CONFIGURING YOUR IP PRINTER

Use these instructions to configure the radio inside your MONARCH® Sierra Sport[™] 2 IP Printer. The IP printer operates on any WiFi (Wireless Fidelity) compatible 802.11b RF network. Make sure your access point and network are correctly set up. Refer to your network manuals for more information. This manual does not include information about setting up your RF network. Refer to the printer's Quick Reference for information about loading supplies, etc.

Installing the Configuration Utility

Download the Configuration Utility from our Web site

(www.monarch.com/service/service_utilities.htm). This utility supports the following platforms: Microsoft® Windows® 98/2000/ME and Windows NT® (SP3+). If using WinPCap version 2.3 or greater, Microsoft Windows XP and 95 are supported. Follow the instructions provided. Read **readme.txt** for updates and more information.

After installing the Configuration Utility, you can set up the printer using a serial cable or by using your network. For initial printer setup, you must use the serial interface.

About the Configuration Utility

This utility allows you to easily configure your IP printer.

- 1. Start the Configuration Utility.
- 2. Click Features List to see a list of supported radios.
- 3. Click Ok when finished.
- 4. Click About/Disclaimer to see the version number of the Utility.
- 5. Click **Ok** when finished.
- 6. Click Exit to exit the Utility.

Selecting the Printer Using a Serial Interface

Before you can use the IP printer, you must configure it. All nodes of a wireless network need to have the same settings in order to communicate with each other. For initial printer setup, you must use the serial interface.

1. Connect a serial cable (DB9 female to DB9 female all lines wired straight through) from the host or PC to the printer's radio harness.



- 2. Turn on the printer.
- **3.** Start the Configuration Utility. Depending on the Configuration Utility's version, the screens may appear differently.
- 4. Select Serial, direct to card.

OemCfg Symbol OEM Card Configu Interface Method Serial, cable to PCK O Network Serial, direct to card O PCMCIA	Configure	Features About/ List Disclaimer	Exit
Card Discovery PCK Unlock Remove Card Discover Remove All	Card Edit/View Config Stats Info	Card Control Reset Card Update Firmwar	e SAR Test
MAC Address IP Address 00:B1:C9:B2:40:0B 192.168.69.200	Card Name WHSEFLR	Type Software 1 Version 1.10	Firmware S1.10 020104
0935:57 - Card Discovered.			
Clear Current Card's History		Clear All Car	d Histories

- 5. Click Configure Interface.
- 6. Make sure you select the correct communication port and 19.2 Baud Rate (19.2 is the only supported baud rate).
- 7. Click Ok.
- 8. Click Discover.

Since you are connected through a serial interface, only one printer appears.

S	erial Port Cor	nfiguration			
	- Port-				
		О СОМ2	О СОМЗ	О СОМ4	
	-Baud Rate-				Ì
	O 2400	O 9600	O 38.4	O 115.2	
	O 4800	⊙ 19.2	O 57.6		
		οr	C		
		UK	Lance	9	

The Card History Window appears at the bottom of the screen to give a status of the connected printers. For example, you may see a message "Card Discovered" when an IP printer is discovered by the Configuration Utility. Messages also appear when printers are turned off or disconnected from the network. You can highlight a printer and Clear Current Card's History or Clear All Card Histories. 9. Highlight the printer to configure and click Config.



A CAUTION window appears. Read **all** the information. You can disable the CAUTION window for this session or permanently. Click **Ok** to continue.

10. Follow the steps in "Configuring the RF Interface."

Selecting the Printer Using a Network Interface

Follow these steps to select a printer using a network interface or to verify printers on a network.

- 1. Turn on the printer.
- 2. Start the Configuration Utility.
- 3. Select Network.
- 4. Click Discover.

Since you are connected through a network interface, multiple printers may appear.

The Card History Window appears at the bottom of the screen to give a status of the connected printers. For example, you may see a message "Card Discovered" when an IP printer is discovered by the Configuration Utility. Messages also appear when printers are turned off or disconnected from the network. You can highlight a printer and Clear Current Card's History or Clear All Card Histories. 5. If necessary, click **Configure Interface** to check the network devices available on the host.

Ne	etwork Configuration		×
9	elected Network Device Name:		
	EL90x		
4	Available Network Devices:		
	Device Name	Device Description	Туре
	EL90x	3Com EtherLink PCI	Eth.
	- Ethomat France Format		
		0 • • • • • • • • • • • • • • • • • • •	
	 Send Standard DEC Frames (most networks) 	O Send IEEE 802.27802.3 Frames (un	commonj
	0K	Cancel	

- 6. Make any changes and click **Ok** when finished or click **Cancel** to exit without saving any changes. You return to the Main screen.
- 7. Highlight the printer you want to configure and click **Config**. A CAUTION window appears. Read **all** the information. You can disable the CAUTION window for this session or permanently. Click **Ok** to continue.
- 8. Follow the steps in "Configuring the RF Interface."

Configuring the RF Interface

Setting a Name and ESS ID

- 1. Enter a **Unit Name**. Use a meaningful name, for example, WHSEFLR.
- 2. Enter the 802.11b ESS ID.
- **NOTE:** The ESS ID address is case-sensitive.
- 3. Enter a valid address for the **Remote IP** (even if you are not using the remote IP).

Setting the Protocol for Listen Mode

Listen mode waits for a host to connect to the specified port and receives data. Listen mode can



be used with TCP (select port number) or LPD (no need to specify port) protocols.

- 1. Select the Protocol as TCP or LPD. Do not use UDP.
- 2. Select the Connection Mode as Listen.
- 3. Select the Port.

Setting the Protocol for Call Remote Mode

Call remote mode initiates the data transfer. Call remote can be used for TCP (select port number) or Telnet (no need to specify port) protocols.

- 1. Select the **Protocol** as TCP or Telnet from the Card Configuration screen. Do not use UDP.
- 2. Select the Connection Mode as Call Remote.
- 3. Specify the Remote IP Address.
- 4. Select the Port.
- 5. Enter the amount of **Retries** in milliseconds after a failure before a connection is tried again.

Setting the Power Save Mode

- 1. Select the **Power Save** mode by checking the Enable box from the Card Configuration screen.
- 2. Set the Algorithm to a value between 1 and 10. 1 is the shortest sleep time (uses battery power quicker, but responds faster); 10 is the longest sleep time (optimal battery conservation, but responds slower).

If the **Power Save** mode is not enabled, the device operates in CAM mode (constantly awake). CAM means the printer is

Unit Name Image: Construction of the state of the	Card Configuration	×
802.11 ESS ID Clear ESS ID to use broadcast IP Addressing DHCP / BODTP Local 192.168.68.200 Gateway 0.0.0.0 Mask 255.255.0.0 Protocol/Connection Options Send Unit Name (above) as the unique ID in option 61 Option 77 Group Name SPECTRUM24 DEMO Protocol/Connection Options Pretrocol/Connection Options TCP UDP Listen Retry 10000 (ms) Listen Retry 10000 (ms) Operation Options Power Save Diversity: Communications Settings Diversity: Communications Settings Diversity: Communications Setting Diversity: Communications Settings Diversity: Communications Setting Diversity: Communications Setting Diversity: Communications Setting Baud 19200 Formal Dife Resone Char Masper MAC Address Suppress Extended Config Baud 19200 Formal Dife Resone Char Diversity: Communications Seting Baud <	Unit Name WHSEFLR	
□ Capture and save broadcast ESSID in FLASH then clear this flag □ PAddressing □ Local 192.168.69.200 □ Gateway 0.0.0 □ Mask 255.255.0.0 □ Protocol/Connection Options □ □ Call Remote Point □ Call Remote 9100 □ Listen Retry 10000 □ Close the socket when the exetend period □ □ Operation Options □ □ Close the socket when the exetend period □ □ Diversity: □ □ Optiment Diversity: □ □ Primary ● Io Mode □ Enable bet=string mode □ □ Serial □ □ Preix Diversity: □ □ Preix Diversity: □ □ Diversity: □ □ Preix Diversity: □ □ Primary ● □ □ Inhibit run-time messages □ □ Preix Char # □ □ Preix Char # □	802.11 ESS ID	(clear ESS ID to use broadcast)
In Packadesing In Packadesing Productions Local 1192_168_69_200 Enable DHCP Flash DHCP settings upon response Bernote 1192_168_69_200 Other Packades Other Packades Other Packades Gateway 0_0_0_0_0 0 Other Packades Other Packades Other Packades Mask 255_255_0_0 O Other Packades Packades Other Packades Protocol/Connection Options Fredeo Unit Name (above) as the unique ID in option 61 Option 77 Oroup Name Send Unit Name (above) as the unique ID in option 61 Option 77 Oroup Name Send Unit Name (above) as the unique ID in option 61 Option 77 Oroup Name Power Save Call Remote Pott 1900 Imager MAC Address Power Save Close the socket when the device is out of range for an extended period Other Packades Peacon Maximum Imager Mac Address Diversity: Operation Options Communications Settings Suppress Extended Config Baud 19200 Format Extended Configuration ID Mode Enable byte-strifting mode Save to File Cancel Wakeup: No Enable byte-strifting mo	Capture and save bro IP Addressing	Dadcast ESSID in FLASH then clear this flag
Remote 192.168.69.200 Gateway 0.0.0 Mask 255.255.0.0 Protocol/Connection Options Send Unit Name (above) as the unique ID in option 61 Option 11 Index Dort Use Option 11 Istemate Potocol/Connection Options Itige: Retry 10000 Listen Retry 10000 Close the socket when the evidencia out of ange for an extended period Other Parameters Operation Options Baud 19200 Diversity: Operation Options Settings Diversity: Format: Direct: Stream Isa Serial Made 105 Wakeup: Tenable bete-stuffing mode Save to File Cancel Wakeup: Inhibit run-time messages Cancel Restore from File Cancel	Local 192.168.69.62	Enable DHCP Flash DHCP settings upon response
Interviewer	D 192 168 69 200	DHCP Response Timeout 0 (iterations; 0 = never time out)
Gateway 0 .0 .0 Mask 255.255.0 .0 .0 .0 Protocol/Connection Options .0 .0 .0 .0 TCP UDP Telnet .0 .0 .0 .0 Call Remote Pot 9to 77 Group Name SPECTRUM24 DEMO .0 Call Remote Pot 1000 (ms) .0 .0 .0 .0 Close the socket when the extended period .0 <td>Remote 132 . 100 . 03 . 200</td> <td>Option 11 Index Don't Use Option 11</td>	Remote 132 . 100 . 03 . 200	Option 11 Index Don't Use Option 11
Mask 255.255.0.0 Protocol/Connection Options Option 77 Group Name TCCP UDP IDP Listen Retry T00000 (rms) Option 77 Group Name Close the socket When the Option 77 Group Name Options Option 77 Group Name Option 77 Group Name Power Save Close the socket When the Option 77 Group Name Options Option 77 Group Name Option 70 Group Name Power Save Option 77 Group Name Power Save Close the socket When the Option 77 Group Name Options Option 77 Group Name Options Constructions Settings Diversity: Baud 19200 ID Mode Serial USA Serial Wakeup: Communications Settings Value Save to File Cancel Replace stating mode Masp Prefix Char (asci) Program Card Gancel	Gateway 0 .0 .0 .0	Send Unit Name (above) as the unique ID in option 61
Protocol/Connection Options TCP UDP LPD Telnet Call Remote Port \$100 Listen Retry 10000 (ms) Close the socket when the device is out of range for an extended period Operation Options Diversity: 0 - Primary ♥ 10 Mode LisA Serial Wakeup: Yes No No No No No No No No No No	Mask 255.255.0.0	Option 77 Group Name SPECTRI IM24 DEMO
Implace state femote in with BOUTP server in TCP UDP Lipt Call Remote Port Listen Retry 10000 (ms) Close the socket when the edvice is out of range for an extended period Power Save Operation Options Communications Settings Diversity: Communications Settings ID Mode Serial USA Serial Wakeup: Computer Structure (Stream) Yes No		
Call Remote Pott 9100 Listen Retry 10000 (ms) Close the socket when the device is out of range for an extended period Image MAC Address Operation Options Communications Settings Diversity: 0. Primary • IO Mode Serial Value 05 (hex) Enable Serial Wakeup: Communications Settings Value 1000 • Serial Communications Settings Baud 19200 • Format Direct Stream Condept Char 05 (hex) Enable byte-stuffing mode Save to File Wakeup: Enable byte-stuffing mode Yes No	Protocol/Connection Uptions	Replace static remote IF with BOUTF server IF
Call Remote Port \$100 Listen Retry 10000 (ms) Close the socket when the device is out of range for an extended period Algorithm 5 Operation Options Communications Settings Baud 19200 O-Primay Image Communications Settings Communications Settings Suppress Extended Config IO Mode Format Direct Stream Priogram Call Serial Wakeup: Dispersive for an Extended Priogram Card and Exit Yes No Inhibit run-time messages Cancel		Other Parameters Power Save
Listen Retry 10000 (ms) Close the socket when the device is out of range for an extended period Beacon Minimum 1 Operation Options Baud 13200 Diversity: Operation Options Diversity: Format Direct Stream Frame ID Mode Save to File Enable byte-stuffing mode Save to File Wakeup: Inhibit run-time messages	Call Remote Port 9100	Manager MAC Address
Close the socket when the device is out of range for an extended period Operation Options Diversity: O-Primary ID Mode ISA Serial Wakeup: Yes No Communications Settings Baud 13200 Format Direct Stream Frame Cmd Escape Char U5 (hex) Enable byte-stuffing mode Msg Prefix Char # (asci) Inhibit run-time messages Beacon Minimum Beacon Maximum Beacon Ma	Listen Retry 10000 (ms)	┌┐┌┐┌┐┌┐┌┐║ ^{Algorithm} ╚┘\̈́ ╡
Close the socket when the device so und of range for an extended period Image: Construction of the socket when the device so und of range for an extended period Image: Construction of the socket when the Beacon Maximum Operation Options Diversity: Communications Settings Image: Suppress Extended Config Diversity: Baud 13200 Image: Suppress Extended Config IO Mode Format Direct Stream ISA Serial Office the socket of the s	Class the control when the	Beacon Minimum 1
extended period	device is out of range for an	
Operation Options Communications Settings Suppress Extended Config Diversity: Baud 19200 Extended IO Mode Format Direct Stream Frame ID Mode Cmd Escape Char D5 (hex) Program Card and Exit Walkeup: Tenable byte-stuffing mode Save to File Cancel Yes No Inhibit run-time messages Restore from File Cancel	extended period	Beacon Maximum
Diversity: Baud 19200 Extended Program Card and Exit IO Mode Format Direct Steam Frame IO Mode Cmd Escape Char 05 (hex) In Enable byte-stuffing mode Msg Prefix Char # (asci) Yes No Inhibit run-time messages	Operation Options Communication	
0 - Primary Format Exceeded Extended Configuration Program Card and Exit 10 Mode Format Direct Stream Format Extended 1SA Serial Cmd Escape Char 05 (hex) Wakeup: Enable byte-stuffing mode Msg Prefix Char # (asci) Yes No Inhibit run-time messages Restore from File	Diversity: Baud 1920	
ID Mode Founds Cureics Founds Founds<	0 - Primary Format Direct	t Stream Frame Extended Program Card
ISA Serial Wakeup: Enable byte-stuffing mode Yes No Inhibit run-time messages	IO Mode	Configuration and Exit
Wakeup: L'hanbie byte-stutting mode Save to File Yes No Inhibit run-time messages Restore from File	ISA Serial Cmd Escape (Char 05 (nex)
Yes No Cancel Cancel Cancel Cancel	Wakeup: Mag Profix Ch	te-stuffing mode Save to File
		-time messages

continuously receiving and transmitting data. This mode uses battery power quickly.

NOTE: Do not change the Beacon Minimum and Beacon Maximum values. The printer does not support these parameters.

> Do not use the Micro AP Mode, Operation Options, or Communication Settings. Changing any of these values may cause the printer to stop communicating!

Do not change the **Manager MAC Address** from the **Other Parameters** section.

Setting WEP Options

- 1. To set WEP options, click Extended Configuration from the Card Configuration screen.
- NOTE: Make sure these WEP settings match those for your Access Point.
- 2. Set the WEP Authentication as
 - 0 Open System,
 - 1 40-bit keys, or
 - 2 128-bit keys.
- 3. Enter the four Key values according to the Access Point.
- NOTE: The key values must be entered in Hexadecimal.
- 4. Select the Key you want to be active.

Setting Ad Hoc Mode

- 1. Select the Ad Hoc Mode by checking the Enable box.
- 2. Select the **Override Channel**. All devices must be on the same channel to communicate.

In Ad Hoc Mode, you do not need an Access Point. It operates as peer-to-peer, so as long as the devices are in range, they will connect and communicate with each other.

In Ad Hoc Mode, set the ESS ID address to something other than what the Access Point is set to; otherwise, you may not be able to communicate. For example, use the letters "AH" at the end of your ESS ID for "Ad Hoc" Mode.

NOTE: If you do not enable Ad Hoc Mode, you are in infrastructure mode, which requires an Access Point.

xtended Card Configuration
Ad Hoc Mode BSS AP ID DK DK DK Cancel
TX Power Override Chan. D D Config Structure: D0 00 00 00 00 00 00 00 Length=541 Version=3
Basic Tx ✓ 1 mbit ✓ 1 mbit ✓ 2 mbits ✓ 2 mbits ✓ 5.5 mbits ✓ 5.5 mbits
11 mbits I 11 mbits Comm Port 2 Baud Disabled Preamble Preamble
Enable All values are On: 3 + Off. 20 + Idle: 5 +
WEP Authentication: 0 - Open System
O Use WEP Key 1 30 31 32 33 34 35 36 37 38 39 3A 38 3C
O Use WEP Key 2 30 31 32 33 34 35 36 37 38 39 3A 38 3C
O Use WEP Key 3 50 51 32 33 34 00 00 00 00 00 00 00 00
O Use WEP Key 4 40 41 42 43 44 00 00 00 00 00 00 00 00 00

Setting Miscellaneous Parameters

- 1. Set the **Basic** and **TX Rates** for Ad Hoc mode only. In infrastructure mode, the printer uses the Access Point's TX Rates.
- 2. Set the Preferred BSS AP ID or Mandatory BSS AP ID.

If Mandatory AP (Access Point) is set, the printer ONLY associates with that Access Point. If that particular Access Point is not found, the printer is unable to access the network.

n Ad Hoc Mode	
Enable Preferred OK TX Power Override Chan. Mandatory Config Struct. Length=541 Version=3 Version=3	l ure:
Basic Tx ✓ 1 mbit ✓ ✓ 1 mbit ✓ ✓ 2 mbits ✓ ✓ 5.5 mbits ✓ ✓ 11 mbits ✓ ✓ 11 mbits ✓ ✓ 11 mbits ✓ ✓ Enbaged Padia Power Down	ion F le
All values are On: 3 Contraction of the contraction	
WEP Authentication: 0 - Open System 💌	
Use WEP Key 1 30 31 32 33 34 35 36 37 38 39 34 38 3C Image: Use WEP Key 1 30 31 32 33 34 35 36 37 38 39 34 38 3C Image: Use WEP Key 2 30 31 32 33 34 35 36 37 38 39 34 38 3C Image: Use WEP Key 3 50 51 32 33 34 00 0	

Preferred BSS AP ID is

reserved for future use. If Preferred AP is set, the printer attempts to associate with the preferred Access Point. If that particular Access Point is not found, the printer associates with any available Access Point it detects.

If neither of these settings are specified, the printer associates and roams to any Access Point it can reach.

- 3. Set the **TX Power** (transmit power) for Ad Hoc mode only. 0 is the maximum "full power"; 4 is the minimum. In infrastructure mode, the printer uses the Access Point's TX Power settings.
- **NOTE:** Do not change the 188 Restart Delay (ticks), Comm Port 2 Baud, leave the Enable Application check box disabled (unchecked), and do not change any of the Enhanced Power Down Mode selections.
- 4. Enable or disable the Long RF preamble from the Card Configuration screen check box based on your Access Point. If your Access Point has long RF preambles disabled, make sure they are disabled here.
- 5. Click **Ok** when finished with the extended card configuration options.

Selecting the IP Addressing Method

Determine which method of IP addressing your network supports: Static IP, BOOTP, or DHCP.

Static IP Configuration

- 1. Enter the Local IP Address on the Card Configuration screen.
- 2. Enter the Subnet Mask.
- 3. Enter the Gateway (if necessary).
- 4. Enter a valid address for the Remote IP (even if you are not using the Remote IP).

BOOTP Configuration

- 1. Set the IP Address (Local) to all zeros on the Card Configuration screen.
- 2. Make sure the check box for "Enable DHCP" is NOT checked.
- 3. If you enable the check box "Replace static remote IP with BOOTP server IP," the current remote IP address is overwritten with the IP address of the BOOTP server.

DHCP Configuration

- 1. Set the IP Address (Local) to all zeros on the Card Configuration screen.
- 2. Select the check box for "Enable DHCP."
- 3. If you enable the check box "Replace static remote IP with DHCP server IP," the current remote IP address is overwritten with the IP address of the DHCP server.
- 4. Set the remaining options according to your network.
- **NOTE:** Use extreme caution if you check "Flash DHCP settings upon response." If checked, the DHCP settings are flashed and saved. The next time the device is turned on, it comes up as a Static IP, not DHCP.

Saving the Configuration

 Click Program Card and Exit to program the card with the current configuration settings on the Card Configuration screen. A message appears "Ready to update the card. Ok to proceed?" Select Ok or Cancel to continue. OR Click Save to File to save this configuration to a file to use for another

printer. When you use **Restore from File**, update the IP address, etc. if needed.

- 2. Click Exit when you are finished configuring the printer using the Configuration Utility.
- 3. Turn off the printer.
- 4. Remove the serial cable from the host to the printer's radio harness.
- 5. Connect the printer's radio harness to the printer's serial port.
- 6. Turn on the printer.

The IP printer is ready to use.



NOTE: Do not change any of the communication settings on the printer itself. Changing those values causes the printer to stop communicating!

Checking the IP Address

Turn ${\bf on}$ the printer by pressing and holding the button until the display turns on.

The display flashes printer version information, battery charging status, and then you will see:



The <T> on the display indicates the printer is connected to a network (peer to peer or infrastructure mode). \cancel{x} indicates the printer is not connected to a network.

When you see "Ready," press the **Center** navigational button to display the printer's IP address. Press any button to return to Ready mode.

Battery and Safety Information

- The printer uses a 7.4V lithium-ion battery.
- You must charge a battery before using it. For optimal battery life, fully charge the battery within three months of receipt.
- The battery should be charged immediately for either long term storage or after the battery has been exhausted from a printing session. Frequent charging will actually prolong battery life and has no negative effects such as memory issues.
- It is normal for battery capacity to decrease up to 20% over the first 300 cycles.

WARNING

Use only Monarch chargers (Monarch® 9462[™] Single Station Charger or the Monarch® 9464[™] Four Station Charger) designed for lithium-ion batteries when charging. The battery might explode if placed on a different charger.

- Charging time is approximately 1.5 to 3 hours.
- Take the battery out of the printer when storing the printer for a month or longer.

- The optimal battery storage temperature is 50°F to 73°F (10°C to 23°C) with a maximum temperature of 104°F (40°C). The battery may permanently lose charging capacity at temperatures less than 32°F (0°C) or greater than 104°F (40°C). For longest life, the battery should be stored in a cool, dry place.
- The recommended temperature for charging is 68°F (20°C) to 77°F (25°C).
- Disposal information Do not throw in trash. Dispose according to your local regulations. The Rechargeable Battery Recycling Corporation (RBRC®) is a non-profit organization created to promote recycling of rechargeable batteries. For more information about how to recycle batteries in your area, visit www.rbrc.org. Batteries can also be returned postage-paid to: ERC; 200 Monarch Lane Door #39; Miamisburg, OH 45342.

CAUTION

Do not disassemble, short circuit, heat above 80°C, or incinerate. The battery may explode.

- Do not let the battery get wet or come into contact with metal objects.
- Do not use a battery with a cracked case.

Battery Considerations

- The printer uses battery power even when the printer is not printing. Remove the printer's battery and place on a charger when the printer is not in use.
- Your printer and network's usage and configuration impacts your printer battery life -- use the printer, access point, and wireless network power management configuration's to increase your printer's battery life.
- Many factors affect your battery's performance, including the quantity of labels being printed, intervals of batches printed, percentage of black per label, power management of the printer, power management of the radio, connectivity and configuration of the host or node, and buffered queues.

Troubleshooting

Use the following table to correct some minor problems that may occur.

Problem	Action
Printer does not connect to a network (peer to peer or infrastructure mode) or display <t></t> .	Make sure the printer's radio harness is still connected to the printer's serial port. After a drop, the cable may become disconnected. Verify the settings for Infrastructure or Ad Hoc mode (ESS ID, WEP, etc.).
The printer is not configured.	Make sure the correct cable is connected. To configure the printer's radio , use a DB9 female to DB9 female (all lines wired straight through) cable. After configuring the printer's radio, connect the printer's radio harness to the printer's serial port. To configure the printer using the serial port, use a null modem cable (part number 12029314 or 12029315).
The printer does not communicate with your network.	 Make sure your network settings for : ESS ID Protocol Ad Hoc or Infrastructure mode WEP options for keys and encryption Long RF preamble IP Address, Gateway, and Subnet Mask match the printer's radio configuration. If your network's protocol is set for LPR, make sure you specify LPD protocol, not TCP.

For additional troubleshooting, disconnect the printer's radio harness and use the printer's RS232 port for diagnostic purposes. Your System Administrator can use the printer's Diagnostics Menu. Call Technical Support for more information.

Printer Specifications

Height: Width:	6.6 inches (168 mm) 3.6 inches (91 mm)
Depth:	4.8 inches (122 mm)
Weight:	1.9 pounds (.86 kg)
Shipping Weight:	3.5 pounds (1.6 kg)
Printing Rate:	Up to 3 inches (76 mm) per second
Operating Limits:	40° to 104° F (5° to 40° C) Storage -40° to 140° F (4° to 60° C) NOTE: This is also the operating range for the battery.
Battery Type:	7.4V Lithium Ion
Inches Per Charge:	Up to 5,000" of 25% black printing on the supply NOTE: Inches per charge will vary according to your setup and usage.
Battery Cycle Life:	Approximately 300 discharge cycles Cycle life is approximate. Many factors effect an individual battery's performance.

IEEE 802.11b Specifications

Frequency:	2.4 GHz range, direct sequence
Communication Rate:	11 Mbps
Protocols:	TCP/IP PassThrough BOOTP DHCP LPD/LPR

For supplies, service or assistance, call toll free: 1-800-543-6650 (In the U.S.A.) 1-800-263-4650 (In Canada) www.paxar.com



IP PRINTER SETUP

Use these instructions to configure your MONARCH® Sierra Sport[™] 2 IP Printer using the printer's Main Menu. The IP printer operates on any WiFi (Wireless Fidelity) compatible 802.11b RF network. Make sure your access point and network are correctly set up. Refer to your network manuals for more information. This manual does not include information about setting up your RF network.

Setting Up the RF Network Printer

1. Turn **on** the printer by pressing and holding the ⁽¹⁾ button until the display turns on.

The display flashes printer version information, battery charging status, and then you will see:



The <T> on the display indicates the printer is connected to a network (peer to peer or infrastructure mode). \cancel{x} indicates the printer is not connected to a network.

When you see "Ready," press the **Center** navigational button to display the printer's IP address. Press any button to return to Ready mode.

2. Press the \bigcirc button under the \parallel icon.



You will see the battery indicator E (empty) and F (full). As you use the printer, the battery indicator line gets closer to E (empty), instead of F (full). Recharge the battery when the line is by the E.

TC9460IPSA Rev. AA 7/02 ©2002 Paxar Corporation. All rights reserved. MONARCH® is a registered trademark of Monarch Marking Systems, Inc. Sierra Sport and 9460 are trademarks of Monarch Marking Systems, Inc. Paxar® is a trademark of Paxar Corporation. 3. Press the button under the icon (Tool Box) to enter the program.



 Tool Box is highlighted. Press the button under the icon to select Tool Box.



- 5. Press the navigational buttons in this order: **Right**, **Center**, **Left**, **Center**, **Right**. The Service Diagnostics menu appears.
- 6. Press the ▲ button under ▼ until you see



Service is highlighted. Press the

 button under the

 icon to select Service.



8. From the Service menu, press the button under until you see RF Network. Press the button under the icon to select RF Network.

The following menu shows the RF Network options.



The RF Network menu allows you to check the printer's status, configure the RF network settings, and reset the radio.

To exit, press the button at any time.

Checking the Status

This option displays the status of the RF network.

1. From the RF Network menu, select Status.

```
192.168.069.062
S1.10 020 104
Version 1.10
WHSEFLR
```

The local IP address, firmware version, software version, and device name are displayed.

2. Press any (a) button to see the next screen of information.



The MAC address, protocol, current state, and radio type are displayed.

3. Press any (a) button to return to the RF Network menu.

Resetting the RF Network

This option resets the radio, because it cycles the power off and then back on.

NOTE: You may lose your current connection and application.

1. From the RF Network menu, select Reset.



2. Press any (a) button to return to the RF Network menu.

Configuring the Printer

The following menu shows the RF Network Configure options.



The Configure menu allows you to set the printer's IP Address, Subnet Mask, Gateway, Power Mode, Call/Listen, Protocol, Transfer, and ESS ID.

To exit, press the button at any time.

Setting the IP Address

This option sets the printer's IP Address.

- 1. From the RF Network menu, select Configure.
- 2. From the Configure menu, select IP Address.



Use the buttons as shown in the following table:

Ļ	•	+
Press 🌢 to	Press 🌢 to	Press 🌢 to
Saves the setting	Scrolls through the positions from left to right	Increments the current position setting by 1

3. When the setting you want is displayed, press the ▲ button under the ↓ icon to save the setting. You return to the Configure menu.

Setting the Subnet Mask

This option sets the printer's Subnet Mask.

1. From the Configure menu, select Subnet Mask.



Use the A buttons as shown in the following table:

Ļ	•	+
Press 🌢 to	Press 🌢 to	Press 🌢 to
Saves the setting	Scrolls through the positions from left to right	Increments the current position setting by 1

2. When the setting you want is displayed, press the ▲ button under the ↓ icon to save the setting. You return to the Configure menu.

Setting the Gateway

This option sets the printer's Gateway address.

1. From the Configure menu, select Gateway.



Use the buttons as shown in the following table:

Ļ	•	+
Press 🌢 to	Press 🌢 to	Press 🌢 to
Saves the setting	Scrolls through the positions	Increments the current
	from left to right	position setting by 1

2. When the setting you want is displayed, press the ▲ button under the ↓ icon to save the setting. You return to the Configure menu.

Setting the Power Mode

This option sets the Power Mode.

1. From the Configure menu, select **Power Mode**.



The choices include CAM (continuously awake) or PSP (power save protocol). PSP conserves battery power. CAM means the printer is continuously receiving and transmitting data. This mode uses battery power quickly.

 Use the button under the ▼ icon to select the power mode you want. Press the button under the ↓ icon to save the setting.

If you select PSP, you are prompted to enter a PSP algorithm between 1-10. 1 is the shortest sleep time (uses battery power quicker, but responds faster); 10 is the longest sleep time (optimal battery conservation, but responds slower).



3. Use the buttons under the ▲ or ▼ icons to select the desired PSP algorithm. Press the button under the ↓ icon to save the setting. You return to the Configure menu.

Setting the Call/Listen Mode

This option sets the connection mode to Call or Listen.

1. From the Configure menu, select Call/Listen.



The choices include Listen or Call. Call mode initiates the transfer of data. Call mode can be used for TCP or Telnet protocols. Listen mode waits for a host to connect to the specified port and receives data. Listen mode can be used for TCP or LPD protocols.

2. Use the ▲ button under the ▼ icon to select the connection mode you want. Press the ▲ button under the ↓ icon to save the setting. For example, if you select Call, you will see

Port		
+ 09	100	
Ļ	►	+

In Listen mode, this is the listen port.

In Call mode, this is the call port.

Use the buttons as shown in the following table:

Ļ	•	+
Press 🌢 to	Press 🌢 to	Press 🌢 to
Saves the setting	Scrolls through the positions from left to right	Toggles between + or -; also Increments the current position setting by 1

3. When the setting you want is displayed, press the button under the ↓ icon to save the setting.



In Call mode, this is the remote IP address you are calling.

Use the buttons as shown in the following table:

Ļ	•	+
Press 🌢 to	Press 🌢 to	Press 🌢 to
Saves the setting	Scrolls through the positions from left to right	Increments the current position setting by 1

- 4. When the remote IP setting you want is displayed, press the ▲ button under the ⊣ icon to save the setting.
- 5. Press the 🔂 button to exit. You return to the Configure menu.

Setting the Protocol

This option sets the protocol.

1. From the Configure menu, select Protocol.



The choices include DLP, UDP, TCP, Telnet, or LPD. The most common options are TCP and LPD for AS400 or Unix systems. Do not use UDP.

2. Use the ▲ buttons under the ▲ or ▼ icons to select the protocol you want. Press the ④ button under the ⊣ icon to save the setting. You return to the Configure menu.

Setting the Transfer Mode

1. From the Configure menu, select Transfer.

Tra	ansfer	
\checkmark	Stream	
Х	Frame	
Ļ		•

The choices include Stream or Frame.

- 2. Use the ▲ button under the ▼ icon to select the transfer mode you want. Press the ▲ button under the ↓ icon to save the setting.
- 3. Press the \bigoplus button to exit. You return to the Configure menu.

Setting the ESS ID

1. From the Configure menu, select ESS ID.

ESS ID ABC 1234 ↓ ▶ ▼

Use the A buttons as shown in the following table:

Ļ	•	+
Press 🌢 to	Press 🌢 to	Press 🌢 to
Saves the setting	Scrolls through the positions from left to right	Increments the current position setting by 1 and scrolls through alpha/special characters

- 2. When the setting you want is displayed, press the ▲ button under the ↓ icon to save the setting.
- 3. Press the 🕁 button to exit.

When you select "Exit" after configuring, you will see



To save all the configuration settings, press the A button under the \dashv icon. To exit without saving the configuration settings, press the A button under the **X** icon.

The IP printer is ready to use. Turn on the printer.

When you see



Press the A button under the connected icon <T> to see the printer's IP Address. Press any A button to toggle back to Ready.

For supplies, service or assistance, call toll free: 1-800-543-6650 (In the U.S.A.) 1-800-263-4650 (In Canada) www.paxar.com