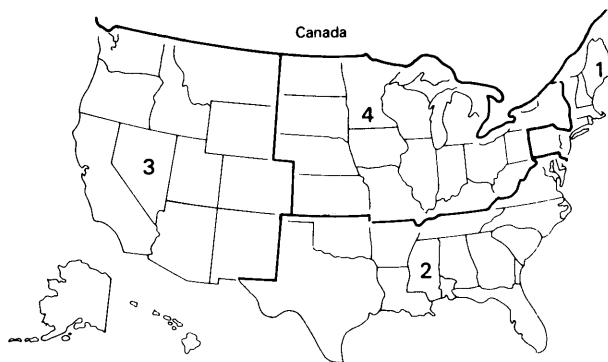
Data General Corporation
Attn: TIPS Administrator F019
4400 Computer Drive
Westboro, MA 01580
Tel. (617) 366-2900

Telephone Assistance

If you are unable to solve a problem with your system with the information in this manual, call Customer Support Center (CSC) at the following number: 1-800-DGHELPS (1-800-344-3577). The CSC will put you in touch with one of Data General's telephone assistance staff to answer such questions as, "If one of my terminals isn't working, can I try connecting it to another USAM line?"

Free telephone assistance is available with your warranty and with most Data General service options. Lines are open from 8:30 a.m. to 8:30 p.m., Eastern Standard Time, Monday through Friday.

A call to Data General's general information hot-line, 1-800-DATAGEN, can also help you solve problems with your order and give you additional telephone assistance.



DG-25956

For telephone assistance in areas outside the continental United States, ask your Data General salesperson for the nearest phone number.

Cables

The tables ahead list the device cables and adapter cables. If more than one length is available, the standard-length cable is listed first.

Device Cables

Equipment	Length	Part Number	Interface Type
Monochrome monitor (Models 10 & 10/SP)	6 ft	005 019373	Not applicable
Color monitor (Models 10 & 10/SP)	6 ft	005 019913	Not applicable
System console or device on 4207 card (Models 20 and 30)	25 ft	005 013258	EIA RS-232-C
	5 ft	005 013325	
	15 ft	005 013315	
	50 ft	005 013321	
	25 ft	005 013260	Current loop
	50 ft	005 013282 ¹	
	100 ft	005 013283 ¹	
	300 ft	005 013285 ¹	
	500 ft	005 013284 ¹	
	DASHER terminal on USAM line	25 ft	005 013258
5 ft		005 013325	
15 ft		005 013315	
50 ft		005 013321	
25 ft		005 013260	Current loop
50 ft		005 013282 ¹	
100 ft		005 013283 ¹	
300 ft		005 013285 ¹	
500 ft		005 013284 ¹	
		25 ft	005 013384
	50 ft	005 020905 ¹	
	100 ft	005 020906 ¹	
	300 ft	005 020907 ¹	
	500 ft	005 020908 ¹	
Any serial printer or plot- ter on USAM line	25 ft	005 013258	EIA RS-232-C
	5 ft	005 013325	
	15 ft	005 013315	
	50 ft	005 013321	

Equipment	Length	Part Number	Interface Type
Serial printer on USAM line	25 ft	005 013260	Current loop
	50 ft	005 013282 ¹	
	100 ft	005 013283 ¹	
	300 ft	005 013285 ¹	
	500 ft	005 013284 ¹	
Modem on USAM line	25 ft	005 019687	Not applicable
Expansion disk unit	5 ft	005 020687	Not applicable
System-to-system ²	25 ft	005-021381	EIA RS-232-C, EIA RS-422-A
	15 ft	005 021382	
	50 ft	005 021380	
	25 ft	005 013260	Current loop
	50 ft	005 013282 ¹	
	100 ft	005 013283 ¹	
	300 ft	005 013285 ¹	
	500 ft	005 013284 ¹	

¹These are extension cables. They must be used with the 25 ft cable, 005 013260.

²Used when connecting a DESKTOP GENERATION system directly to another Data General or DESKTOP GENERATION system.

Adapter Cables

Equipment	Length	Part Number	Interface Type
Printer port (Models 10 & 10/SP)	ft	005 021148	EIA RS-232-C or current loop
Console or 4207 interface (Models 20 and 30)	1 ft	005 021148	EIA RS-232-C or current loop
4-line USAM	1 ft	005 021041	EIA RS-232-C, EIA RS-422-A, or current loop
1-line USAM	1 ft	005 020688	EIA RS-232-C, EIA RS-422-A, or current loop
Current loop adapter unit ¹	3.6 in	005 021359	Current loop

¹Used when connecting a DESKTOP GENERATION system directly to another DESKTOP GENERATION or other Data General system via a current loop interface.

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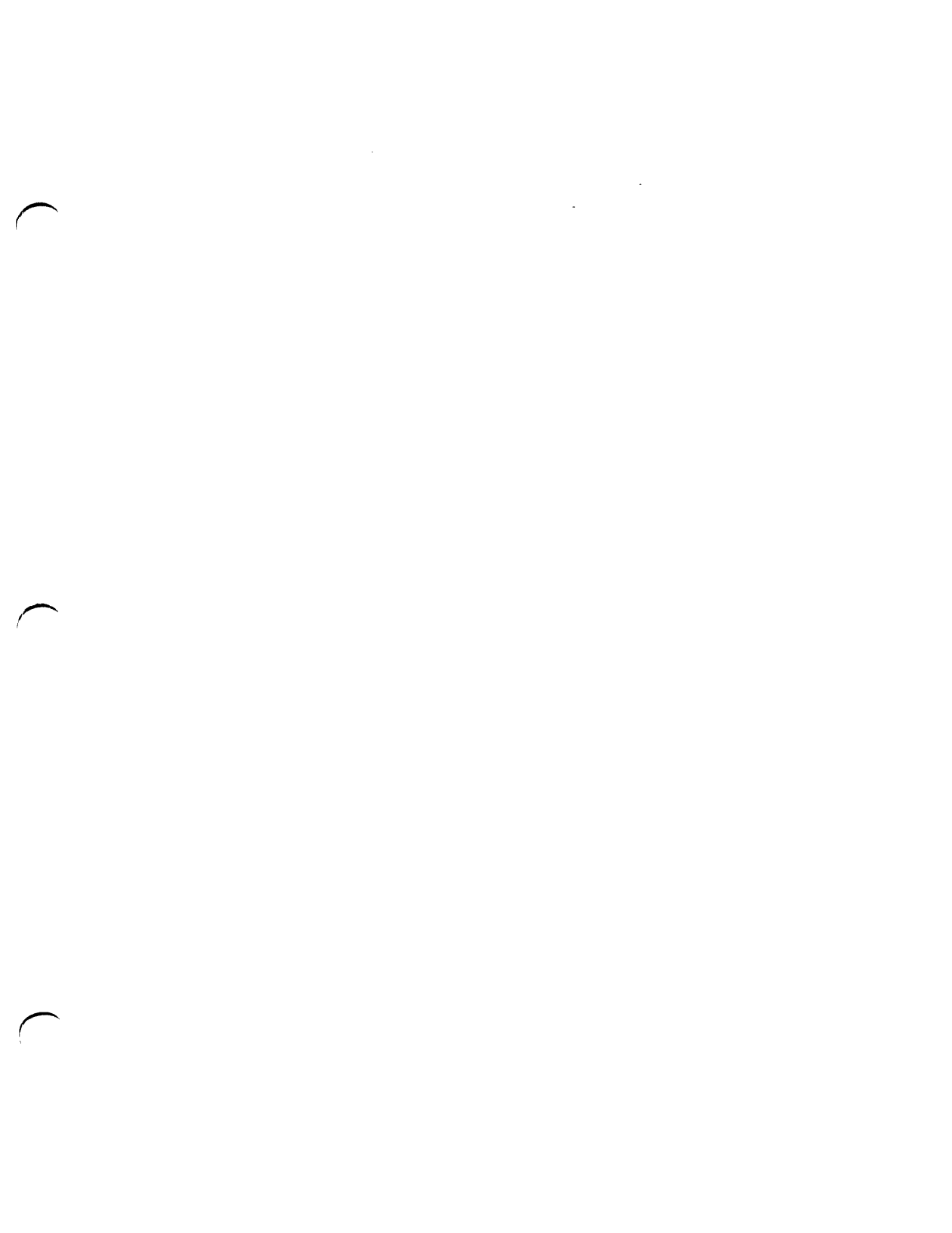
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