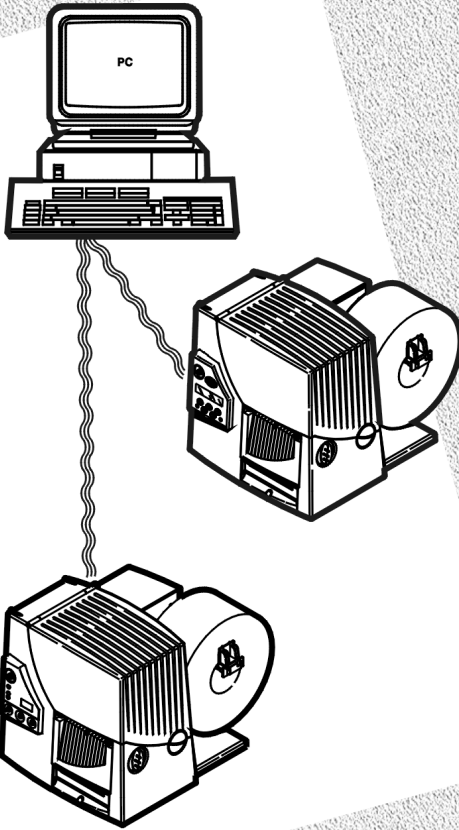


# MonarchNet™ Print Server Operating Instructions



**Monarch®**  
**Printers**

9840™

**Monarch®**  
**PAXAR**

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### **CANADIAN D.O.C. WARNING**

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

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# INTRODUCTION

# 1

## Product Overview

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The Monarch Marking Systems MonarchNet™ Ethernet Printer Server enables Ethernet network users to connect to a parallel printer using a high-speed, bi-directional parallel port.

The Ethernet print server connects to a Monarch® 9840™ printer (version 6.5 or greater).

MonarchNet consists of the following:

- ◆ Operating Instructions for the Ethernet print server (these instructions)
- ◆ Ethernet Print Server

The print server may need to be configured before you can use it. Software is available on Monarch's Web site ([www.monarch.com](http://www.monarch.com)) to configure the print server or you can order part number TC9840ENCD for the MonarchNet Utilities compact disc.

The MonarchNet print server provides multiprotocol capabilities for users with Windows® 95/98/2000, Windows NT®, TCP/IP, and Novell® NetWare®.

## Related Documents

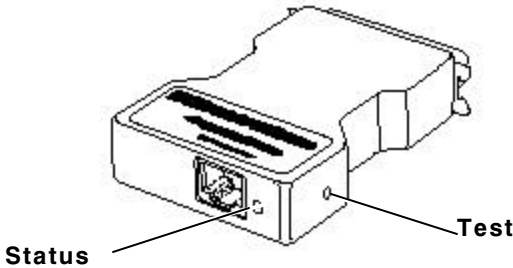
Refer to your printer's Operator's Handbook for related information about printer configuration. A Technical Reference Manual, which includes additional Ethernet set-up and configuration information, is also available on our Web site. You can order part number TC9800ENTR for a printed copy of the Technical Reference Manual.

Also, see your Network Operating System manuals for related information about network configuration and printing operations.

# Hardware Description

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The illustration below displays the back view of the Ethernet print server.



## Parallel Output Port

The parallel output port of the Ethernet print server connects directly to the Centronics connector on most printers.

## 10BASE-T UTP, Unshielded Twisted-Pair Ethernet Cable

Twisted-pair systems use 10BASE-T hubs or concentrators. Adding the Ethernet print server does not interrupt network operation.

## Status Indicator

A bi-color Status indicator displays the general state of the Ethernet print server. In normal operation, the Status indicator flashes orange during power-up self test and then changes to a solid green when it passes the self-test.

- ◆ Solid green indicates a connection has been made with a 10Base-T hub.
- ◆ Flashing green rapidly indicates the network connection is faulty or does not exist.
- ◆ Flashing green slowly indicates print job activity.
- ◆ Solid orange for more than 30 seconds indicates the print server has failed Power On Self Test.
- ◆ Flashing alternately orange and green for longer than two minutes indicates the print server is in firmware download mode.

See Chapter 3, “Troubleshooting” for any problems you may have.

## Test

A test button, located on the side of the Ethernet print server, is provided to allow detailed configuration information to be printed.

- ◆ Restore to Factory Defaults - If the test button is pressed and held when the printer is turned on until the Status indicator turns green, the Ethernet print server configuration parameters are set to Factory Defaults and a configuration sheet prints.





# INSTALLING THE PRINT SERVER

## 2

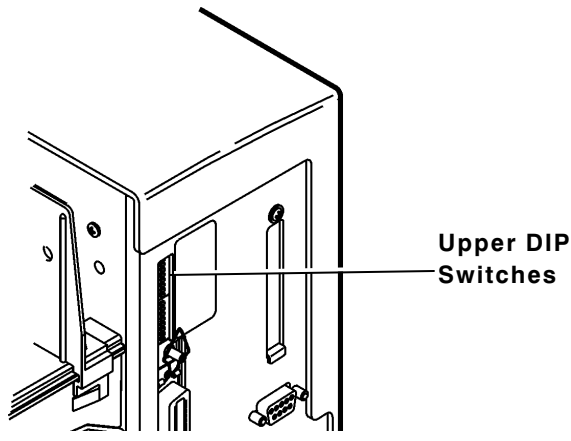
This chapter explains how to install the Ethernet print server.

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If you have not already done so, record the model number, serial number and address of your Ethernet print server and save it for future reference.

---

To use the Ethernet print server, upper DIP switch 8 on the printer must be turned ON. This enables the bi-directional communication.



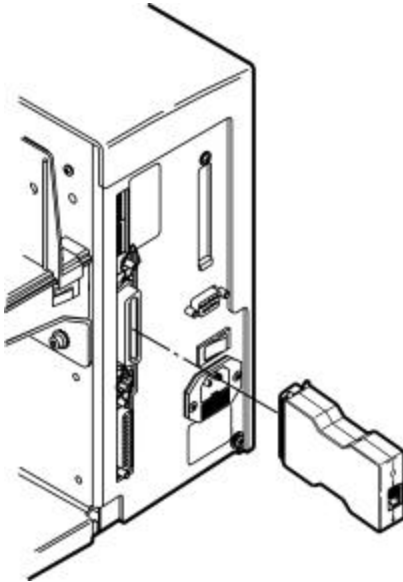
Do not plug any cables into the parallel port when using the Ethernet port.

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A printer with an Ethernet port cannot use the parallel port. However, the serial port is still active.

To install the print server:

1. Turn off the printer by using the printer's power switch or removing the power cord.
2. Attach the Ethernet print server directly to the Centronics® connector on the printer. Secure the Ethernet print server to the printer with the spring clicks on the printer.



3. Attach the 10Base-T UTP cable to the receptacle on the back of the Ethernet print server.
4. Turn on the printer by using the printer's power switch or attaching the power cord.

The status indicator blinks orange during self-test and then changes to green when the self-test completes successfully.

## **Printer Information**

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When turning on the printer or after sending a ^PR (printer reset) immediate command, wait at least eight (8) seconds before sending data to the print server. Any data sent to the print server before the 8-second interval may be lost. For more information about immediate commands, refer to the optional Packet Reference Manual (part number TC9800PM), available on Monarch's Web site.

## **Printing a Configuration Sheet**

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Configuration information prints automatically if the Ethernet print server senses a hardware error. To print configuration information on demand, press the Test button on the side of the Ethernet print server unit or use the configuration utility provided for your network - operating system.

The configuration label prints in MPCL format.

The configuration label is best displayed using 4" wide by 6" long labels. If the label is too small, some information may print outside the label edges. See the following page for a sample configuration label.

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## Monarch Marking Systems

### General

Serial Number:	1949614
Ethernet Address:	0040681DBFAE
Speed:	10Mbps
F/W Version:	6.3b (A024A)
Cable Type:	10 BASET
Link Status:	Good
Polarity:	Normal
Rx Packets:	4243
Rx Packet Unavail:	2
Rx Packet Errors:	0
Checksum Errors:	0
Tx Packets:	272
Tx Packet Errors:	0
Tx Packet Retries:	0

### Error

Netware:	None
TCP/IP:	None

### Netware: ENABLED

Mode:	Unknown
Print Server Name:	MMS1949614
SAP Interval:	1 Minute
Frame Format:	Ethernet 802.3

### TCP/IP: ENABLED

System Name:	MMS1949614
Web Address:	http://10.1.155.162
IP Address:	10.1.155.162
IP Address Source:	DHCP (10.1.10.41)
Subnet Mask:	255.255.0.0
Default Gateway:	0.0.0.0
Timeout Checking:	Enabled

### Jet Admin: ENABLED

### Port Configuration

Name:	
Printer Status:	Online
Connected To:	printer
Error	None

## Ethernet Print Server Status

The Ethernet print server has one bi-color LED that tells the status of the print server. During normal operation, the LED is solid green for more than 30 seconds. This does not mean the print server has an IP address or is attached to a NetWare queue, but that all of the hardware is functioning properly and it has detected the presence of the network. The following table describes the displays of the LED and possible solutions:

LED Display	Description/Action
LED flashing green very rapidly (9 times/sec)	<p>The print server has not detected the presence of a network cable.</p> <p>To determine the problem:</p> <ol style="list-style-type: none"><li>1. Disconnect the print server from the printer. Remove the network cable from the print server. Plug the network cable back in until you hear a positive click. Check the other end of the cable in the same manner. Plug the print server back in. If the print server still does not detect a cable, continue below.</li><li>2. Verify the cable is a 10Base-T cable and it has an RJ-45 end. The network cable must have a CAT-3 or higher rating. Silver Satin or flat ribbon cable is not adequate.</li><li>3. Connect to a network drop that a currently working PC or print server is using. If the print server is still unable to detect the network cable, contact Technical Support for assistance.</li></ol>

<b>LED Display</b>	<b>Description/Action</b>
LED flashing green slowly (1 time/sec)	<p>The print server is trying to print a job. If the job does not print, check the following: Verify the printer has sufficient paper and toner. If the printer is showing any errors, the print server will not be able to send data to the printer. The LED continues to blink until the printer malfunction is resolved or until the print server is turned off.</p>
LED is solid orange for more than 30 seconds	<p>The print server has failed Power On Self Test (POST). If the failure is not catastrophic, press the test button to print a configuration label with more information. Failing POST can be caused by any of the following:</p> <ul style="list-style-type: none"> <li>◆ The printer attached to the print server is malfunctioning. This can cause the print server to fail the POST. Remove the print server from the printer. If the print server still fails POST, continue below.</li> <li>◆ The print server itself has a hardware problem that can only be fixed by replacing or returning the unit. Call Technical Support for repair or replacement information.</li> </ul>
LED alternately flashes orange and green for more than two minutes	<p>The print server is in firmware download mode. This means that it is waiting for new firmware to be sent before it will continue functioning normally. Perform the following:</p> <ol style="list-style-type: none"> <li>1. If the print server was purposely put into firmware download mode, finish the download with the proper update utility. See our Web site: <a href="http://www.monarch.com">http://www.monarch.com</a> to download this utility.</li> <li>2. Call Technical Support for help in recovering this unit.</li> </ol>

## MonarchNet Configuration Problems

If you are having problems using the MonarchNet utility to configure the unit, check the following:

1. If using MonarchNet for TCP/IP, verify there is not a router between the workstation running MonarchNet and the print server. Since the print server does not have an IP address, TCP/IP communication can not be started across a router. Run MonarchNet on the same subnet as the print server. MonarchNet for NetWare does not have this limitation.
2. Verify the print server has a solid green light. If the LED shows a rapidly flashing green light, make sure the network cable is attached. See “Ethernet Print Server Status” for more information.

## Unable to Print

If you are having problems printing, please verify there is communication between the printer and the print server by printing a configuration page. To print a configuration label, press the Test button on the side of the Ethernet print server. If a configuration label does not print, verify the printer has supplies and is on-line. The configuration label prints in MPCL format. If problems persist, contact Technical Support.

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When turning on the printer or after sending a ^PR (printer reset) immediate command, wait at least eight (8) seconds before sending data to the print server. Any data sent to the print server before the 8-second interval may be lost.

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# SPECIFICATIONS

A

## **Ethernet Print Server**

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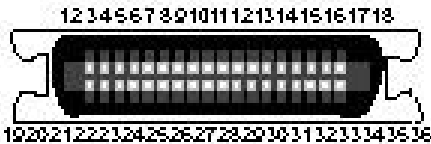
<b>Length:</b>	3.6 inches (91 mm)
<b>Width:</b>	2.5 inches (64 mm)
<b>Height:</b>	0.8 inches (20 mm)
<b>Net Weight:</b>	2.5 ounces (does not include power adapter)
<b>Operating Limits:</b>	50° to 90°F (10° to 32.5°C)
<b>Storage Temperature:</b>	32° to 96°F (0° to 35.5°C)
<b>Humidity:</b>	Operating and Storage - 5% to 90% non-condensing
<b>Power Dissipation:</b>	Operating: 4 watts maximum

# Wiring Specifications

See the following cable pin outs.

## Parallel Output Port Signal Assignments

Pin #	Signal Name	Source	Description
1	nSTROBE	Ethernet print server	Indicates when the data on the data lines is valid.
2-9	DATA 1-8	Ethernet print server	Eight lines used for data transfer.
10	nACK	Printer	Data acknowledge signal from printer.
11	BUSY	Printer	Indicates the printer is not ready to receive data.
12	PAPER ERROR	Printer	Indicates a paper error.
13	SELECT	Printer	Indicates the printer is on-line.
14	nAUTOFEED	Ethernet print server	Used for IEEE 1284 compliance.
31	nINIT	Ethernet print server	Instructs the printer to initialize.
32	nFAULT	Printer	Indicates a printer error condition.
36	nSELECT IN	Ethernet print server	Used for IEEE 1284 compliance.
16, 17, 19-30	GND	N/A	Ground
15, 18, 33-35	NC	N/A	Not connected





For supplies, service, or assistance call toll free:

**1-800-543-6650 (In the U.S.A.)**

**1-800-263-4650 (In Canada)**

**[www.monarch.com](http://www.monarch.com)**