Model 1980 Series
Ruggedized Color Laser Printer

Operation and Maintenance Manual

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

Data Rights Provisions

RECORD OF CHANGES

Date	Revision	Description of Change
051202	–	INITIAL RELEASE

Contents

Figures

Tables

1. CONFIGURATION

1.1. Introduction

This chapter defines the standard configuration of a Model 1980 Series Color Laser 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 Interconnect Drawing (-32X) and Installation Control Drawing (-20X) for the specific part number if other than standard.

Table 1-1. Standard Configuration

Characteristic	Description
Top Assembly Part No.	140722-1XX (where XX is a specific part number ie 140722-101)
Input Power	110 VAC 50/60/400 Hz
Memory	64 Mb Standard 320Mb Optional
Installation Configuration	Table Top Standard Rackmount Optional

Table 1-2. Field Replaceable Units

Description	Part No.	Quantity Per Chassis
Black Toner Cartridge		1
Cyan Toner Cartridge		1
Magenta Toner Cartridge		1
Yellow Toner Cartridge		1
Black Drum		1
Cyan Drum		1
Magenta Drum		1
Yellow Drum		1
Fuser		1
Belt Unit Assembly		1
Dust Filter		1
Paper Cassette Tray		1
Print Engine Assembly		1
EMI Filter		1
Circuit Breaker/Power Switch		1
Control Panel		1

Table 1-3. External Cables/Connector

Function	Part No.
Power Input	

Table 1-4. External Connector Signal Assignments

Connector	Function	Pin	Signal
J1	AC Line Power	A B C	AC HOT NEUTRAL CHASSIS GROUND
J2	Parallel Interface	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36	DATA STROBE DATA BIT 0 DATA BIT 1 DATA BIT 2 DATA BIT 3 DATA BIT 4 DATA BIT 5 DATA BIT 6 DATA BIT 7 ACKNLG BUSY PAPER OUT SELECT AUTO LF NC LOGIC GND CHASSIS GND +5V GND GND GND GND GND GND GND GND GND GND GND GND INIT FAULT GND UNDEFINED UNDEFINED DSL

Connector	Function	Pin	Signal
J3	Ethernet 10/100BaseT	1 2 3 4 5 6 7 8	TX+ TX- RX+ NC NC RX- NC NC
J4	USB v2.0	1 2 3 4	VBUS DATA - DATA + GND

2. GENERAL INFORMATION

2.1. Scope

This manual provides information and instructions required for the operation and maintenance of the Model 1980 Series Color Laser Printer manufactured by DataMetrics Corporation.

2.2. Applicable Documents

<u>Military Standards</u>

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

<u>Commercial Standards</u>

IEEE-1284B   Standard Signaling Method, Bi-directional Parallel Peripheral Interface

<u>Okidata</u>

C5400n Printer User's Guide (on CD)

C5400n Printer Drivers (on CD)

C5400n Handy Reference Guide

C5400n Setup Guide

C5400n Computer Connections and Software Install Guide

C5400n Warranty, Regulatory and Safety Information

Repack Procedure

2.3. Printer Description

The Model 1980 Series printer is a ruggedized, general-purpose laser 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.

2.4. Specifications

Equipment specifications for the Model 1980 Series printer are defined below.

Print Technology	Electrophotographic Laser
Processor	400MHz
Print Speed	24 ppm Black 16 ppm Color
Warm Up	85 sec
First Page	9 sec Black 13 sec Color
Resolution	1200 x 600 dpi
Memory	64MB standard up to 128MB, 192MB or 320MB optional
Paper Input	300 sheets with paper tray 100 sheets with multi-purpose tray
Paper Sizes	Executive (7.25" x 10.5") Letter (8.5" x 11.0"), Legal (8.5" x 14.0"), A4 (8.3" x 11.7"), A5 (5.8" x 8.3"), A6 (4.1" x 5.8") B5 (6.9" x 9.8")
Media Types	Plain paper 20 – 32 lb, Transparencies, Labels, Envelopes, Banners
Connectivity	Windows XP, 2000, NT4, Me, 98, 95, Mac 10.x and higher, Linux 2.0 and higher, Solaris 2.8 and higher
Language	PCL5c, Adobe Postscript 3
Fonts	80 PCL, 136 Postscript
Interfaces	IEEE-1284 parallel, USB v2.0 Ethernet 10/100BaseT (OkiLAN internal print server)
Duplexing	Optional

2.5. Supplementary Documentation

Supplementary information pertaining to the commercial hardware and software that forms a part of the Model 1980 Series printer is provided in the Okidata C5400n Printer manual (on CD) and guides. This information is also available at www.okidata.com.

Table 2-1. Physical Specifications

Characteristic	Description
Dimensions	19.00" W x 24.21"D x 15.00" H [1]
Weight	80 lb

[1] See Installation Control Drawing.

Table 2-2. Electrical Specifications

Characteristic	Description
Input Voltage 110 Vac input (standard)	90 to 132 Vac, single-phase, 47 to 63 and 400 Hz
Input Current 110 Vac input (standard)	Idle 0.41 A Printing 8.0 A

Table 2-3. Environmental Specifications

Characteristic	Description

Temperature
 	
    Operating
 	
    Non-operating
	
	0 to 50°C
	
	-20 to 71°C

Relative humidity (non-condensing)	20 to 80%

Altitude
 	
    Operating
 	
    Non-operating
	
	15,000 ft
	
	40,000 ft

Sinusoidal vibration (operating)	1.5 g's at 5-200 Hz
Shock (non-operating)	30 g, 11 ms
EMI/EMC	MIL-STD-461, Methods CE03, CS01, CS02, CS06, RE02, RS02, and RS03.
Fungus	No fungus-nutrient materials

3. INTRODUCTION

3.1. Scope

This chapter provides information and instructions required for installation of the Model 1980 Series printer. Information is included concerning chassis installation configuration, unpacking, toner cartridge installation, paper supply provisions, connecting of external cabling, software installation, and storage.

3.2. Chassis Installation Configuration

The Model 1980 Series printer is a standard tabletop configuration and an optional rack mount configuration. Chassis dimensions applicable to the installation environment are identified in Figure 3-1.

3.3. Unpacking

Follow the steps listed below to unpack the Model 1980 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.

    b. Open the front access door. Slide the paper tray out of the printer and remove the shipping retainer from the tray.

3.4. Toner Cartridge Installation

The Model 1980 Series printer is shipped with the toner cartridges installed. However each tone cartridge must be prepared for operation by removing the shipping tape. Follow the procedure defined below to install the cartridge.

    a. Open the top cover of the printer.

    b. Open the top cover of the engine.

    c. Remove each toner cartridge from its packaging. Gently shake the cartridge to evenly distribute the toner.

Caution
To prevent damage, do not expose the cartridge to light for more than a few minutes.

    d. Remove the sealing tape from the cartridge.

    e. Insert each cartridge in the proper location for the black, yellow, cyan and magenta colors. Move the cartridge into the guides until it stops in the printer.

    f. Close the top cover of the engine.
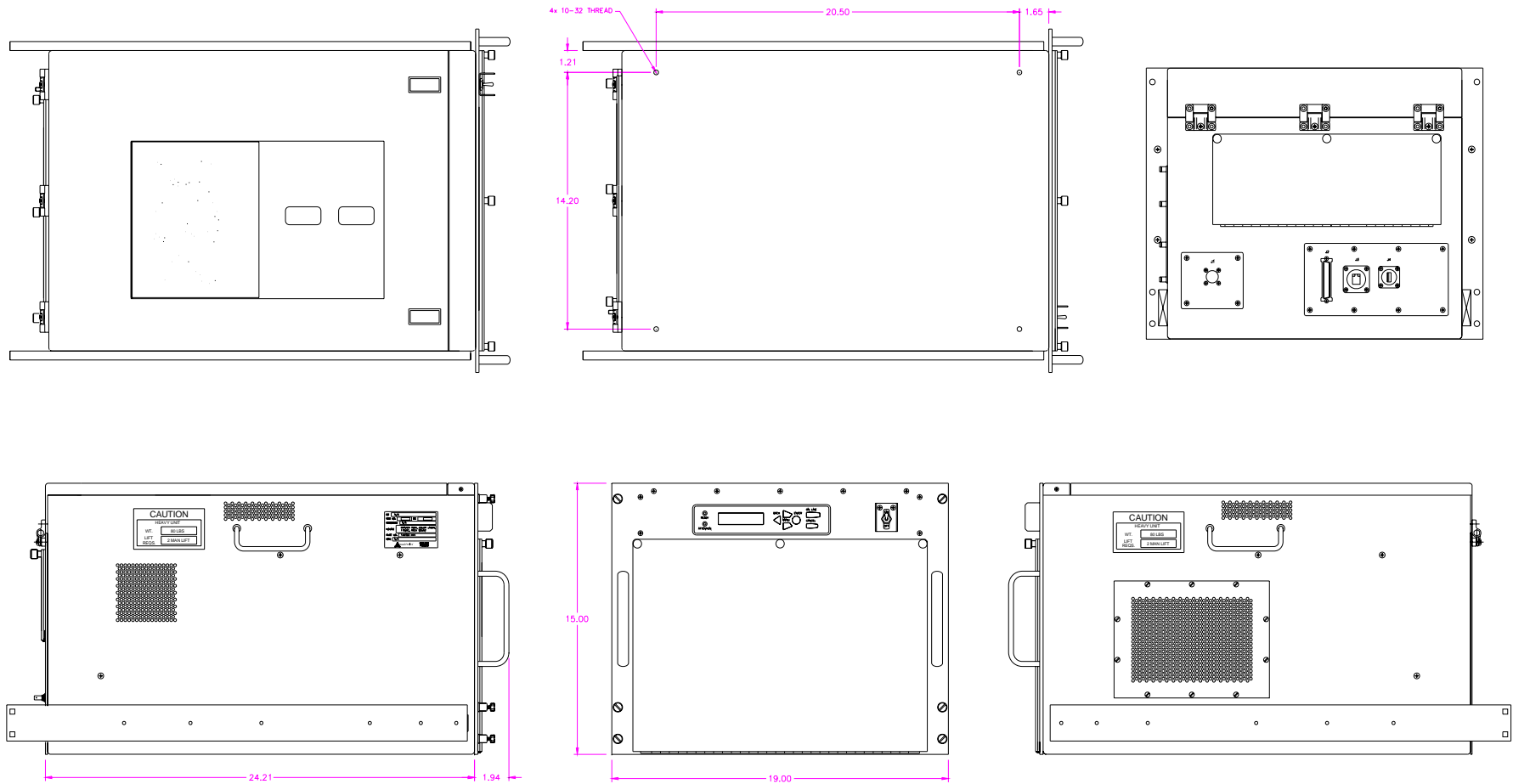
    g. Close the top cover of the printer.

Figure 3-1. Installation Dimensions

3.5. External Cable Installation

All external interfaces for the Model 1980 Series printer are located at the rear panel (Figure 3-2). 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 ac input connector on the rear panel.

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

3.6. Software Installation

The Okidata C5400n software must be installed before the Model 1980 Series printer can be used. Information and instructions required for installation and configuration of printer software is provided in the Okidata C5400n Printer User's Guide on the supplied CD.

The control panel language can be selected from the System Configuration Menu (Sys Config Menu) in the menu settings.

3.7. Limited Operation, Storage, and Transportation

If the printer is not operated for more than 1 week, the toner cartridges should be removed and stored in the supplied black plastic bags. If the printer is to be stored or transported, the unit should be packaged as originally shipped. The toner/drum cartridges should also be stored in the black plastic bags in reinstalled into the printer. The printer can be stored or transported in any manner that is consistent with the environmental conditions identified in Table 2-3.
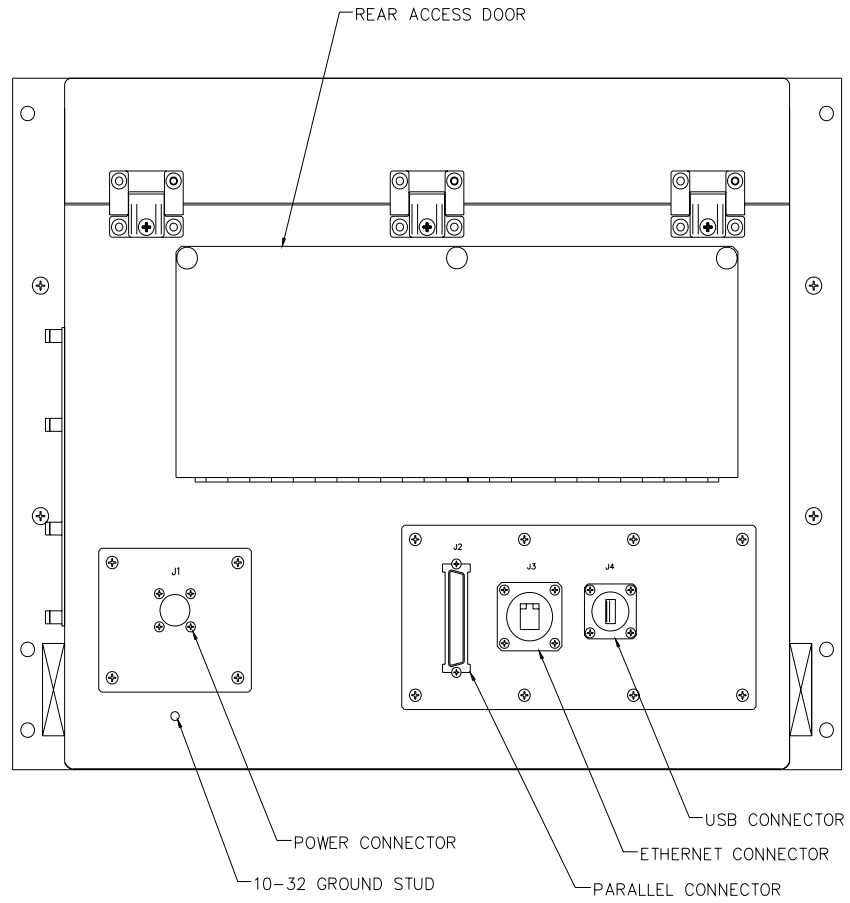
Figure 3-2. Rear Panel

4. OPERATION

4.1. 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.

4.2. Controls and Indicators

All controls and indicators required for operation of the Model 1980 Series printer are located at the front panel of the unit (Figure 4-1). Control console switches and indicators are shown in Figure 4-2. Controls and indicators are described in Table 4-1. Printer status indications for normal operation are identified in Table 4-2.
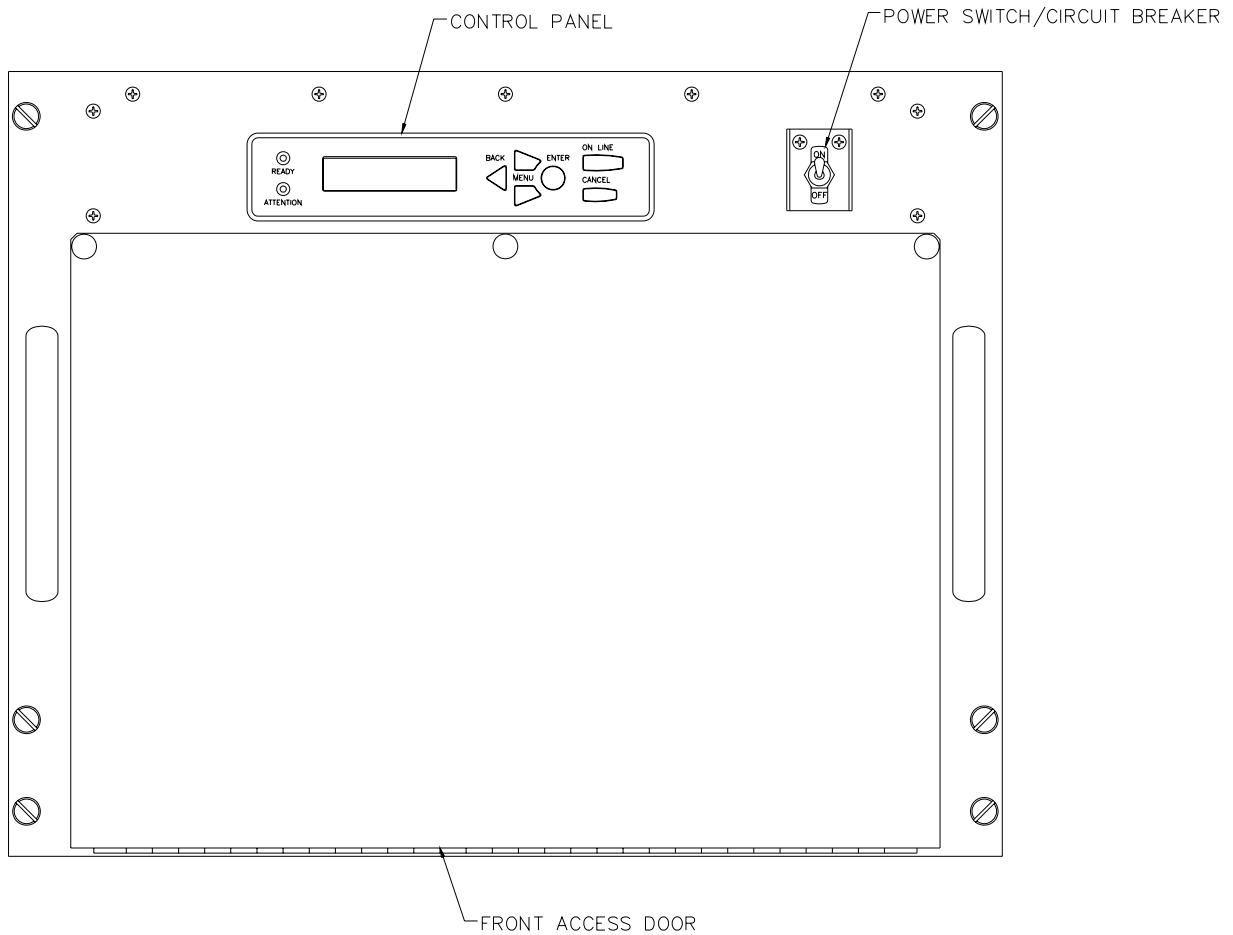
Figure 4-1. Front Panel
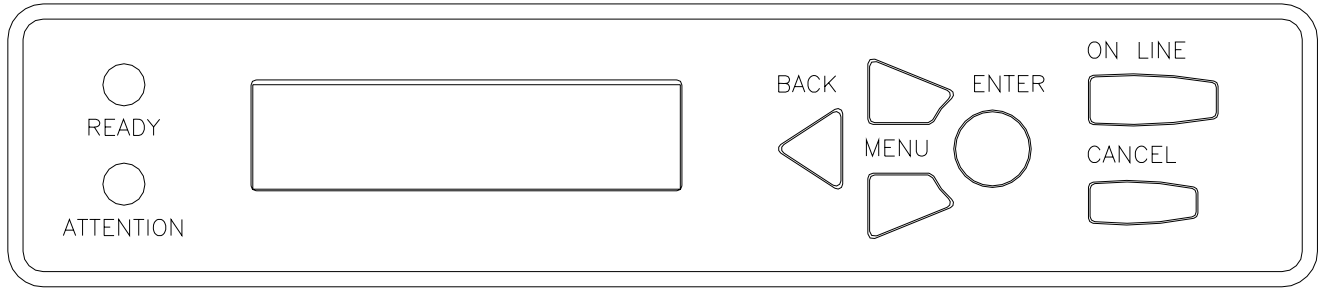
Figure 4-2. Control Console

Table 4-1. Controls and Indicators

Identification	Description	Function
ON/OFF	Circuit breaker/switch	On/off switch and over current-protection device for prime power.
READY	Green LED	Illumination indicates that the printer is ready to perform print operations. Flashes when the printer is receiving data.
ATTENTION	Amber LED	Illumination indicates that the printer has incurred an error or warning condition. See the display for information.
BACK	Switch	Scrolls back one level in the menu.
MENU +	Switch	Enter the menu or scroll to the next category in the menu.
ENTER	Switch	Select the value or item in the menu.
MENU -	Switch	Go back to the previous category or exit the menu.
ON LINE	Switch	Toggle between online and offline status.
CANCEL	Switch	Stop printing the current job.

Table 4-2. Printer Status Indications During Normal Operation

LED	Action	Description
READY	On	Printer is ready.
	Off	Printer is offline.
	Blinking	Printer is receiving data.
ATTENTION	On	Printer has an error or warning status.
	Off	Printer has no errors.
	Blinking	Printer has an alarm status.

4.3. Configuration and Test Printouts

4.3.1. PCL/PostScript

PCL and Postscript font list pages may be printed from the printer control panel. Configuration and test printouts contain the following information:

Test Type	Description	Test Execution
Demo Page	Provides an example of overall print quality.	Accessible from the Okidata menu.
Menu Map	Identifies the current settings and available menus and items for the printer.	Accessible from the Okidata menu.
Error Log	Identifies the current printer settings and options installed for the printer.	Accessible from the Okidata menu.
Font list	Identifies fonts that are currently installed in the printer.	Accessible from the Okidata menu.

4.3.2. Ethernet Print Server

The unit is configured with an Ethernet I/O and a configuration print will invoked the print list all of the EIO information. This configuration printout is accessible from the Okidata menu.

4.4. 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. Verify that the READY 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. Operational parameters are not affected by normal power on/off cycles.

4.4.1. Manual Paper Feeding

Specifications for manual-feed media are defined in para 2.4. Follow the instructions defined below to conduct print operations with media fed manually.

a. Lower the MP TRAY (upper) access door.

b. Slide the paper guides slightly wider than the media.

c. Press down on the loading platform.

d. Position the media in the center of the paper guides with the print side up.

e. Move the media into the manual-feed entry point of the print engine.

f. Press the blue tray latch to engage the paper.

g. Verify that operational software is configured for manual feed.

h. Initiate the print job.

Note

Introduction of media into the manual feeder while a print job is in progress may cause a jam to occur.

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i. When manual feed operations are complete, raise and secure the front panel door.

4.4.2. 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.

4.5. 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.

4.5.1. Clearing Paper Jams

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

- Paper cassette tray loaded improperly or overfilled.
- Paper cassette tray removed.
- Print media does not meet specifications (para 2.4).
- Paper guide at rear of print engine is not secured in closed position.

Paper jams normally occur in the paper feed, toner cartridge, or rear paper guide areas. Procedures for clearing obstructions in the paper path are identified in the following paragraphs.

4.5.1.1. Paper Feed Area

a. Open the front access door.

b. Remove the cassette tray and open the front door.

c. If media has lodged between the paper feed and toner cartridge areas, try first to remove the paper from the toner cartridge area.

d. To remove media from the paper feed area, move the media to the right and then pull it out the front of the printer.

e. Verify that media is positioned correctly in the paper cassette tray.

f. Install the paper cassette tray and close the front door. Raise and secure the front access door.

4.5.1.2. Toner Cartridge Area

a. Open the top cover of the printer.

b. Open the top door of the print engine.

c. Do not rotate the locking arms of the toner cartridge. Remove the 4 toner/drum cartridges.

Caution
To prevent damage, do not expose the cartridge to light for more than a few minutes.

d. If the leading edge of the media is visible, gently pull the paper out of the printer.

e. If the media has entered the output area, refer to 4.5.1.3.

f. Insert the 4 toner/drum cartridges in the print-engine carriage. Verify the cartridges are located in the correct location per the color legend.

g. Close the top door of the print engine.

h. Close and secure the top cover of the printer.

4.5.1.3. Rear Paper-Guide Area

a. Open the rear access cover of the printer.

b. Open the rear paper guide/tray.

c. If the leading edge of the media has reached the output (top) area, pull the release lever located on the fuser and pull the paper out the top. If the media has not reached the top of the printer, pull the release lever and pull the paper out the back of the printer.

d. Close and secure the hinged paper guide at the rear of the print engine.

e. Close and secure the top cover of the printer.

4.6. 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. Place the printer power switch in the "off" position.

5. FUNCTIONAL DESCRIPTION

5.1. Introduction

This chapter describes the major functional elements of the Model 1980 Series printer. Information is provided concerning power distribution, the printing subsystem, control console, and cooling system. Chassis interconnections are identified in Figure 5-1.

5.2. Printer Description

The Model 1980 Series printer provides laser hardcopy output of data received from a host computer. The standard printer configuration incorporates an IEEE-1284B bi-directional parallel interface (Centronics), a 10/100Base-T Ethernet and a USB v2.0 port. The mechanical and electrical subsystems of the printer are described in the following paragraphs.

5.2.1. Power Distribution

The Model 1980 Series printer utilizes the 110Vac primary power subsystem of the commercial print engine. Prime power enters the chassis at the rear panel J1 connector. 110Vac 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 8-ampere circuit breaker/power switch at the front panel for 110Vac. The load side of the circuit breaker provides ac power to the print engine input-power connector. A chassis ground stud is located on the rear panel of the unit.

5.2.2. Printing Subsystem

The Model 1980 Series printer incorporates the printing subsystem architecture of the Okidata C5400n printer as follows:

- "Formatter System" – Receives print data from the host, processes the image, and transfers it to the Engine Control System. The Formatter System also provides the interface between the user and the printer (Control Panel). Monitors and controls all of the printer's mechanical and electrical subsystems. It is the center of the printer's operation. Produces the actual physical image on the page. Moves paper or other print media through the printer from one of the selected input trays (Tray 1 or MP).

Figure 5-1. Chassis Interconnections

5.2.2.1. Paper Movement

The paper feed system automatically picks print media from either Tray 1 or Tray MP 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 photosensitive drum and transferred to the paper. After the transferring stage of the image formation process, the paper is fed to the fusing assembly and fused.

The paper exits the printer through the top or rear output bins.

5.2.3. 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 READY/ATTENTION indicators and the BACK/UP/ /DOWN/ENTER/ONLINE/CANCEL switches. The control panel assembly interfaces with the print engine formatter circuit board. 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.

5.2.4. Cooling

The ruggedized Model 1980 Series printer utilizes the cooling mechanism of the commercial print engine. Cooling air is drawn into the unit by a single fan located on the lower right side of the chassis. The fan is powered by the print engine dc power subsystem. Air is forced across print engine components and exhausted at the top left of the chassis.

6. MAINTENANCE

6.1. Introduction

This chapter provides information and instructions concerning Model 1980 Series printer tools and test equipment, periodic maintenance, fault isolation, and the removal and installation of replaceable components and subassemblies.

6.2. 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

6.3. Periodic Maintenance

6.3.1. Print Engine

Normal print operations result in the depositing of residual paper and toner particles within the printer interior. The interior may be cleaned with a lint-free cloth and using an small vacuum. As a minimum, the printer interior should be cleaned whenever the toner cartridge is replaced. Detailed information pertaining to cleaning of the printer interior is provided in the Okidata C5400n Users Guide.

6.3.2. Dust Filter

The air-inlet filter on the right side of the chassis may be removed and replaced or washed with a mild detergent. The required frequency of cleaning is a function of the particulate concentration of the operating environment.

6.4. Fault Isolation

If front panel status indicators reflect a normal operational state (Table 4-2) and the printer will not function properly, refer to Table 6-1. If indicators reflect an error condition, refer to the status descriptions and recommended corrective action provided in Okidata C5400n Users Guide.

> 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 6-1. 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 for the correct media location (Tray 1 or MP).
	Use the software utility or control panel to print a test page. If test page does not print:
	• Check the paper supply in the cassette tray.
	• Verify that the print queue is clear and that the printer has not been paused.
	• If a jam occurs, refer to 4.5.1.
Printed page is blank or of poor quality.	Redistribute toner in cartridge.
	Clean inside of printer (6.3.1).
	Check paper type and quality (para 2.4).
	Adjust print density through the host software.
	Verify that EconoMode is deselected in the host software.
	Verify that printer and host computer are configured for the same language (PCL/ Postscript).
	Install new toner cartridges.
	Verify that sealing tape is removed from toner cartridge.
Front panel indicators reflect an error state.	Refer to Table 4.2
Print operations are conducted successfully, but control panel switches or indicators do not respond correctly.	Replace control panel. If control panel replacement does not correct problem, replace print engine.

6.5. Replaceable Components and Subassemblies

The following paragraphs include information concerning replaceable components and subassemblies. Item locations are shown in Figure 6-1. The following items are replaceable within an organizational-level maintenance activity:

- Toner Cartridge
- Dust Filter
- Control Panel Assembly

- 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.

6.5.1. Toner Cartridge Replacement

Removal:

   a. Open the top cover of the printer.

   b. Unfasten the toner cartridge retainer.

   c. Pull the toner cartridge toward the front panel and remove the cartridge from the chassis.

Installation:

   a. Remove the new toner cartridge from the packaging material.

   b. Gently shake the cartridge to evenly distribute the toner.

   c. Remove the sealing tape from the cartridge.

   d. Insert the cartridge in the print-engine carriage in the direction of the arrows provided on the cartridge. Move the cartridge into the guides until it stops securely in the printer.

   e. Fasten the toner cartridge retainer.
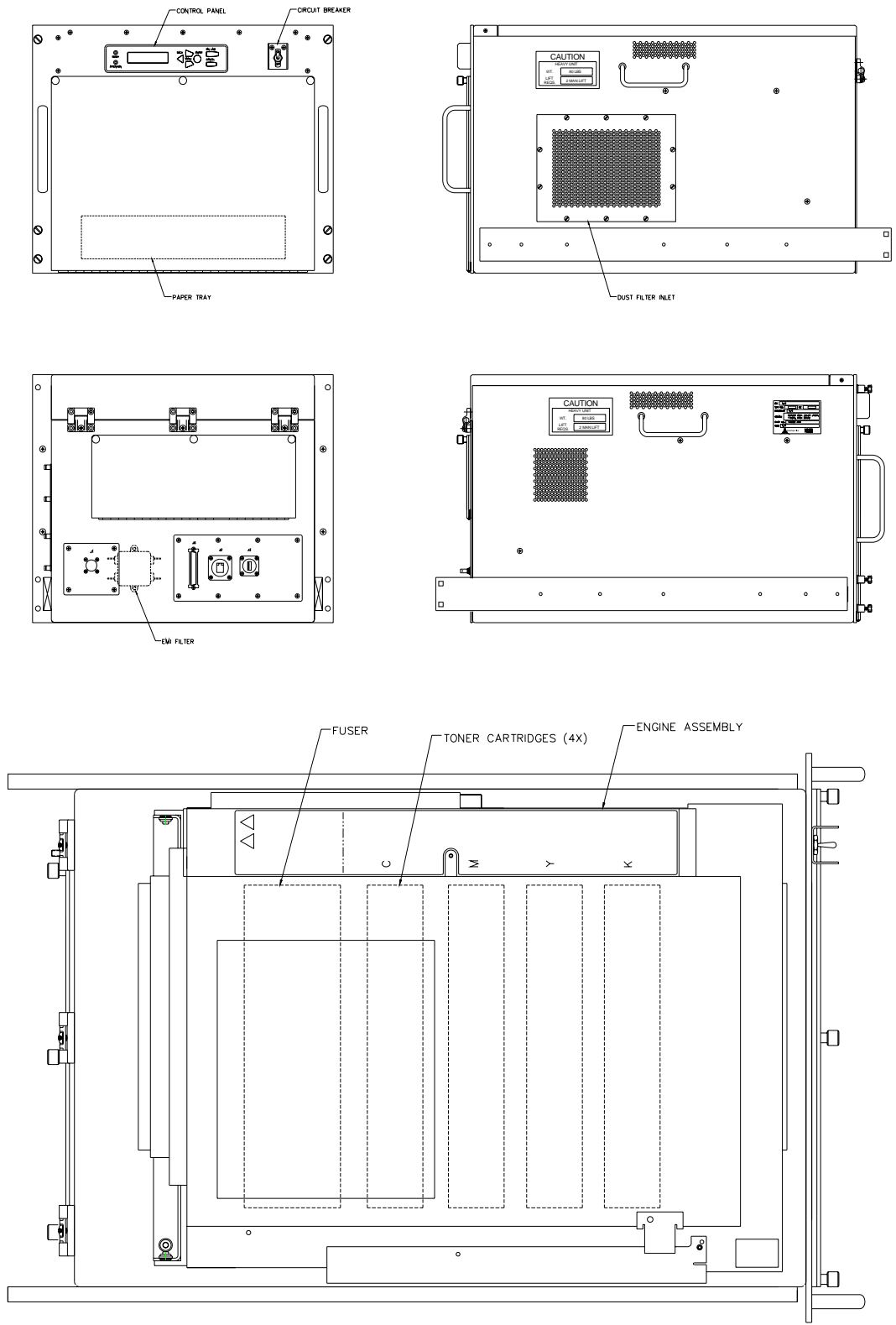
   f. Close and secure the top cover of the printer.

Figure 6-1. Field Replaceable Units

6.5.2. Dust Filter Replacement

Removal:

    a. Remove the filter assembly from the right side of the printer chassis wall. It contains the dust filter, and EMI shield to the inside of the chassis wall.

    b. Remove the dust filter from the filter assembly by removing the mounting hardware that retains the EMI shield.

Installation:

    a. Position the dust filter on the filter assembly and replace the EMI shield and its mounting hardware.

    b. Install the filter assembly to the chassis.

6.5.3. Control Panel Assembly Replacement

Removal:

    a. Open the top cover of the printer.

    b. Disconnect the control panel harness.

    c. Remove the five 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. Close and secure the top cover of the printer.

6.5.4. EMI Filter Replacement

Removal:

    a. Open the top cover of the printer.

    b. Remove the 13x screws securing the rear cover and rotate down.

    c. Remove the two nuts that secure the EMI filter to the rear mounting bracket.

    d. Disconnect EMI filter harness terminals (note wire assignments).

    e. Remove the EMI filter from the chassis.

Installation:

    a. Position the EMI filter on the floor of the chassis near the filter-mounting studs.

    b. Connect EMI filter harness terminals.

    c. Position the EMI filter on the rear mounting bracket and install the hardware that secures the filter.

    d. Secure the rear cover.

    e. Close and secure the top cover of the printer.

6.5.5. Circuit Breaker/Power Switch Replacement

Removal:

    a. Open the top cover of the printer.

    b. Remove the two nuts that secure the EMI filter cover to the rear mounting bracket.

    c. Disconnect ac harness terminals from the load side of the EMI filter (note wire assignments).

    d. Disconnect the ac input power connector from the print engine.

    e. Cut the cable straps that secure the circuit breaker/power switch harness to the chassis.

    f. Remove the nut and 2 screws that secures the circuit breaker/power switch to the front panel. Remove the switch and ON/OFF faceplate from the front panel.

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 ac input power connector to the print engine.

    d. Connect ac harness terminals to the load side of the EMI filter.

    e. Position the EMI filter on the rear mounting bracket.

    f. Secure the circuit breaker/power switch harness to the chassis with new cable straps.

    g. Close and secure the top cover of the printer.

6.5.6. Print Engine Assembly Replacement

Removal:

a. Remove the top cover of the printer. Remove the rear cover.

b. Disconnect the ac input power connector from the print engine.

c. Disconnect the data I/O interface cable(s) from the formatter board then remove the rear mounting bracket.

c. Disconnect the control panel interface cable connector.

d. Remove the 5 screws that secure the print engine base plate to the outer chassis floor.

e. Lift the print engine out of the chassis.

f. Remove the screws that secure each of the four, print engine mounting locations to the base plate.

g. Remove the print engine from the base plate.

Installation:

a. Position the print engine on the base plate.

b. Position the four print engine mounting spacers onto the base plate, reinstall the hardware that secures the engine.

c. Lower the print engine assembly into the chassis.

d. Install the rear mounting bracket and install the hardware that secures the base plate to the chassis floor.

e. Connect the control panel interface cable connector.

f. Connect the data I/O interface cable(s) to the formatter board.

g. Connect the ac input power connector to the print engine. Install the rear cover.

h. Install and secure the top cover of the printer.