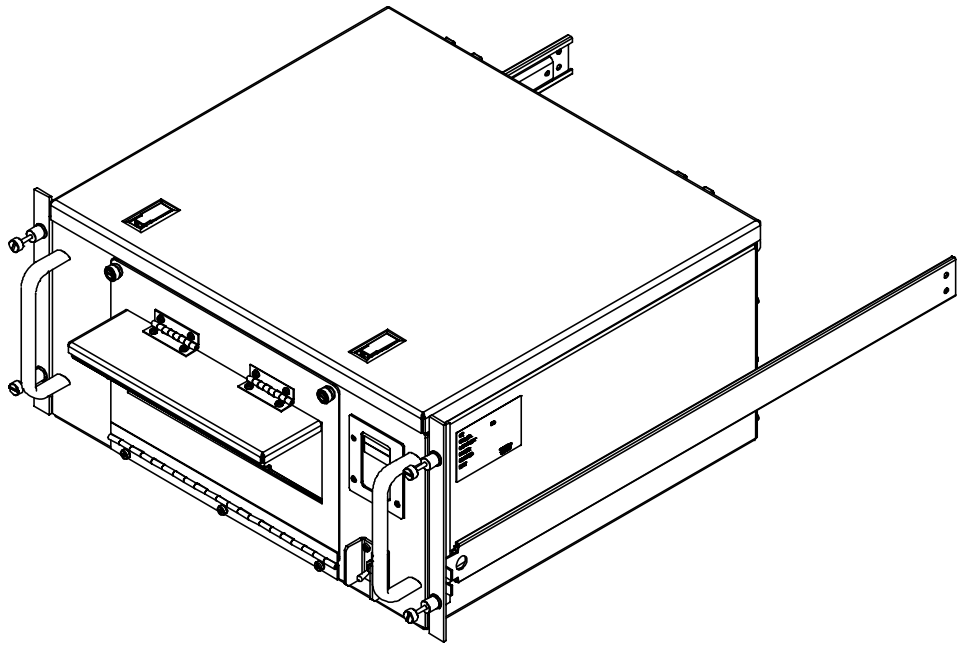
DataMetrics™

FULLY MISSION CAPABLE™

Model 1960 Ruggedized Inkjet Printer

Operation and Maintenance Manual



This manual is intended to function as an example ONLY and does not represent all configurations and options for this product.

DataMetrics™ Corporation
1717 Diplomacy Row • Orlando, FL 32809 • (407)251-4577 •(407)251.4588 FAX
www.datametrics.com

Data Rights Provisions

THE INFORMATION CONTAINED IN THIS MANUAL IS SUPPLIED WITH LIMITED RIGHTS ONLY. DATA SHALL NOT, WITHOUT THE WRITTEN PERMISSION OF THE CONTRACTOR, BE EITHER (A) USED, RELEASED, OR DISCLOSED IN WHOLE OR IN PART OUTSIDE THE GOVERNMENT, (B) USED IN WHOLE OR IN PART BY THE GOVERNMENT FOR MANUFACTURE OR, IN THE CASE OF COMPUTER SOFTWARE DOCUMENTATION, FOR PREPARING THE SAME OR SIMILAR COMPUTER SOFTWARE, OR (C) USED BY A PARTY OTHER THAN THE GOVERNMENT, EXCEPT FOR: (1) EMERGENCY REPAIR OR OVERHAUL WORK ONLY, BY OR FOR THE GOVERNMENT, WHERE THE ITEM OR PROCESS CONCERNED IS NOT OTHERWISE REASONABLY AVAILABLE TO ENABLE TIMELY PERFORMANCE OF THE WORK, PROVIDED THAT THE RELEASE OR DISCLOSURE HEREOF OUTSIDE THE GOVERNMENT SHALL BE MADE SUBJECT TO A PROHIBITION AGAINST FURTHER USE, RELEASE OR DISCLOSURE; OR (2) RELEASE TO A FOREIGN GOVERNMENT, AS THE INTEREST OF THE UNITED STATES MAY REQUIRE, ONLY FOR INFORMATION OR EVALUATION WITHIN SUCH GOVERNMENT OR THE CONDITIONS OF (1) ABOVE. THIS STATEMENT SHALL BE INCLUDED ON ANY REPRODUCTION HEREOF.

Record of Changes

DATE	REVISION	DESCRIPTION OF CHANGE
060426	–	INITIAL RELEASE

1.0 CONFIGURATION

1.1 Introduction

This chapter defines the configuration of a general Model 1960 Series printer. Information is provided concerning system configuration (Table 1-1), field-replaceable units (Table 1-2), external cabling (Table 1-3), and external connector signal assignments (Table 1-4). Refer to the specific printer documentation for interconnection diagram and installation control drawing.

Table 1-1. System Configuration

CHARACTERISTIC	DESCRIPTION
Top Assembly Part No.	513030-1XX (where XX is the specific configuration)
Input Power	110-220 VAC standard (12 VDC optional)
Memory	32 Mb

Table 1-2. Field Replaceable Units

DESCRIPTION	PART NO.	QUANTITY PER CHASSIS
Black Print Cartridge		1
Tri Color Print Cartridge		1
Print Engine Assembly		1
EMI Filter		1
Circuit Breaker/Power Switch Assembly		1
Control Panel		1

Table 1-3. External Cables

FUNCTION	PART NO.
Power Input	

Table 1-4. External Connector Signal Assignments

CONNECTOR	FUNCTION	PIN	SIGNAL
J1	Input Power	A B C	LINE NEUTRAL GROUND
J3	Ethernet 10/100BaseT	1 2 3 4 5 6 7 8	TX+ TX- RX+ NC NC RX- NC NC
J4	USB, Type B female connector	1 2 3 4	+5VDC DATA- DATA+ SIGNAL GROUND

2.0 GENERAL INFORMATION

2.1 Scope

This manual provides information and instructions required for the operation and maintenance of the Model 1960 Series printer manufactured by DataMetrics™ Corporation.

2.2 Applicable Documents

MILITARY STANDARDS

MIL-STD-461C..... Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference

COMMERCIAL STANDARDS

EIA RS-310..... Racks, Panels, and Associated Equipment

USB 2.0 ..... Standard, Universal Serial Bus, Full Speed Compatible

HEWLETT PACKARD

C8970-90003..... HP Deskjet 6940 Series Printer Reference Guide

2.3 Printer Description

The Model 1960 Series printer is a ruggedized, general-purpose inkjet printer that is configured in a single enclosure. The equipment is packaged using environmental management techniques that protect internal components from shock, vibration, temperature extremes, and EMI/RFI. The chassis may be configured for tabletop or rack-mount operation. The printer includes the following primary functional elements:

- Power subsystem
- Printing subsystem
- Control console
- Cooling system
- External interfaces

2.3.1 Power Subsystem

The Model 1960 Series printer operates with 110-240VAC input power. The power subsystem includes an EMI filter and the circuit breaker/power switch. DC voltages required for various printer functions are generated within the commercial print engine.

2.3.2 Printing Subsystem

The Model 1960 Series printer incorporates a Hewlett Packard Deskjet 6940 print engine that provides true 1200 x 1200 dpi resolution text and graphics and 4800 x 1200 photo resolution with a print speed up to 36 pages per minute. The printer processor includes a 96MHz processor and 8 Mb memory.

The printer may be operated with any host computer that supports Windows 98 SE, Me, 2000, XP and Macintosh OS 10.2 and higher. The printer includes 8 scalable TrueType fonts.

The printer automatically loads Letter, A4, Executive, B5, or Legal paper from the 150-sheet tray. The standard printer configuration incorporates an USB 2.0 interface and an Ethernet 10/100BaseT interface.

2.3.3 Control Console

The control console is located on the right side of the printer front panel. This console is the operator interface for print operations other than those controlled from the host computer. Controls and indicators are described in Chapter 4.

2.3.4 Cooling System

The ruggedized Model 1960 Series printer utilizes passive cooling. The printer is sealed to limit water, dust and dirt intrusion during operation.

2.3.5 External Interfaces

The rear panel of the printer includes connectors for prime power and the host computer data interface. A chassis ground lug is located on the rear panel adjacent to the power connector.

2.4 Specifications

Equipment specifications for the Model 1960 Series printer are defined in Tables 2-1 through 2-3.

2.5 Options

The Model 1960 Series printer may be configured with the optional features listed in the following paragraphs. Options included in a delivered configuration are defined in Chapter 1.

2.5.1 Options

The Model 1960 has an optional rack mount that includes slides and mounting features.

2.6 Supplementary Documentation

Supplementary information pertaining to the commercial hardware and software that forms a part of the Model 1960 Series printer is provided in the HP Deskjet 6940 Series Printer User's Guide.

Table 2-1. Physical Specifications

CHARACTERISTIC	DESCRIPTION
Dimensions	19.00"W x 8.72"H x 15.52"D (See Figure 2-1)
Weight	27 lbs. less slides

Table 2-2. Electrical Specifications

CHARACTERISTIC	DESCRIPTION
Input Voltage: 110-220 VAC input (standard)	90-264 VAC; 50,60 and 400Hz
Input Power Consumption: 110-220 VAC input (standard)	7 Watts Power On, 60 Watts max when printing

(1)Sleep mode/active printing mode.

Table 2-3. Environmental Specifications

CHARACTERISTIC	DESCRIPTION
Temperature: Operating Non-operating	 -20 to 50°C -40 to 85°C
Relative humidity (non-condensing)	10 to 95%
Altitude: Operating Non-operating	 15,000 ft 40,000 ft
Random vibration (non-operating)	0.01 g^2/Hz at 10 to 2,000 Hz
Shock (non-operating)	20 g, 11 ms
EMI/EMC	MIL-STD-461, Methods CE03, CS01, CS02, CS06, RE02, RS02, and RS03.
Fungus	No fungus-nutrient materials

2.7 Introduction

This chapter provides information and instructions required for installation of the Model 1960 Series printer. Information is included concerning chassis installation configuration, unpacking, print cartridge installation, paper supply provisions, connecting of external cabling, software installation, and storage.

2.8 Chassis Installation Configuration

The Model 1960 Series printer is rack-mountable chassis configuration. Chassis dimensions applicable to the installation environment are identified in Figure 2-1. Rack-mount printer configurations may be installed in any 19-inch equipment rack conforming to EIA RS-310.

2.9 Unpacking

Follow the steps listed below to unpack the Model 1960 Series printer and prepare the unit for installation. Packing materials should be retained for future use.

a. Carefully remove the printer from the shipping container. Inspect the unit for any evidence of damage.

2.10 Print Cartridge Installation

The Model 1960 Series printer is shipped without the print cartridges installed. Follow the procedure defined below to install the cartridge.

a. Power on the printer by toggling the circuit breaker to the ON position. Then press the power button on the control panel. Wait for the steady power LED to indicate the printer is ready.

b. Open the top cover.

c. Raise the cradle latch.

d. Slide out the cartridges (if replacing a cartridge).

e. Remove the print cartridges from the packaging and remove the pull tab and clear tape. Do not touch the copper nozzles.

CAUTION

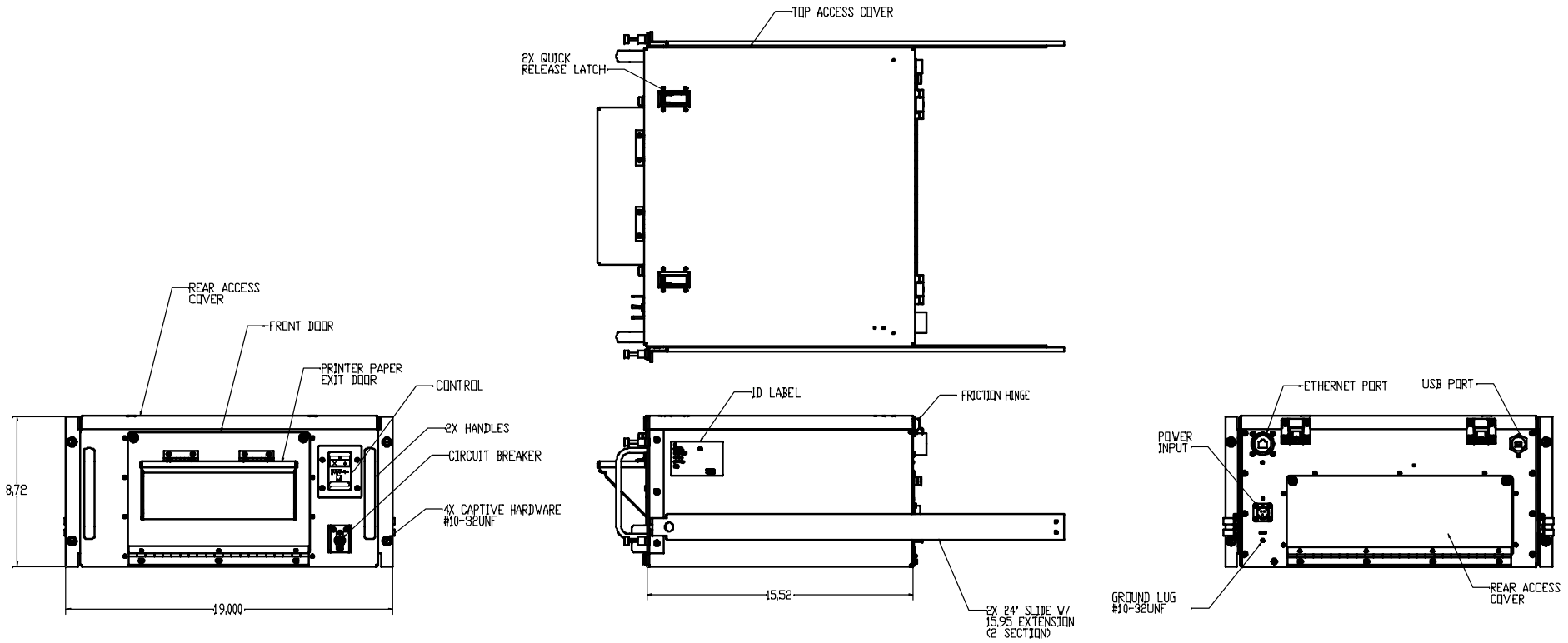
To prevent damage, do not touch the copper surfaces of the electrical contacts or ink nozzles.

f. Push in the cartridge.

g. Secure the latch.

h. Close the top cover.

Figure 2-1. Installation Dimensions



2.11 Paper Supply

The paper tray will accommodate approximately 150 sheets of letter, A4, executive, B5 (ISO), B5 (J15), legal paper. The paper tray is accessible through the front panel door. Tray guides may be adjusted to accommodate the supported media sizes. Paper supply specifications are provided in Table 2-4.

Table 2-4. Paper Supply Specifications

PAPER SOURCE	PAPER TYPE	DIMENSIONS	WEIGHT
Paper Tray	Cards	3 x 5 in. minimum (76 x 127 mm) 5 x 8 in. maximum (127 x 203 mm)	Up to 110 lb (up to 200 g/m^2)
	Transparency	Same as letter and A4	0.0039 to 0.0045 in. thick (0.099 to 0.114 mm)
	Labels	Same as letter and A4	0.005 to 0.007 in. thick (0.127 to 0.178 mm)
	Envelopes	3.54 x 8.07 in. thru 4.72 x 9.49 in.	20 to 24 lb (70 to 90 g/m^2)
	Letter A4 Executive B5 (ISO) Legal	8.5 x 11 in. (216 x 279 mm) 8.3 x 11.7 in. (210 x 297 mm) 7.3 x 10.5 in. (191 x 267 mm) 6.9 x 9.9 in. (176 x 250 mm) 8.5 x 14 in. (216 x 356 mm)	16 to 24 lb (60 to 90 g/m^2)
	Photographic	4 x 6 in. minimum (101 x 152 mm) 8.5 x 11 in. (216 x 279 mm)	Up to 75 lb (Up to 280 g/m^2)

2.12 External Cable Installation

All external interfaces for the Model 1960 Series printer are located at the rear panel (Figure 2-2). External connector signal assignments are defined in Chapter 1. Perform the following steps to connect external cabling.

a. Verify that the front panel circuit breaker is in the “off” position.

b. Connect the system ground cable to the ground stud on the rear panel.

c. Install the host computer data interface cable.

d. Connect the power cable to the power input connector on the rear panel.

> Caution
>
> Verify that the power source conforms to the input power configuration defined in Chapter 1.

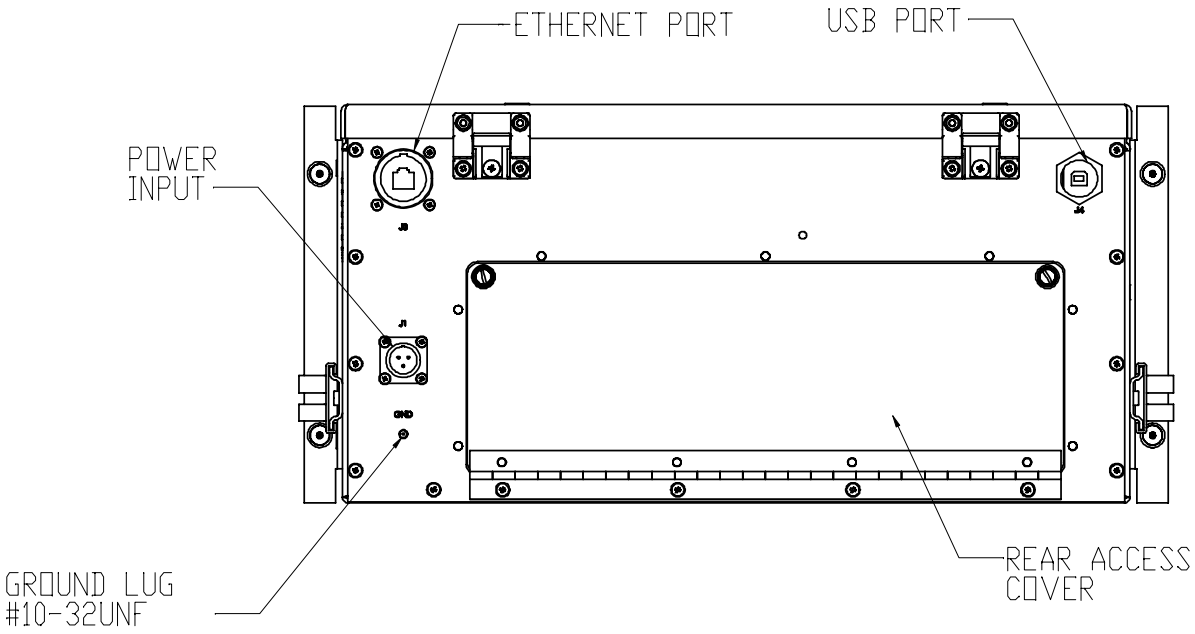
2.13 Software Installation

The HP Deskjet 6940 software must be installed before the Model 1960 Series printer can be used. Information and instructions required for installation and configuration of printer software are provided in the HP Deskjet 6940 Series Printer User’s Guide.

2.14 Limited Operation, Storage, and Transportation

If the printer is not operated for more than 1 week, the print cartridge should not be removed. If the printer is to be stored or transported, the unit should be packaged as originally shipped. The printer can be stored or transported in any manner that is consistent with the environmental conditions identified in Table 2-3.

Figure 2-2. Rear Panel



3.0 OPERATION

3.1 Introduction

This chapter provides information concerning printer controls and indicators, test printing, normal operation, error conditions, and shutdown. Before the unit is powered up for the first time, verify that the installation procedures defined in Chapter 3 have been performed.

3.2 Controls and Indicators

All controls and indicators required for operation of the Model 1960 Series printer are located at the front panel of the unit (Figure 3-1). Control console switches and indicators are shown in Figure 3-2. Controls and indicators are described in Table 3-1. Printer status indications for normal operation are identified in Table 3-2.

Figure 3-1. Front Panel

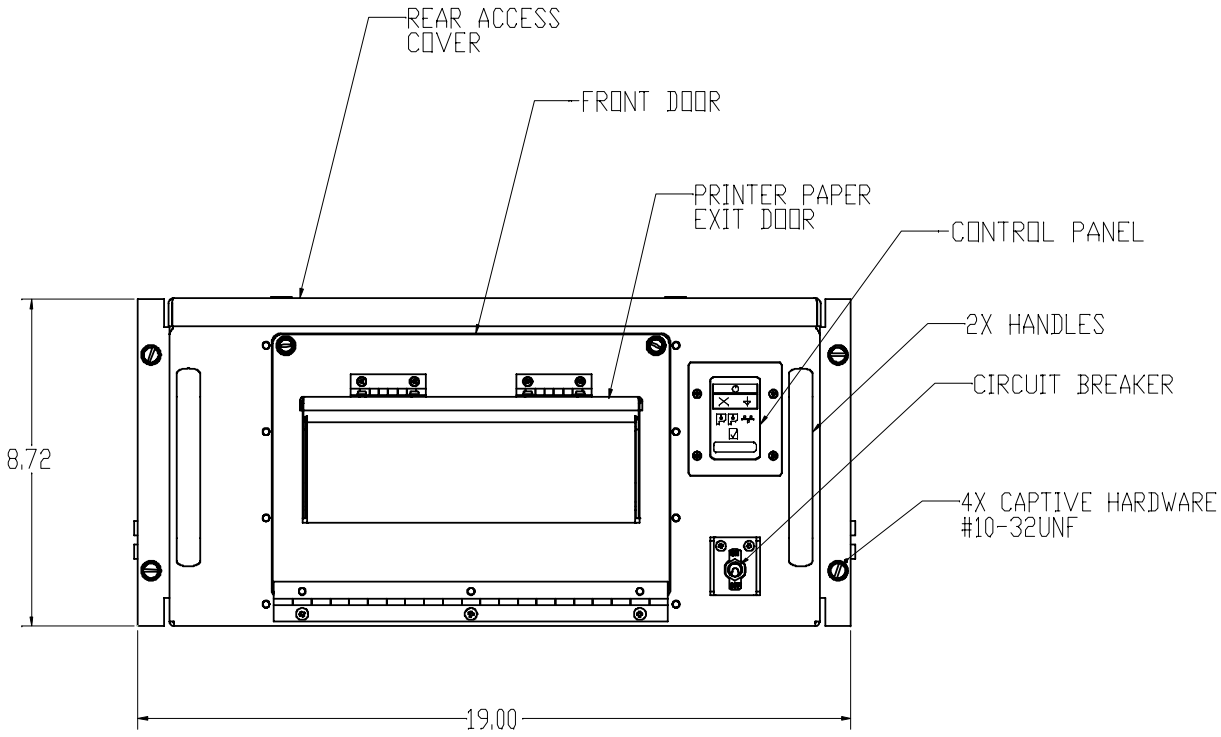


Figure 3-2. Control Console

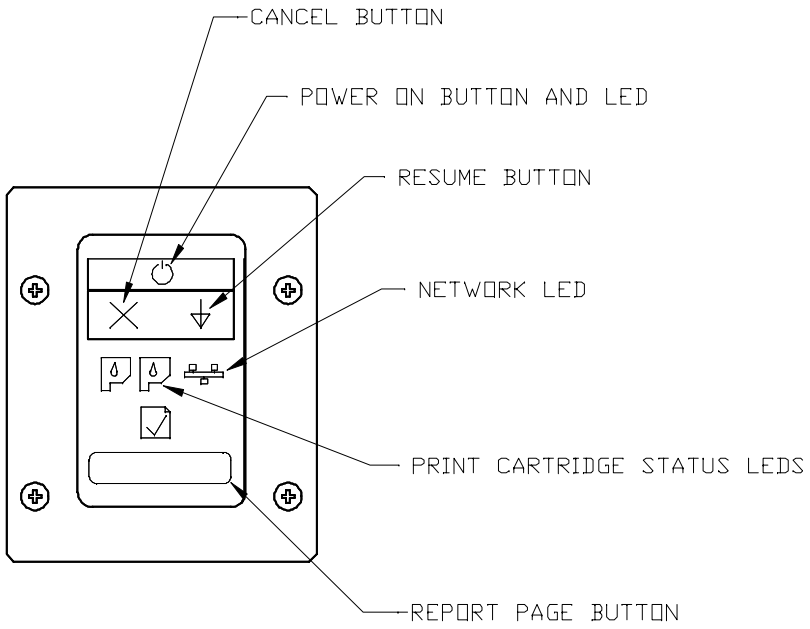


Table 3-1. Controls and Indicators

DESCRIPTION	FUNCTION
Circuit breaker/switch	On/off switch and over current-protection device for prime power.
Power LED	Illumination indicates that the printer is ready to perform print operations.
Print Cartridge LED'S	Illumination indicates that the printer ink cartridges require service.
Network LED	Illumination indicates that the printer is network ready.
Power button	When pressed: • The printer will turn on and off. The POWER LED will illuminate when the printer is turned on.
Resume button	When pressed: • Printing will resume if the printer is paused or jammed
Cancel button	When pressed: • Terminates a print job that is in progress.

3.3 Configuration and Test Printouts

3.3.1 Test Page

The test page may be printed from the printer software. Configuration and test printouts contain the following information:

TEST TYPE	DESCRIPTION	TEST EXECUTION
Test Page	Identifies the current driver and port settings.	Accessible from the HP Deskjet Utility area of the system software.
Report Page	Identifies the current settings and options for the printer.	Press Report Page button on control panel.

3.3.2 Normal Operation

Follow the instructions defined below to operate the printer under normal conditions.

a. Power-up the host computer.

b. Place the printer power switch in the "on" position.

c. Press the power button to turn on the printer.

d. Verify that the POWER LED illuminates after completion of the self-test/warm-up sequence. Once the printer has achieved a ready state, no manual intervention is required to conduct routine print tasks.

3.3.3 Stopping a Print Job

A print job can be terminated from the application software, from a print queue, or by pressing the front panel CANCEL switch. If a job has not started printing, terminate the process with the application software or at the print queue. If printing has started, terminate the process by pressing the CANCEL switch. The printer will finish any pages that are already moving through the printer and delete the rest of the job. Pressing the CANCEL switch during a print operation will cancel only the current job.

3.4 Error Conditions

When the printer incurs an error condition, a status indication will be displayed at the control console. Refer to Chapter 6 for a description of console error indications and recommended corrective action.

3.4.1 Clearing Paper Jams

Paper jams are most commonly caused by one of the following conditions:

- Paper tray loaded improperly or overfilled.
- Print media does not meet specifications (Table 2-4).

Paper jams normally occur in the paper feed or the rear paper guide areas (Figure 3-3). Procedures for clearing obstructions in the paper path are identified in the following paragraphs.

Do not clear a paper jam front the front of the printer.

a. Press the resume button. If the jam is not cleared the proceed to the next step.

b. Turn the printer off.

c. Open the rear door and remove the rear paper guide using the 2 release levers. Press the levers towards each other and remove the guide.

d. Remove the paper jam

e. Replace the rear paper guide and close the rear door.

f. Turn on the printer and press the Resume button.

3.5 Shutdown

The printer enters standby mode when no data is being received from the host computer. It is not necessary to power down the printer when the unit is not used for limited periods. When the printer is to be taken out of service, perform the following shutdown sequence:

a. Ensure that the printer is not receiving data from the host computer.

b. Press the Power button on the control panel. The power LED will extinguish.

c. Place the printer power switch in the “off” position.

4.0 FUNCTIONAL DESCRIPTION

4.1 Introduction

This chapter describes the major functional elements of the Model 1960 Series printer. Information is provided concerning power distribution, the printing subsystem, control console, and cooling system. Chassis interconnections are identified in Figure 4-1.

4.2 Printer Description

The Model 1960 Series printer provides inkjet hardcopy output of data received from a host computer. The standard printer configuration incorporates a USB interface and an Ethernet port. The mechanical and electrical subsystems of the printer are described in the following paragraphs.

4.2.1 Power Distribution

The Model 1960 Series printer utilizes the DC primary power subsystem of the commercial print engine. Prime power enters the chassis at the rear panel J1 connector. Power is sent through an EMI filter that provides attenuation of interference related to input voltage and output current. Prime power exits the filter and is routed to a circuit breaker/power switch at the front panel. The load side of the circuit breaker provides power to the print engine input-power connector. A chassis ground stud is located on the rear panel of the unit.

4.2.2 Printing Subsystem

The Model 1960 Series printer incorporates the printing subsystem architecture of the Hewlett Packard Deskjet 6940 as follows:

- “Processor System” – Monitors and controls all of the printer’s mechanical and electrical subsystems. It is the center of the printer’s operation. The Processor System receives print data from the host, processes the image, and transfers it to the Image System. It also provides the interface between the user and the printer through the control panel.
- “Image Formation System” – Produces the actual physical image on the page.
- “Paper Pick and Feed System” – Moves paper or other print media through the printer from the paper tray.

4.2.2.1 Print Cycle

The processor system is the main module during printer operation. The processor system formats a link which operates as a data bus. This lets printer status, command information, and dot-image data to be passed between the systems.

Figure 4-1. Chassis Interconnections

4.2.2.2 Paper Movement

The paper feed system automatically picks print media from the paper tray and delivers it to the registration roller. Before the media reaches the registration roller, the separation pad separates any excess sheets of media and the registration shutter corrects the media's skew.

A top-of-page sensor detects the leading edge of the page. The paper is synchronized to the leading edge of the image on the print carriage and transferred to the paper.

The paper exits the printer through the front output bins.

4.2.3 Control Console

All controls and indicators required for printer operation are located at the front panel of the unit. The primary control panel includes the Power/Resume/Ink/Network indicators and the Power/Resume/Cancel/Report Page switches. The control panel assembly interfaces with the print engine processor system. The circuit breaker/power switch interfaces with the line filter and print engine power-input connector. Printer controls and indicators are described in Chapter 4.

4.2.4 Cooling

The cooling system of the Model 1960 Inkjet Printer is passive conduction and convection. There are no cooling fans. This engine has a low power consumption of 60 watts max when printing. Typical printing is 25 watts.

5.0 MAINTENANCE

5.1 Introduction

This chapter provides information and instructions concerning Model 1960 Series printer tools and test equipment, periodic maintenance, fault isolation, and the removal and installation of replaceable components and subassemblies.

5.2 Tools and Test Equipment

The following tools and test equipment are required to maintain the printer:

- Common hand tools
- Digital voltmeter
- Host computer with compatible data interface

5.3 Periodic Maintenance

5.3.1 Print Engine

Normal print operations result in the depositing of residual paper and print particles within the printer interior. The print mechanism may be cleaned with a lint-free cloth. As a minimum, the printer interior should be cleaned whenever the print cartridge is replaced. Detailed information pertaining to cleaning of the printer interior is provided in the HP Deskjet 6940 Series Printer User's Guide.

5.3.1.1 Calibrating a Print Cartridge

The printer automatically performs a calibration when the print cartridges are replaced. If the alignment of the cartridges has changed then a manual calibration is required.

a. Open Printer Properties.

b. Select the Services tab.

c. Open the HP Toolbox menu.

d. Select the Calibrate The Device and follow the on screen instructions.

5.3.1.2 Cleaning the Print Cartridges

The print cartridges can become contaminated of there is excessive debris that enters the printer housing. If the print quality degrades then an automatic print cartridge cleaning is required.

a. Open Printer Properties.

b. Select the Services tab.

c. Open the HP Toolbox menu.

d. Select the Clean the Print Cartridges and follow the on screen instructions.

5.3.1.3 Manually Cleaning the Print Cartridges

If the print cartridges require further cleaning then a manual cleaning may be required.

a. Press the ON/OFF switch.
b. Open the top cover and the cradle moves to the center.
c. Remove the source power.
d. Remove the print cartridges and place with the nozzle side up.
e. Clean on both sides of the nozzles with distilled water and cotton swabs or other soft, lint-free material. DO NOT clean the nozzles. DO NOT have the print cartridges removed for more the 30 minutes as the nozzles can become clogged.
f. Clean the cradle walls.
g. Re-install the print cartridges.
h. Connect the power source.
i. A calibration page will begin. Follow the on screen instructions.

5.4 Fault Isolation

If front panel status indicators reflect a normal operational state (Table 5-2) and the printer will not function properly, refer to Table 5-1. If indicators reflect an error condition, refer to the status descriptions and recommended corrective action provided in Table 5-2.

WARNING

POTENTIALLY LETHAL VOLTAGES EXIST WITHIN THE PRINTER. SERIOUS INJURY MAY RESULT IF SAFETY PRECAUTIONS ARE NOT OBSERVED. FAULT DIAGNOSIS PROCEDURES REQUIRE THAT INTERNAL COMPONENTS BE TESTED WHEN PRIME POWER IS APPLIED. THESE COMPONENTS MUST ONLY BE TOUCHED WITH THE APPROPRIATE TEST EQUIPMENT.

Table 5-1. General Fault Isolation

FAULT CONDITION	RECOMMENDED ACTION
Printed page is not produced when job is issued from host computer.	Verify that host software is configured correctly. Use the software menu to print a test page. If page does not print: • Check the paper supply in the tray. • Verify that the print queue is clear. • Check the power and data interfaces are secure. • Verify the top door is closed. • Verify the rear access door is secured. • If a jam occurs, refer to 4.5.1.
Printed page is blank or of poor quality.	Check the print cartridges. Check paper type and quality (Table 2-4). Adjust print density through the host software. Verify that printer and host computer are configured for the same language. Install a new print cartridge. Verify that sealing tape is removed from print cartridge.
Printer is slow.	Multiple applications are running on the host computer. Complex documents or graphics are printing. Automatic paper option is selected.
Front panel indicators reflect an error state.	Refer to Table 3.2
Print operations are conducted successfully, but control panel switches or indicators do not respond correctly.	Replace control panel.

Table 5-2. Error Indications

ERROR INDICATIONS			PROBABLE CAUSE / RECOMMENDED ACTION
RESUME	**INK**	**POWER**	
BLINKING	OFF	ON	• Paper Out The printer is out of paper. Fill the tray with paper and press the RESUME switch to continue. • Paper jam If there is a paper jam, the printer will attempt to clear the jam. If the printer is unsuccessful, it will continue to display the Blinking Error message until the cause is remedied. Pressing the CANCEL switch will cancel the print job and the printer will return to Ready unless there is a paper jam still in the printer. See “Clearing Paper Jams” on page 24.
OFF	ON	ON	• Print cartridge missing Verify the correct ink cartridges are installed. • Print cartridges are low on ink. • Print cartridge improperly installed
OFF	OFF	BLINKING	• Printer is printing.
ON	ON	ON	• Printer is stalled. Cycle power to clear.

5.5 Replaceable Components and Subassemblies

The following paragraphs include information concerning replaceable components and subassemblies. Item locations are shown in Figure 5-1. The following items are replaceable within an organizational-level maintenance activity:

- Print Cartridge
- Control Panel
- EMI Filter
- Circuit Breaker/Power Switch
- Print Engine Assembly

WARNING

POTENTIALLY LETHAL VOLTAGES EXIST WITHIN THE PRINTER. SERIOUS INJURY MAY RESULT IF SAFETY PRECAUTIONS ARE NOT OBSERVED. DISCONNECT THE POWER SOURCE BEFORE PERFORMING REPAIR PROCEDURES.

NOTE
Observe precautions relating to electrostatic discharge (ESD) when handling components that include integrated circuitry.

5.5.1 Print Cartridge Replacement

Removal:

a. Turn on the printer.
b. Open the top cover of the printer.
c. Raise the print cartridge retainer.
d. Lift the print cartridge from the cradle.

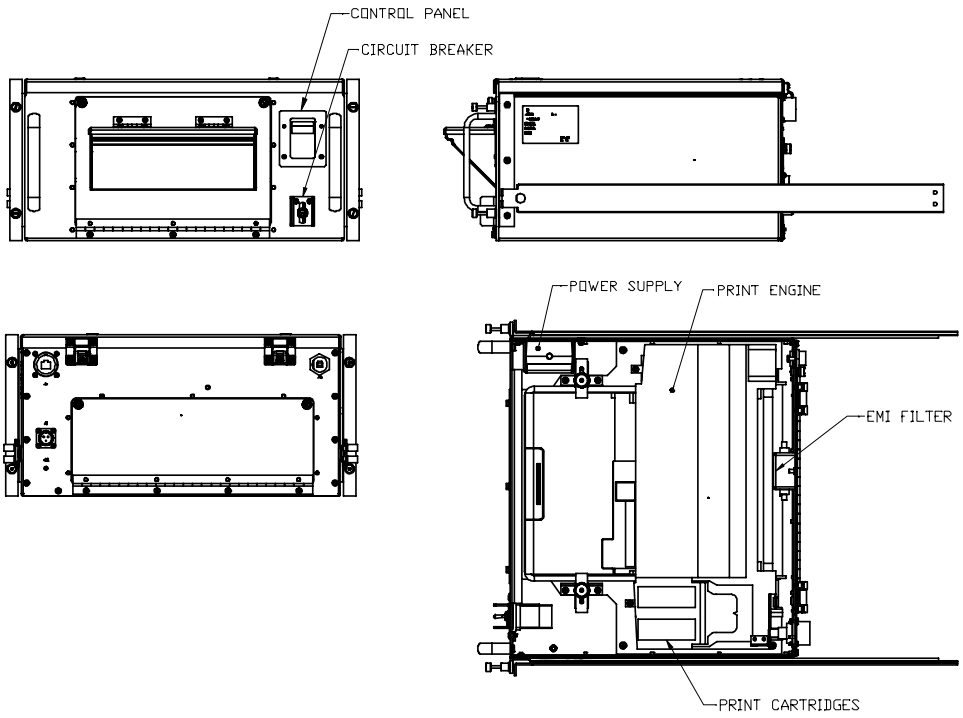
Installation:

a. Remove the new print cartridge from the packaging material.
b. Carefully remove the sealing tape from the cartridge.

CAUTION
Do not touch the print cartridge ink nozzles or electrical contacts. Touching these areas will result in clogs and ink failure.

c. Firmly insert the cartridge in the cradle.
d. Secure the print cartridge retainer.
e. Close and secure the top cover of the printer.

Figure 5-1. Field Replaceable Units



5.5.2 Control Panel Replacement

Removal:

a. Open the top cover of the printer.
b. Disconnect the control panel harness.
c. Remove the 4 screws that secure the control panel to the inside of the front panel.
d. Remove the control panel from the inside of the front panel.

Installation:

a. Position the control panel on the front of the chassis.
b. Install the hardware that secures the control panel to the front panel.
c. Connect the control panel harness.
d. Secure and close the top cover of the printer.

5.5.3 EMI Filter Replacement

Removal:

a. Open the top cover of the printer.
b. Remove the two nuts that secure the EMI filter to the inside of the rear panel.
c. Disconnect EMI filter harness terminals (note wire assignments).
d. Remove the EMI filter from the chassis.

Installation:

a. Position the EMI filter on the mounting studs.
b. Connect EMI filter harness terminals.
c. Install the hardware that secures the filter.
d. Close and secure the top cover of the printer.

5.5.4 Circuit Breaker/Power Switch Replacement

Removal:

a. Open the top cover of the printer.
b. Remove the hardware that secures the switch guard and circuit breaker to the housing.
c. Disconnect the harness terminals from the load side of the EMI filter (note wire assignments).
d. Disconnect the input power connector from the power supply.
e. Cut the cable straps that secure the circuit breaker/power switch harness to the chassis.
f. Remove the circuit breaker/power switch cable from the printer.

Installation:

a. Position the circuit breaker/power switch in the front panel. Position the ON/OFF faceplate on the switch.
b. Install the hardware that secures the circuit breaker/power switch to the front panel.
c. Connect the input power connector to the power supply.
d. Connect harness terminals to the load side of the EMI filter.
e. Secure the circuit breaker/power switch harness to the chassis with new cable straps.
f. Close and secure the top cover of the printer.

5.5.5 Print Engine Assembly Replacement

Removal:

a. Open the top cover of the printer.
b. Disconnect the input power connector from the power supply.
c. Disconnect the data I/O interface cable(s) from the processor board.
d. Disconnect the control panel interface cable connector.
e. Remove the 2 screws that secure the print engine to the mounting plate.
f. Lift the print engine out of the chassis.

Installation:

a. Position the print engine on the mounting plate.
b. Install the hardware that secures the print engine to the mounting plate.
c. Connect the control panel interface cable connector.
d. Connect the data I/O interface cable(s) to the processor board.
e. Connect the input power connector to the power supply.
f. Close and secure the top cover of the printer.