



**3235 IPDS/SCS**

**I-O 3235 IPDS/SCS USB/Flash/DIMM  
User's Guide**

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## Preface

I-O's 3235 IPDS/SCS USB/Flash/DIMM card converts IBM's IPDS and SCS proprietary data streams into data streams that can be sent to ASCII based printers. In essence, the 3235 makes a HP LaserJet printer look like an IBM host printer to an IBM iSeries midrange or zSeries mainframe host.

This document describes the installation, basic configuration and operation of the 3235. Companion documents describe in detail the configuration of the IBM host, the customization of the I-O IPDS and SCS Printer Emulation. These are:

- The IPDS Reference Manual
- The SCS Reference Manual

Each of these documents are found on the I-O 3235 Utility CD or can be downloaded from [www.iocorp.com](http://www.iocorp.com).

The guide consists of the following chapters:

- **Introduction:** Provides an overview of the product.
- **Installation:** Provides an overview of installing the I-O product in an HP LaserJet.
- **IBM Host Configuration:** Provides an overview of the setup process for both the iSeries midrange and zSeries mainframe hosts. The detail processes are full described in two companion documents, the IPDS Reference Manual and SCS Reference Manual.
- **IPDS Configuration:** Provides instructions on setting up the LaserJet printer for IPDS printing. Gives an overview of how to customize the IPDS printer session. Customization of the printer session are more fully described in the companion document, the **IPDS Reference Manual**.
- **5250 SCS Configuration :** Provides instructions on setting up the LaserJet printer for SCS printing. Gives an overview of how to customize the IPDS printer session. Customization of the printer session are more fully described in the companion document, the **SCS Reference Manual**.
- **3270 SCS Configuration :** Provides instructions on setting up the LaserJet printer for SCS printing. Gives an overview of how to customize the IPDS printer session. Customization of the printer session are more fully described in the companion document, the **SCS Reference Manual**.
- **Troubleshooting:** Provides solutions to problems that you may encounter while using the product.
- **Manufacturer's Warranty & Repair Policy:** States the warranty and how to obtain service and support.

The following symbols are used in the guide.



**Caution:** This symbol highlights procedures that, if not correctly performed or adhered to, could damage or corrupt the product or adversely affect the security and functionality of the product. Do not proceed beyond such points until the required conditions are fully understood and achieved.



**Note:** This symbol denotes useful additional information that is relevant to the procedure or feature being described.



**Tip:** This symbol denotes a hint, shortcut or alternate method to aid or supplement the procedure being described.

**Consistent with our policy of continuous development, the product you received may have features different from those described in this guide. Please visit our web-site [www.iocorp.com](http://www.iocorp.com) for current information.**

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# Introduction

## Overview

This chapter provides a brief overview of I-O's 3235 IPDS/SCS host print solution for HP LaserJet printers.




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**NOTE:** FOR BREVITY, THE TERMS "PRINT SERVER", "PRODUCT" AND "I-O PRODUCT" WILL REFER TO THE SPECIFIC I-O PRINT SERVER, USB/FLASH/DIMM CARD, PRINT BOX, ETHERNET DISPLAY, THIN CLIENT, SOFTWARE PRINT SERVER, ETC. HOST PRINTING SOLUTION THAT YOU ARE USING. SYSTEM I5, ISERIES AND AS/400 HOSTS WILL BE REFERRED HEREIN AS 5250 HOSTS. ZSERIES AND S/390 MAINFRAME HOSTS WILL BE REFERRED HEREIN AS 3270 HOSTS. THE TERM IBM HOST AND HOST WILL ALSO BE USED AND REFERS TO THE APPROPRIATE 5250 OR 3270 HOST WITHIN THE CONTEXT OF THE TOPIC BEING DISCUSSED.

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The 3235 converts IBM's proprietary IPDS and SCS data streams into HP's PCL language. Print jobs are sent from the IBM host to the LaserJet equipped with a 3235. The IBM data stream is converted from IBM's EBCDIC character set to the ASCII character set. IBM's IPDS command structure is converted to PCL 5e, while SCS is converted into PCL 3.

In addition to converting SCS print jobs for printing on non-IBM printers, certain 3235 models are able to "enhance" SCS print jobs by adding formatted text, barcodes, logos, images and so on to create checks, invoices, statements, estimates and other graphically oriented business documents. These professional, graphics-rich documents (Enhanced SCS documents) are automatically created by the 3235 without modifying host applications or data streams. The 3235 accomplishes this by using templates that are triggered by some unique value on the SCS print job. Templates are created using the optional FormPort Designer software. Users may either purchase the FormPort Designer software and create the templates themselves, or contract with I-O's Forms-on-Demand professional design service.

The I-O 3235 USB, CompactFlash or DIMM card is easily installed in an HP LaserJet printer. The printer automatically detects the card and installs the I-O IPDS and SCS front panel configuration options. In addition, the printer also adds the I-O IPDS and SCS configuration options to the printer's Web page allowing quick, fast interface to setup the printer's various configuration options. (Only LaserJet models produced in 2004 and later support Web page configuration.)

Connection to the IBM host is accomplished over the Ethernet link using TCP/IP. The HP JetDirect interface provides the physical connection to the Ethernet link. IPDS data streams use PPR/PPD, and SCS data streams use either TN5250e or TN3270e protocol. TN5250e is used for IBM eServer i5, iSeries and AS/400 hosts. TN3270e is used for zSeries and S/390 mainframe host systems.

For IPDS, configuration is required at both the 3235 and the IBM host.




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**CAUTION:** BECAUSE OF THE COMPLEXITY OF CONFIGURING IPDS AND/OR MAINFRAME PRINTERS, A KNOWLEDGEABLE HOST SYSTEM ADMINISTRATOR OR IBM SPECIALIST MUST PERFORM THE PROCESS. THE INSTRUCTIONS CONTAINED IN THIS AND RELATED DOCUMENTS ARE INTENDED TO ONLY PROVIDE A BRIEF OVERVIEW OF THE PROCESS.

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For SCS printing from 5250 hosts, configuration is only required at the LaserJet printer as the IBM host will automatically create a print device, writer and spooler.

For SCS printing from 3270 hosts, configuration is required at both the LaserJet printer and the IBM host.

Once the 3235 and IBM host are properly configured, print jobs can then be sent from the IBM host to the 3235 equipped LaserJet printer.

The I-O IPDS and SCS Printer Emulations can be customized to change the host print attributes if needed (CPI, page orientation, edge-to-edge, etc.). For 3270 hosts, the I-O SCS Printer Emulation will also handle the DSC (LU3) data stream as well as the SCS (LU1) data stream.

I-O's IPDS Printer Emulation includes customization capabilities for font substitutions capability, simulated edge-to-edge capability for printing on non-edge-to-edge printer, paper tray mapping, etc.

I-O has also included a number of advanced printing features in the I-O SCS Printer Emulation. These include the ability to send printer specific commands as part of the SCS data stream that the IBM host does not know the printer is capable of performing. Other features include I-O's bar code language, graphing language, and even color support.

## ***Supported LaserJet Models***

<b>I-O Product No.</b>	<b>LaserJet Model</b>	<b>Minimum Printer Firmware Level</b>
3235-010 #	4050	
3235-010 #	8000	v. 4.48
3235-010 #	8100	
3235-010 #	8150*	
3235-021	4100	v. 01.027.02
3235-021	4100 MFP	v. 3.528.0
3235-021	4200 Family	v. 04.003.0
3235-021	4300 Family	v. 04.003.0
3235-030	4550	
3235-031	4600	v. 03.012.1
3235-031	5500	v. 04.016.2
3235-041	9000	v. 2.511.0
3235-041	9000 MFP	v. 3.721.0
3235-041	9055	
3235-041	9065	
3235-052	4650	07.000.5
3235-052	2410/20/30	08.108.3a
3235-052	4250/4350	08.008.5a
3235-052	4345mfp	08.051.3
3235-052	5550	
3235-052	9040, 9050	
3235-052	9040mfp, 9050mpf	
3235-052	9500mfp	
3235-053**	4650	07.000.5
3235-053**	2410/20/30	08.108.3a
3235-053**	4250/4350	08.008.5a
3235-053**	4345mfp	08.051.3
3235-053**	5550	
3235-053**	9040, 9050	
3235-053**	9040mfp, 9050mpf	
3235-053**	9500mfp	
3235-062	3000	
3235-062	3800	
3235-062	P3005	08.037.0

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3235-062	M3035mfp
3235-062	M4345mfp
3235-062	M5035mfp

\*Requires J3113A JetDirect Card.

# Discontinued model

\*\*Includes the Enhanced SCS capability.



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**NOTE:** THE ABOVE LISTED PRINTER FIRMWARE VERSION MAY HAVE BEEN SUPERCEDED WITH NEW VERSIONS. IT IS HIGHLY RECOMMENDED THAT YOU OBTAIN AND INSTALL THE MOST RECENTLY RELEASED PRINTER FIRMWARE BEFORE PROCEEDING WITH THE INSTALLATION OF THE I-O SCS COMPACTFLASH. CONTACT HP AT [WWW.HP.COM](http://WWW.HP.COM) FOR PRINTER FIRMWARE DOWNLOADS.

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# Installation

## *Install the I-O 3235*

The following steps will guide you through the installation of the I-O 3235 USB, CompactFlash or DIMM card into a HP LaserJet printer.

1. Perform a self-test of the printer by printing the LaserJet's configuration pages. Then power off the printer.




---

**NOTE:** MAKE A NOTE OF THE IP ADDRESS OF THE PRINTER AS IT WILL BE REQUIRED BY THE IBM SYSTEM ADMINISTRATOR WHEN THE IPDS PRINTER SESSION IS SET UP AT THE IBM HOST.

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2. Open the printer's access door or remove the formatter board.
3. Install the USB, CompactFlash or DIMM card. (Refer to your LaserJet printer user's guide for specific steps on installing optional USB, CompactFlash or DIMM cards.)
  - For USB cards, insert the card such that the edge connectors will make contact with the edge connectors in the card slot.
  - For CompactFlash cards, hold the Compact Flash card by its edges and line up the grooves in the side of the card with the tabs in a CompactFlash slot.
  - For DIMMs, hold the DIMM by the edges (don't touch the edge connector) and insert the DIMM into an available slot. Make sure that the retaining clips on each side are securely locked in place.




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**CAUTION:** DO NOT PUT THE DIMM OR COMPACTFLASH IN A SLOT RESERVED FOR PRINTER SYSTEM FIRMWARE.

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4. Close the access door or re-install the printer's formatter board.
5. Power on the printer. Print a Printer Configuration Page or Menu Map.
6. If the USB, CompactFlash or DIMM card is properly installed, the Configuration Page will show the I-O 3235 as an installed "Personality" on the Configuration Page. On the Menu Map, you will find menu options for the I-O IPDS and/or SCS customization options. The printer's front panel will also show menus for I-O's IPDS and/or SCS customization options.
7. Set the following LaserJet printer options:
  - "Default Personality" as "Auto".
  - I/O time out value to 30 (this is not on the I-O IPDS or SCS menu)
8. After completing these steps, you will need to complete additional configuration of the LaserJet printer and IBM host by following the detailed steps outlined in this user's guide and the companion IPDS and SCS reference manuals..

## *Optional LaserJet First-Page Out Setting*

In some cases, the JetDirect interface may need one additional configuration option set which will result in the first page being printed faster.



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**CAUTION:** THOUGH MAKING THIS CHANGE IS NOT DIFFICULT, IT IS SUGGESTED THAT A KNOWLEDGEABLE PRINTER SPECIALIST EXECUTE THIS CHANGE.

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The following steps will guide you through the process to enable the JetDirect interface's buffer packing option:

1. Start a Telnet session with the JetDirect card.
2. Type: menu, press ENTER.
3. Select option 2. TCP/IP Menu, press ENTER.
4. Select option 2. TCP/IP Print Options, press ENTER.
5. Select Y to change settings, press ENTER.
6. Set Buffer Packing to 1 = Enabled, press ENTER.
7. Select 0 to return to the Main Menu, press ENTER.
8. Select 0 to Exit Telnet, press ENTER.
9. Select Y to Save Settings, press ENTER.

# IBM Host Configuration

This chapter provides a brief description of the process to configure the IBM host for use with the I-O 3235. For the complete process, please refer to the **IPDS Reference Manual** and the **SCS Reference Manual**.

Configuration involves the following steps:

- Setup the IBM host
- Setup the 3235 printer emulation.
- Customization, if needed, of the 3235 to adjust the final printing output.

## IPDS Setup

This user's guide contains specific instructions on the setup and use of the 3235. Companion manuals contain more detailed instructions on setting up the IBM host and customizing the IPDS printer session.

Please refer to the following manuals and guides to setup IPDS sessions:

- Setting up the IBM System i5, iSeries or AS/400 midrange host are found in the **IPDS Reference Manual**.



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**NOTE:** SETTING UP THE IBM HOST FOR A 3235 ENABLED LASERJET IS THE SAME AS SETTING UP AN IBM IPDS PRINTER. HOWEVER, IN THE PRINTER DEFINATION FILE, WHEN ENTERING THE IP ADDRESS OF THE IPDS PRINTER, USE THE IP ADDRESS OF THE HP LASERJET (SEE THE PRINTER'S CONFIGURATION PAGES FOR THE ADDRESS). ALSO, IN LIEU OF USING PORT 5001 AS IS NORMAL FOR IBM IPDS PRINTERS, USE PORT 9100 WHICH IS USED BY HP LASERJET PRINTERS.

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- Setting up the 3235's IPDS printer emulation is found in the **IPDS Configuration** chapter in this guide.
- Customizing the IPDS printer emulation is found in the **IPDS Reference Manual**.



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**TIP:** THESE MANUALS AND GUIDES MAY BE FOUND ON THE I-O 3235 UTILITY CD.

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## 5250 SCS Setup

This user's guide contains specific instructions on the setup and use of the 3235. Companion manuals contain more detailed instructions on setting up the IBM host and customizing the SCS printer session.

Please refer to the following manuals and guides to setup SCS sessions:

- Setting up the IBM System i5, iSeries or AS/400 midrange host are found in the **SCS Reference Manual**.
- Setting up the 5250 SCS printer emulation is found in the **5250 SCS Configuration** chapter in this guide.
- Customizing the 5250 SCS printer emulation is found in the **SCS Reference Manual**.



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**TIP:** THESE MANUALS AND GUIDES MAY BE FOUND ON THE I-O 3235 UTILITY CD.

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## 3270 SCS Setup

This user's guide contains specific instructions on the setup and use of the 3235. Companion manuals contain more detailed instructions on setting up the IBM host and customizing the SCS printer session.

Please refer to the following manuals and guides to setup SCS sessions:

- Setting up the IBM mainframe and its associated Telnet 3270 server is found in the **SCS Reference Manual**.
- Setting up the 3270 SCS printer emulation is found in the **3270 SCS Configuration** chapter in this guide.
- Customizing the 3270 SCS printer emulation is found in the **SCS Reference Manual**.



**TIP:** THESE MANUALS AND GUIDES MAY BE FOUND ON THE I-O 3235 UTILITY CD.

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# IPDS Configuration

## ***LaserJet Setup***

Once the I-O 3235 card is properly installed in the LaserJet printer, no additional configuration of the printer is needed. However, you may want to customize the way that the 3235 handles IPDS jobs. Refer to the ***IPDS Printer Customization*** section and the ***IPDS Reference Manual***.

## ***IPDS Printer Customization***

You can change many configuration parameters that affect IPDS printing through the use of the printer's front panel. On newer LaserJet printers (those released after 2004), you may also use the printer's Web interface to access the 3235's configuration parameters. In addition, I-O's Host Download Command scripting can also be used.

### **Front Panel Configuration**

To configure the 3235 via the front panel, press the main menu button until you reach the sections to configure the 3235. There can be as many as three menu different options for the 3235. These may vary depending upon the LaserJet model. Prior to changing any options via the front panel, it is recommended that you print a Menu Map. The Menu Map shows all menu settings, including the sections for the IPDS and SCS and their current settings.

After you reach any of the IPDS setup menus, you may step through the different settings by using the "item" button. Individual selections within each menu item can be addressed with the "value" button. Active menu selections are noted by an asterisk (\*). To select a different setting than the active one, use the value button until your desired option is displayed and save it using the "select" button.

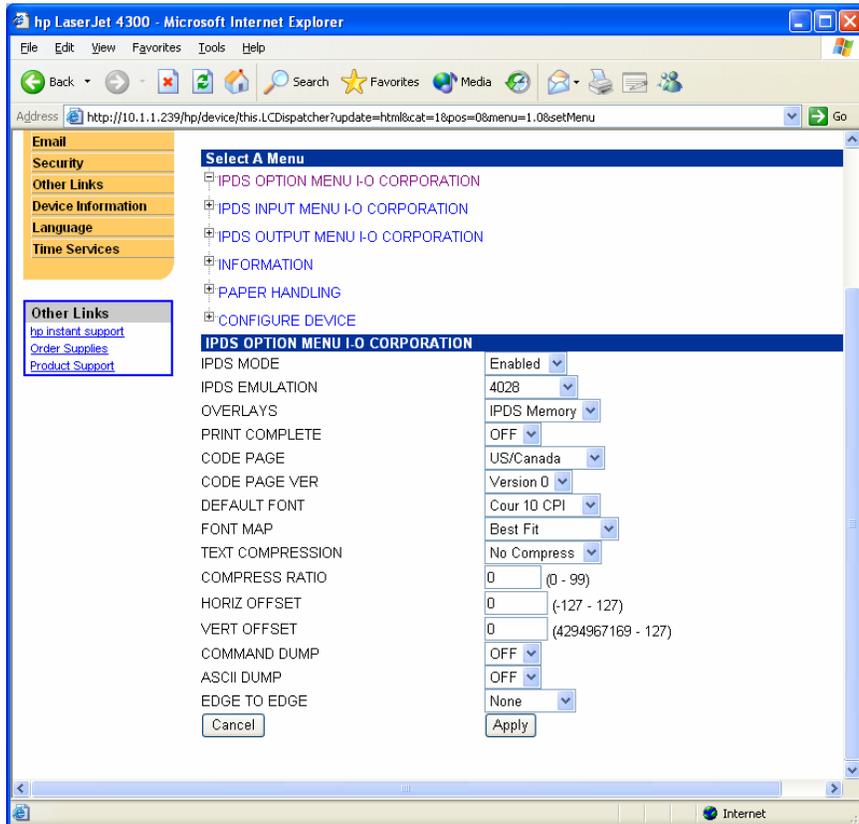
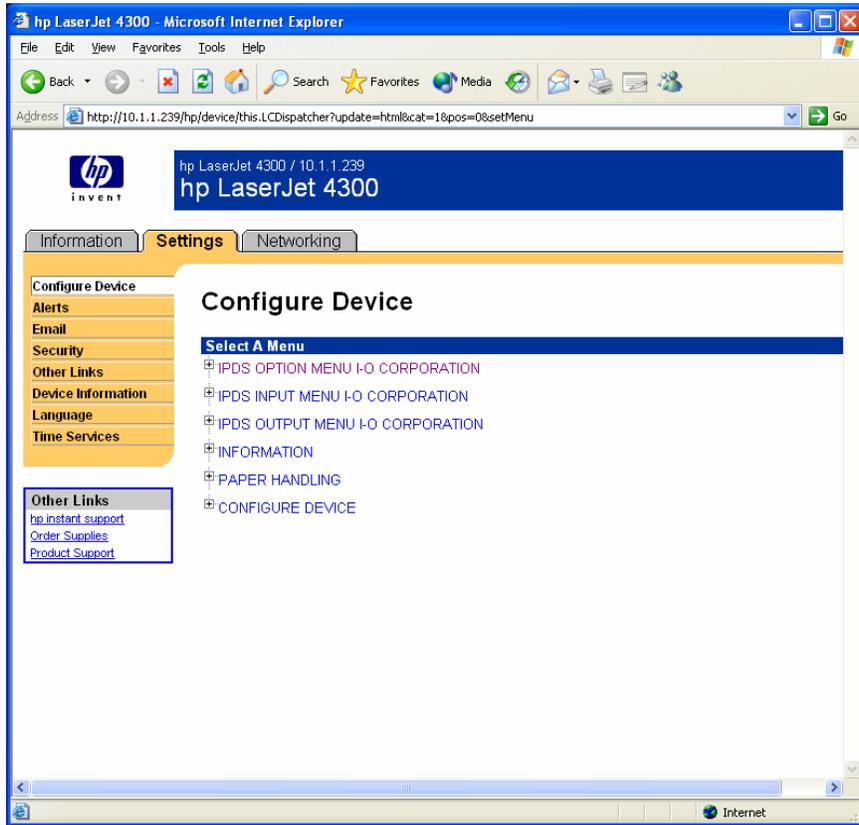
After all front panel options have been selected, it is recommended that you print a copy of the Menu Map of all front panel settings.

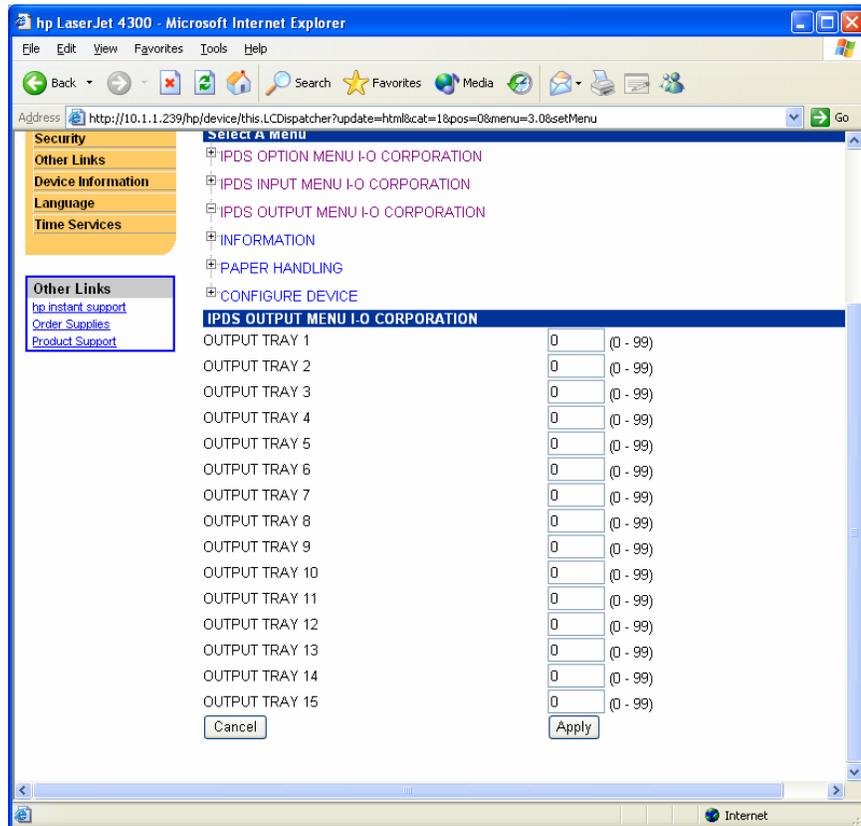
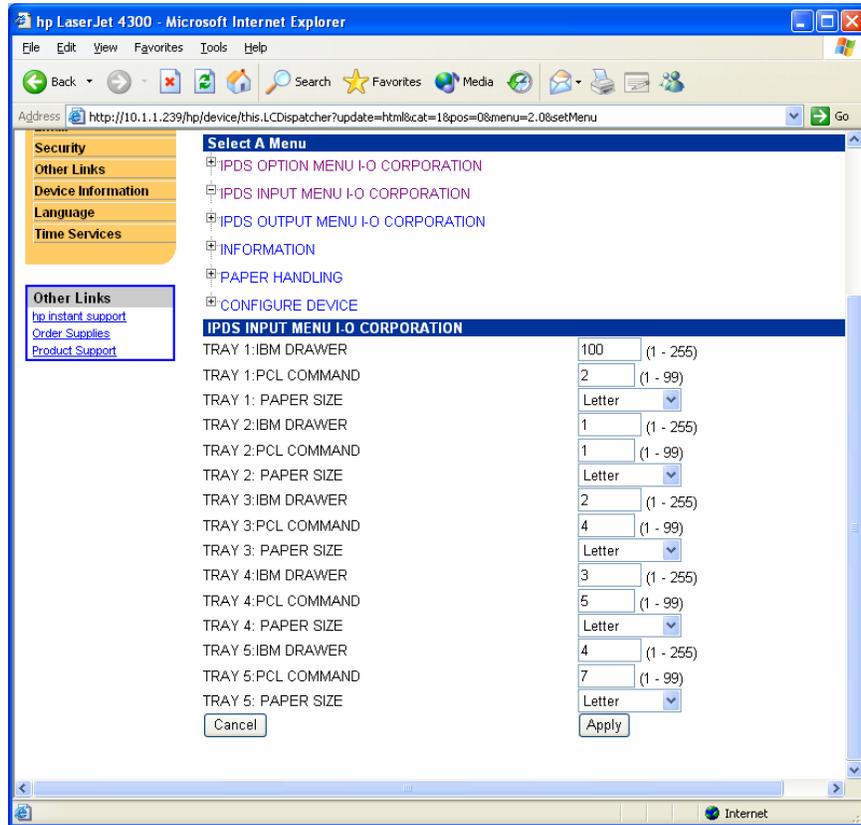
### **Web Page Configuration**

To configure the 3235 via the printer's internal Web server, using the Web browser on a PC navigate to the printer's IP address. Generally you will find the IPDS menus under the Settings section. However, because the Web pages differ from printer model to printer model, you may need to search around on the printer's Web pages until you locate the area where all the printer's menus are displayed. You can then customize the IPDS conversion values right on the PC's screen. This method is available for LaserJet printers released in 2004 and thereafter.

After all menu options have been selected, it is recommended that you print a copy of the Menu Map of all printer's settings. This shows all of the printer's options including the 3235 configuration settings.

The following are samples of the Web pages for the HP 4300 LaserJet.





## Host Download Commands

Host Download commands are basically strings of text that are sent from the IBM host to the IPDS Printer Emulation session that will configure the print job. All configuration parameters pertaining to the IBM printer emulation can be modified using Host Download commands.

## Supported IPDS Configuration Options

The following table shows the available configuration options in alphabetical order. The middle column gives the Host Download Command number. The last column identifies if the configuration parameter also appears on the LaserJet's front panel and Web page. A detailed explanation of each configuration parameter is found in the **IPDS Reference Manual**.

<i>Configuration Parameter</i>	<i>Command Number</i>	<i>Web Page and Front Panel Option</i>
600 DPI Graphics	22	
ASCII Dump	n/a	✓
Compression Ratio	41	✓
Code Page Version	30	✓
Default Code Page (Host Language)	30	
Default Font	32	✓
Edge to Edge	26	✓
Font Mapping	34	✓
Font Strings	33	
Horizontal Margin Offset	42	✓
Host Port Initialization String	04	
Input Tray Mapping	50	✓
Output Tray Mapping	52	✓
Overlay Stored in Printer Memory	24	✓
Paper Size	51	✓
Print Self-Test	98	
Restore Factory Defaults	98	
Restore Previous Settings	98	
Text Compression	40	✓
True Print Complete	25	

## Additional Configuration Options

The following commands are available only in the I-O 3235 and only in printers that support the Web interface.

### ASCII DUMP

Enables or disables the ASCII dump feature – consult the **Troubleshooting** chapter for further instructions on the ASCII dump feature.

<i>Value</i>	<i>Description</i>
Off*	Disables the ASCII dump feature
On	Enables the ASCII dump feature

### **COMMAND DUMP**

Enables or disables the command dump feature – consult the ***Troubleshooting*** chapter for further instructions on the Command Dump feature.

<i>Value</i>	<i>Description</i>
Off*	Disables the command dump feature
On	Enables the command dump feature

## ***IPDS Printer Operation***

Once the IBM host and 3235 enabled LaserJet printer are configured, you may send print jobs to the LaserJet printer.

The printer will connect to any IBM host that sends an IPDS job to it. After printing the job, the printer and the host will wait for any additional print jobs. After a short waiting period (as setup on the IBM host) with no print jobs, the host will automatically disconnect from the printer. This frees the printer to accept other IBM host, Windows, or Unix print jobs.

# 5250 SCS Configuration

## LaserJet Setup

Setting up the LaserJet printer is done by entering the IBM host's IP address and the name the 5250 SCS Printer Emulation session will be identified as on the IBM host.



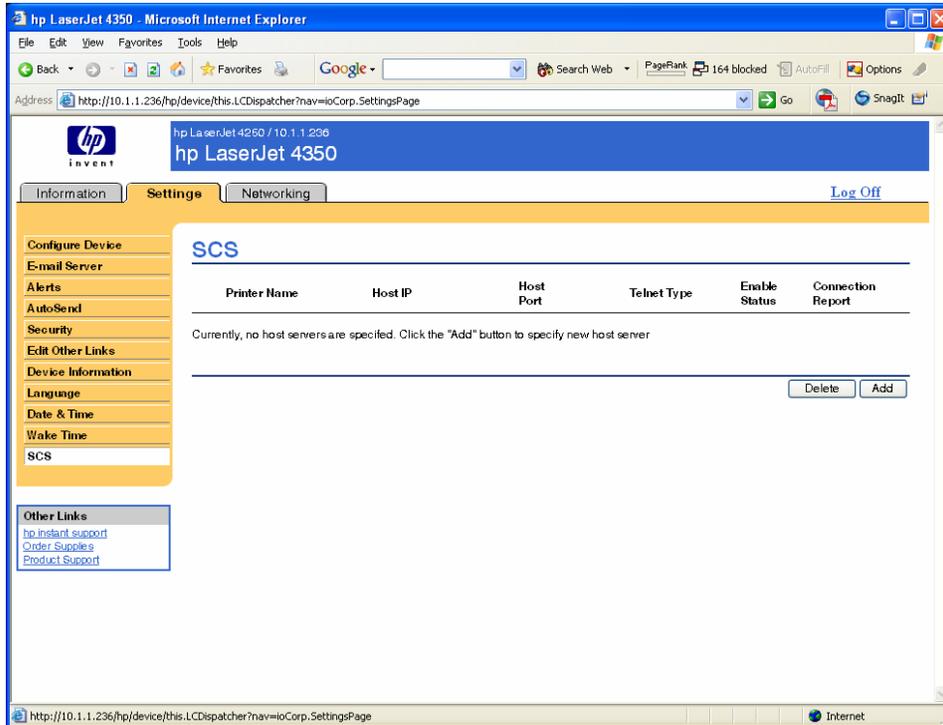
**NOTE: THE IBM HOST INFORMATION CAN ONLY BE ENTERED THROUGH THE LASERJET'S WEB PAGE.**

The following are the steps required to establish a 5250 SCS Printer Emulation session with the IBM host:

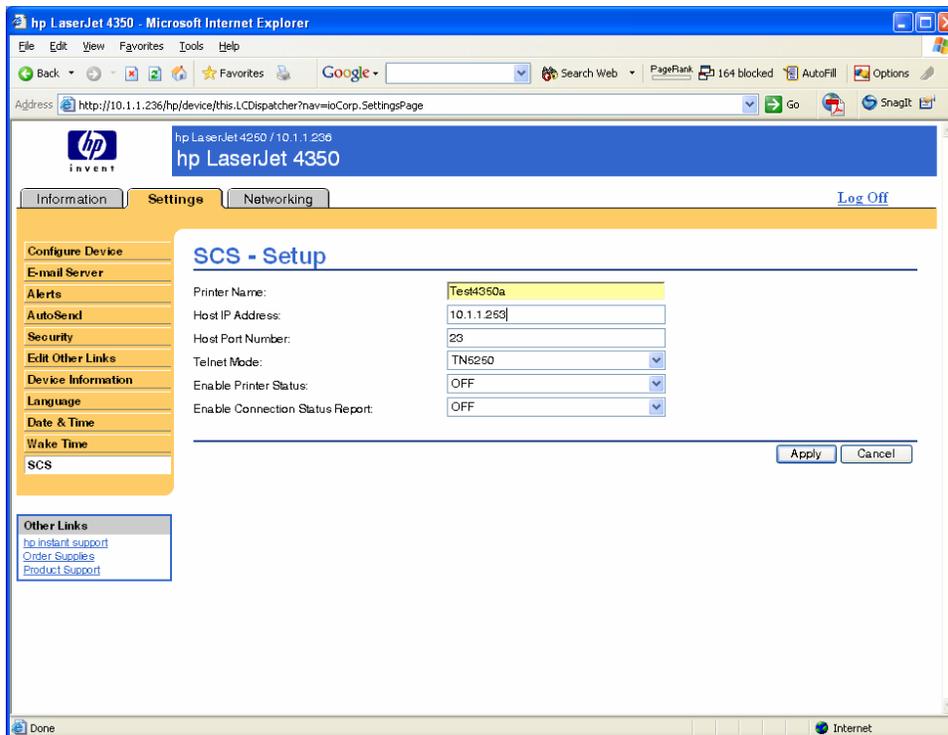
1. At a Windows PC, start the Browser.
2. In the URL field, enter the IP address of the LaserJet that contains the I-O SCS CompactFlash. The following screen will appear.

Input/Output	Status	Size	Type
Tray 1	Empty	ANY SIZE	ANY TYPE
Tray 2	OK	LETTER	PLAIN
Tray 3	OK	LETTER	PLAIN
STANDARD TOP BIN	OK	N/A	N/A

- Click on the Settings tab, then on the SCS option in the side panel and the following screen will appear.



- Click on the CONNECT button to display the following screen.

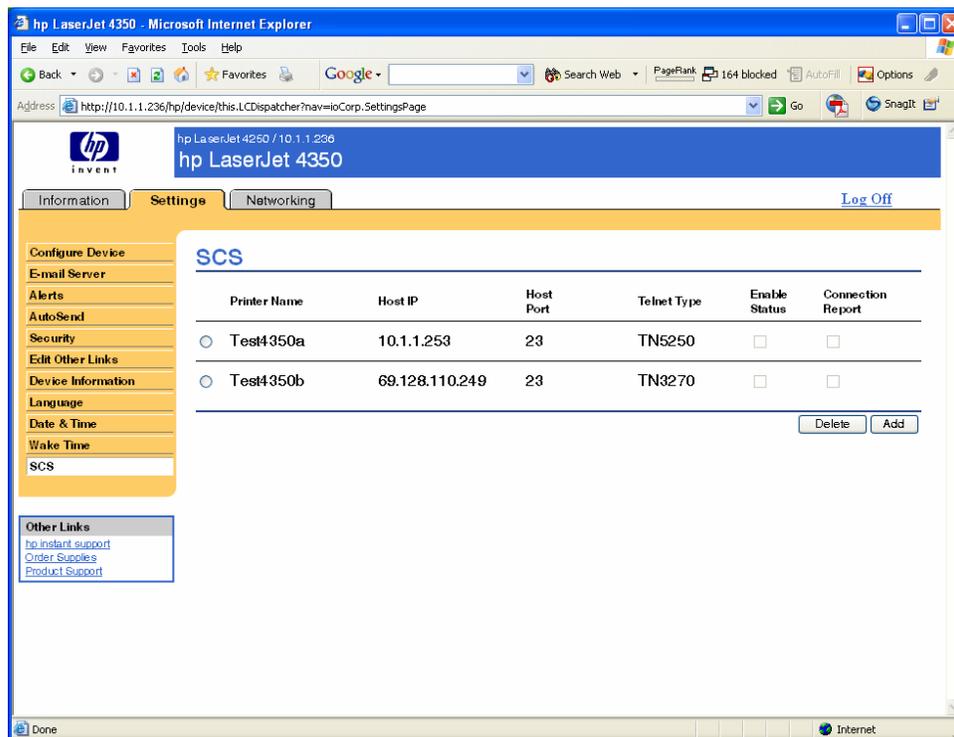


Enter the following information on this screen:

- Printer Name:** Enter the name that the IBM host will use to identify this 5250 SCS Printer Emulation session. This is the name that will be used on the IBM host when sending print jobs to this printer.

- **Host IP Address:** Enter the TCP/IP address of the IBM host that this 5250 SCS Printer Emulation Session will be connected to.
- **Host Port Number:** Enter the IP port number that will be used to contact the IBM host. Generally this number will be 23. However, if there is a firewall that requires a different port number, use this field to enter that new port number.
- **Telnet Mode:** Select from the drop down list TN5250e for connection to an eServer i5, iSeries or AS/400 host.
- **Enable Printer Status:** Select from the drop down list whether to enable sending the status of the print job to the host. For hosts running OS/400 V4R3 or earlier versions that do not have the most recent PTFs applied, it may be necessary to disable sending paper out and printer offline messages to the host. Otherwise the print jobs for the TN5250e printer sessions may hang up on the Host and not get printed
- **Enable Connection Status Report:** Enables or disables the printing of a page showing the connection status between the I-O SCS Printer Emulation session and the IBM host. This page will tell you if the I-O SCS Printer Emulation session is communicating properly with the IBM host. It is suggested for the for the at least the initial setup this be enabled. Then once you are comfortable with the operation of the I-O SCS Printer Emulation, you may turn off this feature. .

After all values have been entered or selected, press the APPLY button. The following screen will appear.



Additional printer sessions may be configured to different IBM hosts. The sessions can be a mixture of both TN5250e and TN3270e sessions. To add additional sessions, click on the CONNECT button.

After printer session has been configured, the LaserJet will connect to the IBM host and a new printer session will automatically be created on the IBM host. If the connection status page function is enabled, a page will print showing the status of the connection between the I-O SCS Printer Emulation session and the host. If the connection status indicates a good connection has been made, then the printer session is then ready to receive IBM host print jobs.

If there is a need to customize the way the print jobs are being handled by the I-O 5250 SCS Printer Emulation, refer to the **5250 SCS Printer Customization** chapter.

## 5250 SCS Printer Customization

This chapter describes how to customize the I-O 5250 SCS Printer Emulation.

I-O's 5250 SCS Printer Emulation can be configured to change the way IBM host print jobs are actually printed. Options include the ability to set the final print quality (draft or near-letter quality), the characters per inch used, etc.

Customization can be done in three different ways:

- Using the HP LaserJet's Web page
- Using the HP LaserJet printer's front panel
- Using I-O's robust and feature-rich Host Download Commands

### Web Page Configuration

To configure the 5250 SCS Printer Emulation session via the printer's internal Web server, using the Web browser on a PC navigate to the printer's URL (the printer's IP address).

Generally you will find the 5250 SCS menu under the Settings section. However, because the Web pages differ from printer model to printer model, you may need to search around on the printer's Web pages to locate the 5250 SCS menu. You can then customize the 5250 SCS Printer Emulation configuration values right on the PC's screen.



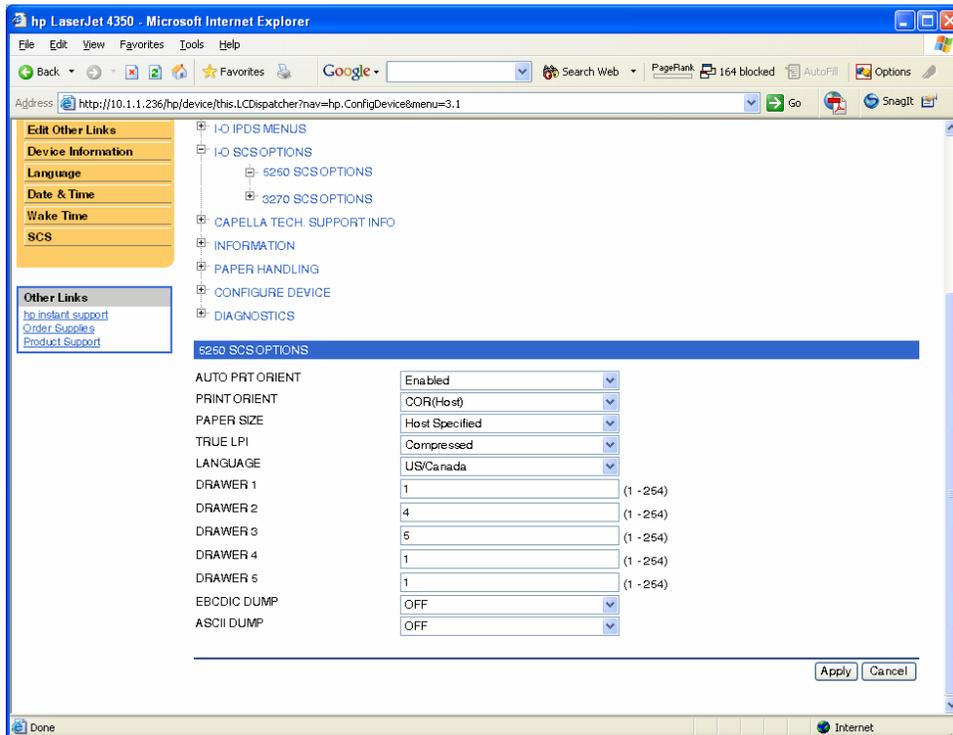
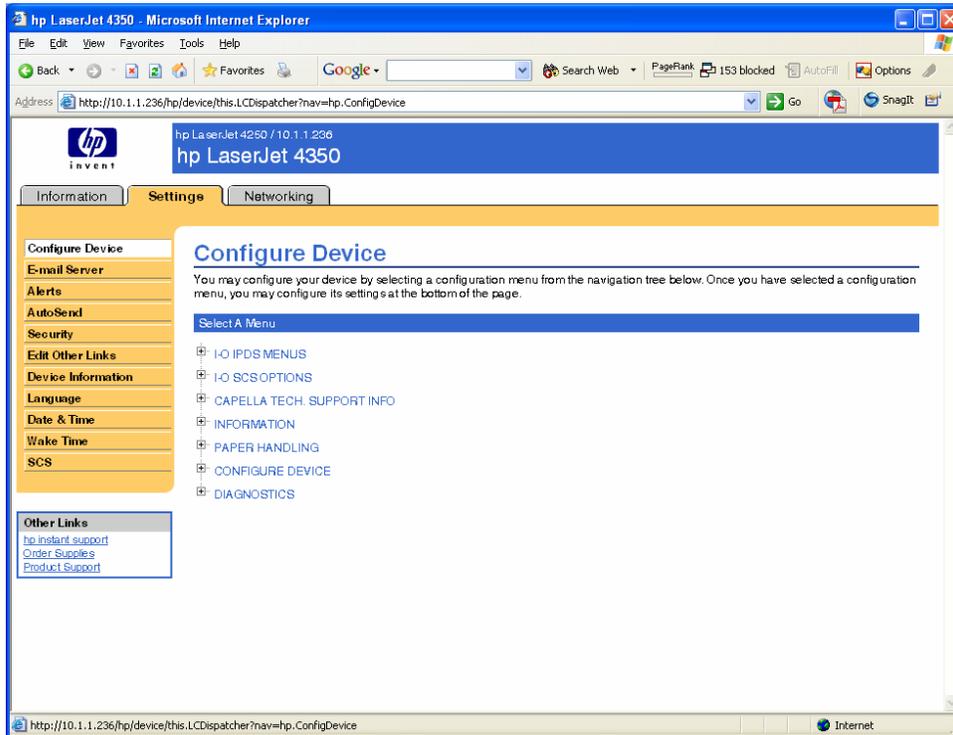
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**NOTE:** NOT ALL LASERJET PRINTERS ARE CAPABLE OF PROVIDING A WEB PAGE. GENERALLY LASERJET PRINTERS INTRODUCED DURING 2004 AND LATER ARE CAPABLE OF SERVING UP A WEB PAGE.

---

After all menu options have been selected, it is recommended that you print a copy of the Menu Map. This shows the current settings for all the printer's various configuration options.

The following are samples of the Web pages for the HP 4350 LaserJet. Detailed information on the use of each of the menu options is found in the section.



## Front Panel Configuration

Upon installation of the I-O 5250 SCS CompactFlash, the printer recognizes the CompactFlash and the additional front panel selections automatically become accessible.

To configure the 5250 SCS CompactFlash via the front panel, press the main menu button until you reach the sections to configure the 5250 SCS option. Prior to changing any options via the front panel, it is recommended that you print a Menu Map. The Menu Map shows all menu settings and may be helpful if you decide to return to a previous setting.

After you reach any of the 5250 SCS setup menu, you may step through the different settings by using the "item" button. Individual selections within each menu item can be addressed with the "value" button. Active menu selections are noted by an asterisk (\*). To select a different setting than the active one, use the value button until your desired option is displayed and save it using the "select" button.

After all front panel options have been selected, it is recommended that you print a copy of the Menu Map.



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**NOTE:** NOT ALL 5250 SCS CONFIGURATION OPTIONS CAN BE ACCESSED THROUGH THE PRINTER'S FRONT PANEL. REFER TO THE TABLE IN THE **SUPPORTED 5250 SCS PRINTER CONFIGURATION OPTIONS** SECTION.

---

## Host Download Commands

Host Download commands are basically strings of text that are sent from the IBM host to the I-O 5250 SCS Printer Emulation session that will configure the print job. All configuration parameters pertaining to the IBM printer emulation can be modified using Host Download commands.

## Supported 5250 SCS Configuration Options

The following table shows the available configuration options in alphabetical order. The middle column gives the Host Download Command number. The last column identifies if the configuration parameter also appears on the LaserJet's front panel and Web page. A detailed explanation of each configuration parameter is found in the **SCS Reference Manual**.

<i>Configuration Parameter</i>	<i>Host Download Command Number</i>	<i>Web Page and Front Panel Option</i>
ASCII Dump	43	✓
Automatic Page Orientation	08	✓
Character Set	17	
Command Pass-Thru Default	44	
CPT End Delimiters	02	
CPT Start Delimiters	01	
Duplexing	33	
EBCDIC Dump	42	✓
Horizontal Margin	19	
Host Language	05	✓
IBM Drawer 1	13	✓
IBM Drawer 2	14	✓
IBM Drawer 3	15	✓
IBM Drawer 4	30	✓
IBM Drawer 5	31	✓
Lines Per Inch	10	✓
Orientation	07	✓
Override Host Formatting	16	
Paper Size	09	✓
Process Left Margin Before/After Command Pass-Thru	35	
Save Current Settings	99	
User Defined Fonts	21	
User Defined Strings	04	
Vertical Margin	18	

## 5250 SCS Printer Operation

### Running a 5250 SCS Printer Session

The 5250 SCS Printer Emulation session will automatically connect to the IBM host when the following occurs:

- The session is first configured on the LaserJet printer.
- The printer is powered up.

To end the connection with the IBM host, do one of the following:

- Use the printer's Web interface to disconnect the session(s). Do this by starting a browser, navigate to the printer's IP address, select the Settings and then the SCS menu, click on the SCS session, and click the DISCONNECT button. This method will cause the IBM host to immediately shut down the session.
- Power down the printer.



---

**CAUTION:** WHEN THE LASERJET PRINTER IS POWERED OFF, THE IBM HOST WILL NOT IMMEDIATELY END THE CONNECTION. AFTER A TIME-OUT PERIOD THAT VARIES FROM 15 MINUTES TO SEVERAL HOURS, THE IBM HOST WILL EVENTUALLY END THE CONNECTION AND ALLOW RECONNECTION. IF THE PRINTER IS POWERED UP WITHIN THIS PERIOD, THE IBM HOST WILL REFUSE TO ALLOW THE 5250 SCS PRINTER EMULATION SESSION TO RECONNECT.

---

To cause the IBM host to immediately end the connection and allow reconnection, either of two processes may be used:

- Vary off the Device
  1. End the writer.
  2. Vary off the device.
  3. Cycle the power on the printer.
- End the Telnet session:
  1. End the Telnet session by using the IBM host's TCPADM command. (You may also use the NETSTAT command, option 3 as an alternate.)
  2. At the command line, type GO TCPADM, take selection "7", then "3".
  3. Find the IP address for the LaserJet that runs the 5250 SCS Printer Emulation session, then execute option "4 - End of Session".
  4. Cycle the power at the printer.

# 3270 SCS Configuration

## LaserJet Setup

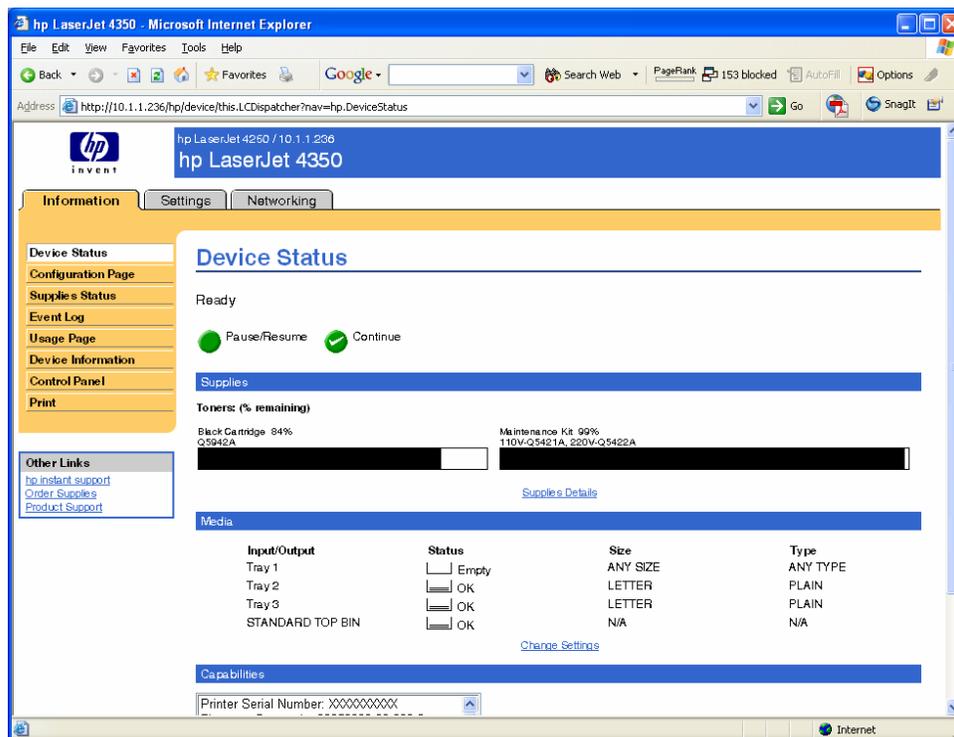
Setting up the LaserJet printer is done by entering the IBM host's IP address and the name the 3270 SCS Printer Emulation session will be identified as on the IBM host.



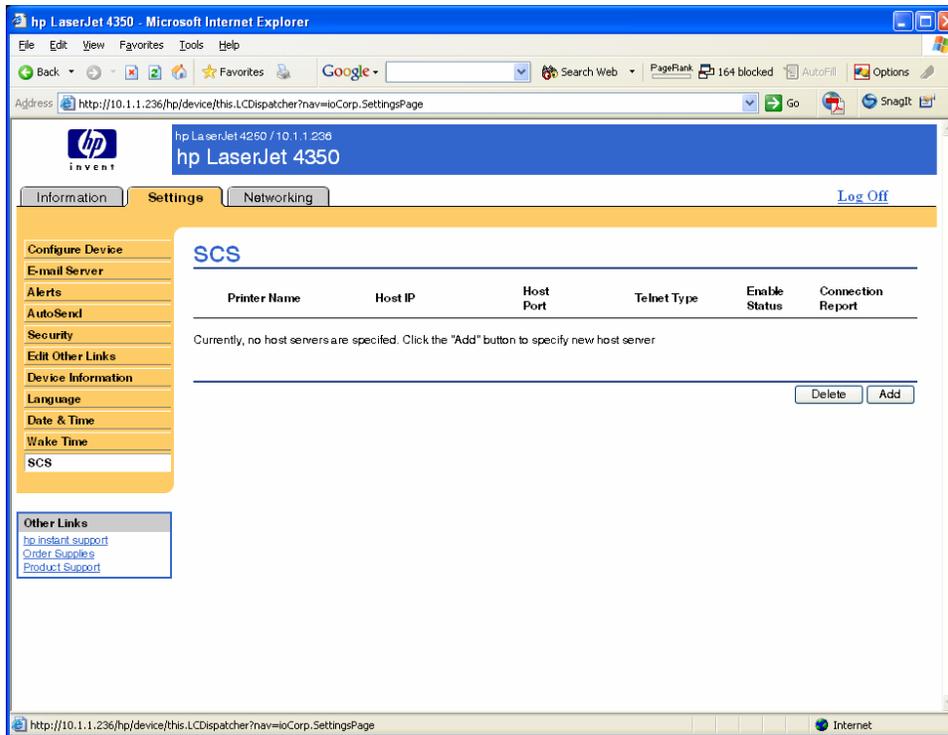
**NOTE: THE IBM HOST INFORMATION CAN ONLY BE ENTERED THROUGH THE LASERJET'S WEB PAGE.**

The following are the steps required to establish a 3270 SCS Printer Emulation session with the IBM host:

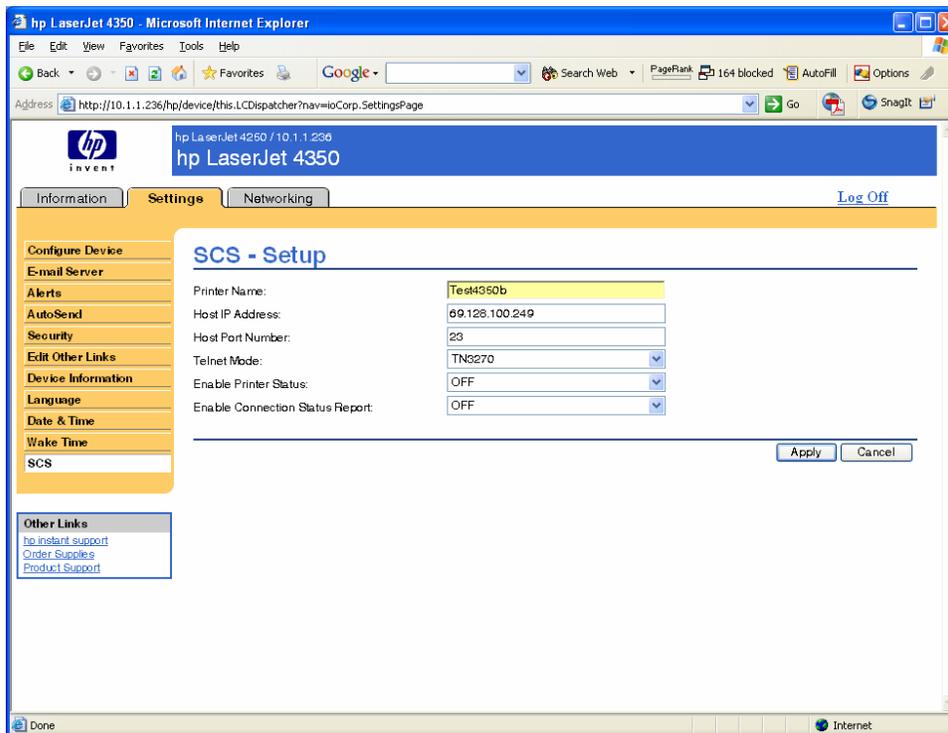
1. At a Windows PC, start the Browser.
2. In the URL field, enter the IP address of the LaserJet that contains the I-O SCS CompactFlash.



- Click on the Settings tab, then on the SCS option in the side panel.



- Click on the ADD button (right hand side of the screen).

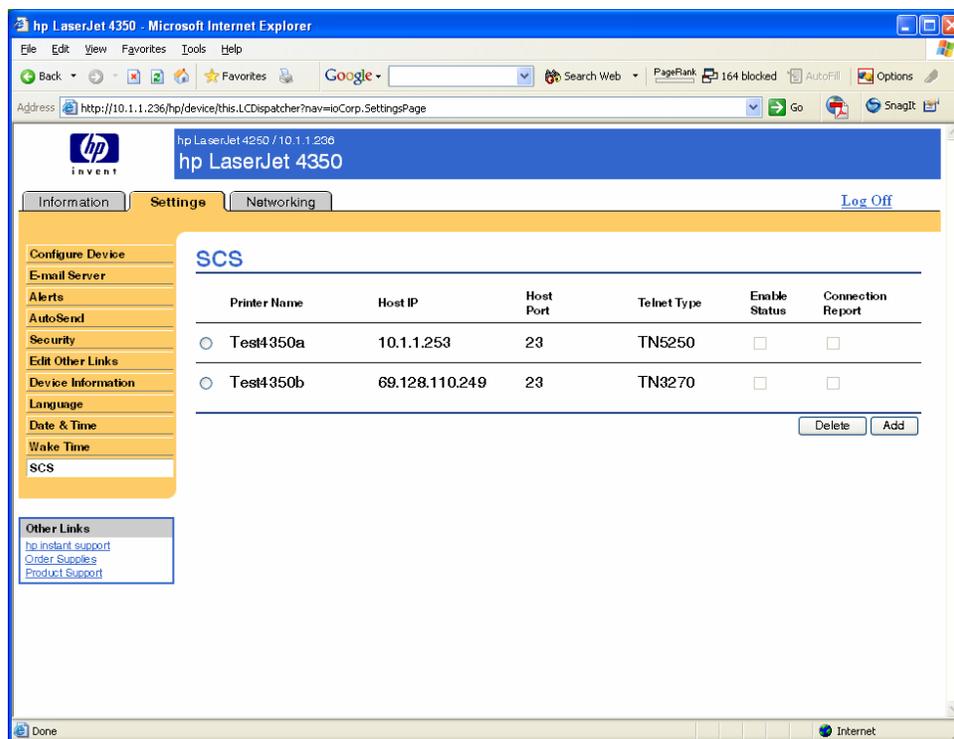


Enter the following information on this screen:

- Printer Name:** Enter the name that the IBM host will use to identify this 5250 SCS Printer Emulation session. This is the name that will be used on the IBM host when sending print jobs to this printer.
- Host IP Address:** Enter the TCP/IP address of the IBM host that this 5250 SCS Printer Emulation Session will be connected to.

- **Host Port Number:** Enter the IP port number that will be used to contact the IBM host. Generally this number will be 23. However, if there is a firewall that requires a different port number, use this field to enter that new port number.
- **Telnet Mode:** Select from the drop down list TN5250e for connection to an eServer i5, iSeries or AS/400 host.
- **Enable Printer Status:** Select from the drop down list whether to enable sending the status of the print job to the host. On some mainframe hosts, it may be necessary to disable sending paper out and printer offline messages to the host. Otherwise the print jobs for the TN3270e printer sessions may hang up on the Host and not get printed
- **Enable Connection Status Report:** Enables or disables the printing of a page showing the connection status between the I-O SCS Printer Emulation session and the IBM host. This page will tell you if the I-O SCS Printer Emulation session is communicating properly with the IBM host. It is suggested for the for the at least the initial setup this be enabled. Then once you are comfortable with the operation of the I-O SCS Printer Emulation, you may turn off this feature. .

After all values have been entered or selected, press the APPLY button. The following screen will appear.



Additional printer sessions may be configured to different IBM hosts. The sessions can be a mixture of both TN5250e and TN3270e sessions. To add additional sessions, click on the ADD button.

After printer session has been configured, the LaserJet will connect to the IBM host and a new printer session will automatically be created on the IBM host. If the connection status page function is enabled, a page will print showing the status of the connection between the I-O SCS Printer Emulation session and the host. If the connection status indicates a good connection has been made, then the printer session is then ready to receive IBM host print jobs.

If there is a need to customize the way the print jobs are being handled by the I-O 3270 SCS Printer Emulation, refer to the **3270 SCS Printer Customization** chapter.

## 3270 SCS Printer Customization

This chapter describes how to customize the I-O 3270 SCS Printer Emulation.

I-O's 3270 SCS Printer Emulation can be configured to change the way IBM host print jobs are actually printed. Options include the ability to set the final print quality (draft or near-letter quality), the characters per inch used, etc.

Customization can be done in three different ways:

- Using the HP LaserJet's Web page
- Using the HP LaserJet printer's front panel
- Using I-O's robust and feature-rich Host Download Commands

### Web Page Configuration

To configure the 3270 SCS Printer Emulation session via the printer's internal Web server, using the Web browser on a PC navigate to the printer's URL (the printer's IP address).

Generally you will find the 3270 SCS menu under the Settings section. However, because the Web pages differ from printer model to printer model, you may need to search around on the printer's Web pages to locate the 3270 SCS menu. You can then customize the 3270 SCS Printer Emulation configuration values right on the PC's screen.



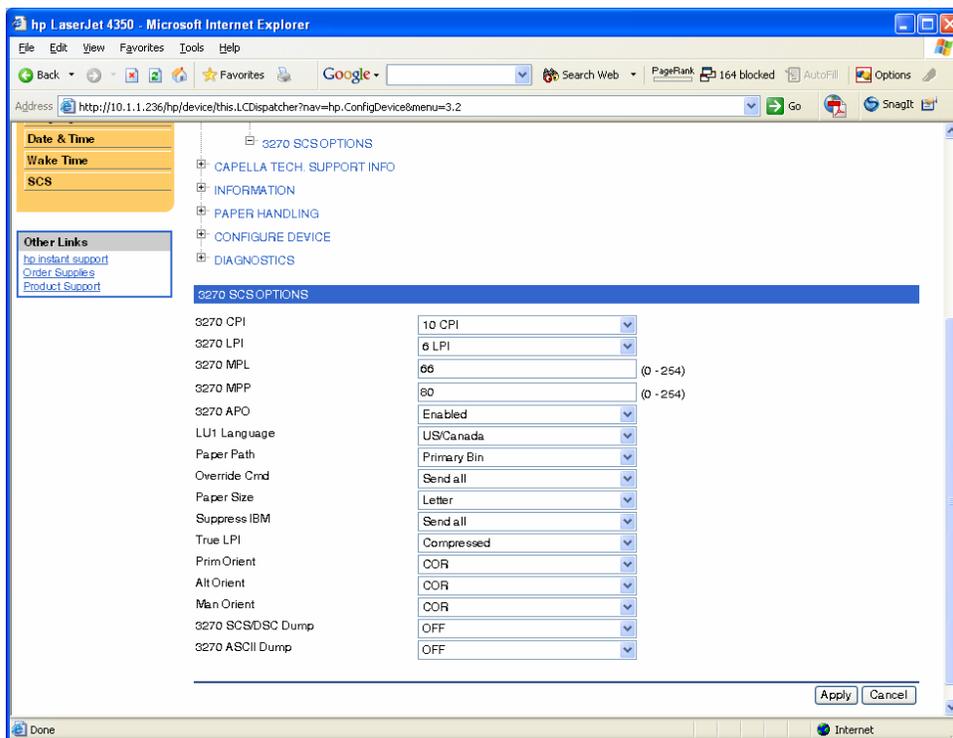
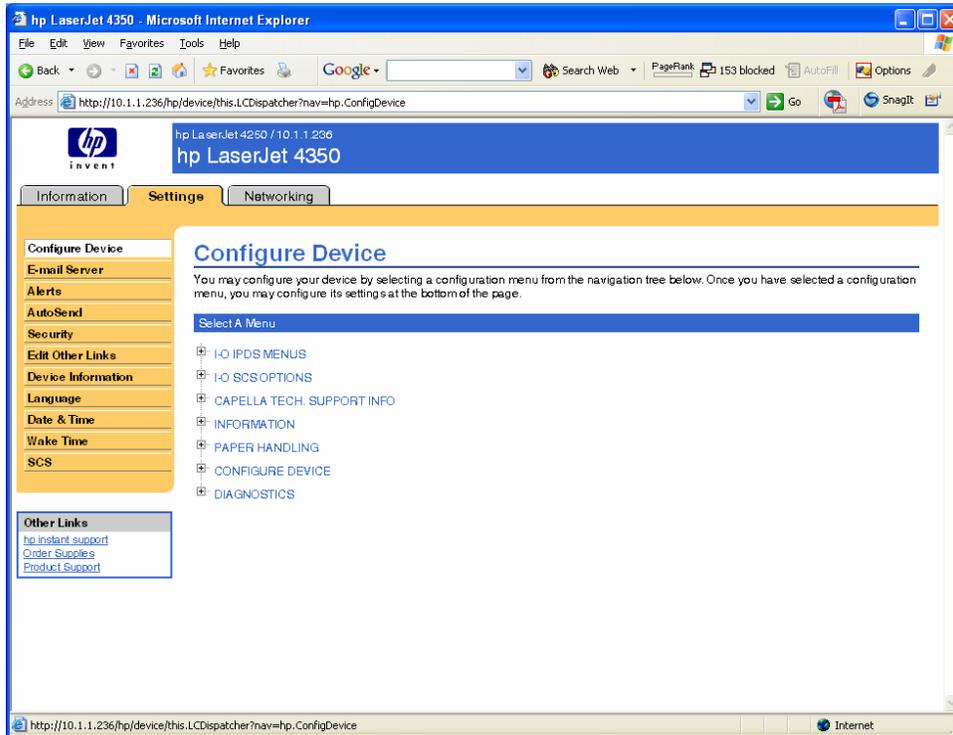
---

**NOTE:** NOT ALL LASERJET PRINTERS ARE CAPABLE OF PROVIDING A WEB PAGE. GENERALLY LASERJET PRINTERS INTRODUCED DURING 2004 AND LATER ARE CAPABLE OF SERVING UP A WEB PAGE.

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After all menu options have been selected, it is recommended that you print a copy of the Menu Map. This shows the current settings for all the printer's various configuration options.

The following are samples of the Web pages for the HP 4350 LaserJet. Detailed information on the use of each of the menu options is found in the **3270 SCS Printer Configuration Options** section.



## Front Panel Configuration

Upon installation of the I-O 3270 SCS CompactFlash, the printer recognizes the CompactFlash and the additional front panel selections automatically become accessible.

To configure the 3270 SCS CompactFlash via the front panel, press the main menu button until you reach the sections to configure the 3270 SCS option. Prior to changing any options via the front panel, it is recommended that you print a Menu Map. The Menu Map shows all menu settings and may be helpful if you decide to return to a previous setting.

After you reach any of the 3270 SCS setup menu, you may step through the different settings by using the "item" button. Individual selections within each menu item can be addressed with the "value" button. Active menu selections are noted by an asterisk (\*). To select a different setting than the active one, use the value button until your desired option is displayed and save it using the "select" button.

After all front panel options have been selected, it is recommended that you print a copy of the Menu Map.



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**NOTE:** NOT ALL 3270 SCS CONFIGURATION OPTIONS CAN BE ACCESSED THROUGH THE PRINTER'S FRONT PANEL. REFER TO THE TABLE FOUND IN THE **SUPPORTED 3270 SCS PRINTER CONFIGURATION OPTIONS SECTION**

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## Host Download Commands

Host Download commands are sent from the IBM 3270 mainframe to the 3270 SCS Printer Emulation session as part of a print job. All configuration parameters pertaining to the 3270 SCS Printer Emulation session can be modified using Host Download commands.

## Supported 3270 SCS Printer Configuration Options

The following table shows the available configuration options in alphabetical order. The middle column gives the Host Download Command number. The last column identifies if the configuration parameter also appears on the LaserJet's front panel and Web page. A detailed explanation of each configuration parameter is found in the **SCS Reference Manual**.

<i>Configuration Parameter</i>	<i>Host Download Command Number</i>	<i>Web Page and Front Panel Option</i>
Alternate Paper Tray Orientation	63	✓
Auto Print Tray Orientation	61	✓
Automatic Function at End of Job	20	
Character Set Selection	65	
Characters Per Inch	03	✓
Command ID Character	41	
CPT Ending Delimiter Characters	39	
CPT Start Delimiter Characters	40	
CR at MPP+1	15	
Custom User Strings	55	
FF after Timeout	27	
FF Valid Location	19	
FF after Local Screen Copy	13	
FF before Local Screen Copy	12	
FF Usage	25	
Form Length	05	✓
Intervention Required Timeout	34	
Line Spacing	04	
Lines Per Inch	02	✓
LU1 Language	08	✓
LU3 Print Image (Non-SCS Mode)	14	
Manual Paper Tray Orientation	64	✓
Maximum Print Position	06	✓
NL at MPP+1	16	
Override Formatting Commands	30	✓
Overwrite DSC (LU3) Translation Table	71	

Overwrite EBCDIC (SCS/LU1) Translation Table	70	
Paper Path	11	✓
Paper Size	32	✓
Primary Paper Tray Orientation	62	✓
Print Case	07	
SCS TRN Translate	45	
Start / Stop ASCII Hex Dump	42	✓
Start / Stop EBCDIC Hex Dump	43	✓
Store Configuration in Permanent Memory	99	
Suppress Empty Forms	26	
Suppress IBM Control Codes	36	✓
True LPI Spacing	38	✓
Truncate/Wrap Select	31	
Valid FF at End of Print Buffer	18	
Valid FF followed by Data	17	
Vertical Channel Select (VCS)	37	

## 3270 SCS Printer Operation

### Running a 3270 SCS Printer Session

A LaserJet printer running an I-O 3270 SCS printer emulation session will appear to the IBM mainframe host as a 7287, 32623, 3268, 3812-1, 4028, 4214 or 4224 SCS printer.

The 3270 SCS Printer Emulation session will automatically connect to the IBM host when the following occurs:

- The session is first configured on the LaserJet printer.
- The printer is powered up.

To end the connection with the IBM host, do one of the following:

- Use the printer's Web interface to disconnect the session(s). Do this by starting a browser, navigate to the printer's IP address, select the Settings and then the SCS menu, click on the SCS session, and click the DISCONNECT button. This method will cause the IBM host to immediately shut down the session.
- Power down the printer.



**TIP:** REFER TO THE **SCS REFERENCE MANUAL** FOR DETAILS ON THE OPERATION OF THE 3270 SCS PRINTER SESSION.



**CAUTION:** BECAUSE OF THE COMPLEXITY OF CONFIGURING MAINFRAME PRINTERS, A KNOWLEDGEABLE HOST SYSTEM ADMINISTRATOR OR IBM SPECIALIST MUST PERFORM THE PROCESS. THE INSTRUCTIONS CONTAINED IN THIS AND RELATED DOCUMENTS ARE INTENDED TO ONLY PROVIDE A BRIEF OVERVIEW OF THE PROCESS.

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# Troubleshooting

This chapter contains solutions for problems you may encounter while using the I-O's *adaptio* Host Printing Software. If a problem persists even after you implement the solutions provided here, or if you encounter a problem not listed here, please refer to the following resources:

- The I-O Knowledge Base at [www.iocorp.com](http://www.iocorp.com).
- The SCS Reference Manual
- The IPDS Reference Manual
- Your I-O Dealer
- I-O's Technical Support Group at 801-973-6767 or by email at [support@iocorp.com](mailto:support@iocorp.com).




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**NOTE:** THE MANUALS AND GUIDES MAY BE VIEWED ON THE I-O 3235 UTILITY CD.

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## Software Updates for DIMM Products

Call I-O Technical Support group to arrange for a new DIMM to be shipped to you. You will need to return the old DIMM as part of the update process.

## Software Updates for USB and CompactFlash Products

To update the I-O 3235 firmware, it is necessary to determine which storage location the I-O 3235 USB or CompactFlash card is installed. Once the storage location has been identified, then updating the I-O 3235 is a simple matter of sending a "rfu" file to the printer.

### How to Determine Which USB or CompactFlash Firmware File to Use

Firmware to update the I-O 3235 USB or CompactFlash cards uses the naming convention of 062v117\_fsa0.rfu.

- The first three characters "062" indicate the I-O 3235 model number.
- The next four characters "v117" indicate the version number.
- The next five characters "\_fsa0" indicate the printer's logical storage location.




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**CAUTION:** IT IS CRITICAL THAT YOU IDENTIFY THE CORRECT STORAGE LOCATION WHEN UPDATING A USB OR COMPACTFLASH CARD. IF YOU CHOOSE THE WRONG LOCATION, YOU COULD END UP WITH TWO COPIES OF THE 3235 FIRMWARE IN YOUR PRINTER. THIS COULD POTENTIALLY CAUSE THE PRINTER TO CRASH, AND DEFINITELY WILL CAUSE UNEXPECTED PRINTING RESULTS.

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### How to Determine the Logical Storage Location

The LaserJet uses a logical storage location that differs from the physical card slot that a USB or CompactFlash card is located in.

For example:

- In a LaserJet 4350, an I-O 3235 CompactFlash can be installed in card slot 2 with card slot 1 having nothing installed in it. The LaserJet will see the I-O 3235's logical storage location as "0".
- Again in a LaserJet 4350, there can be a Compact Flash from another manufacturer in card slot 1, and the I-O 3235 is in card slot 2. The LaserJet will then see the I-O 3235's logical storage location as "1".

- Still another situation can be where there is an internal hard drive in the printer, and the USB or Compact Flash is installed in card slot 1. The LaserJet will see the I-O 3235's logical storage location as "1".

In some LaserJet printers, such as the 4345mfp or the 9050, there are three card slots.

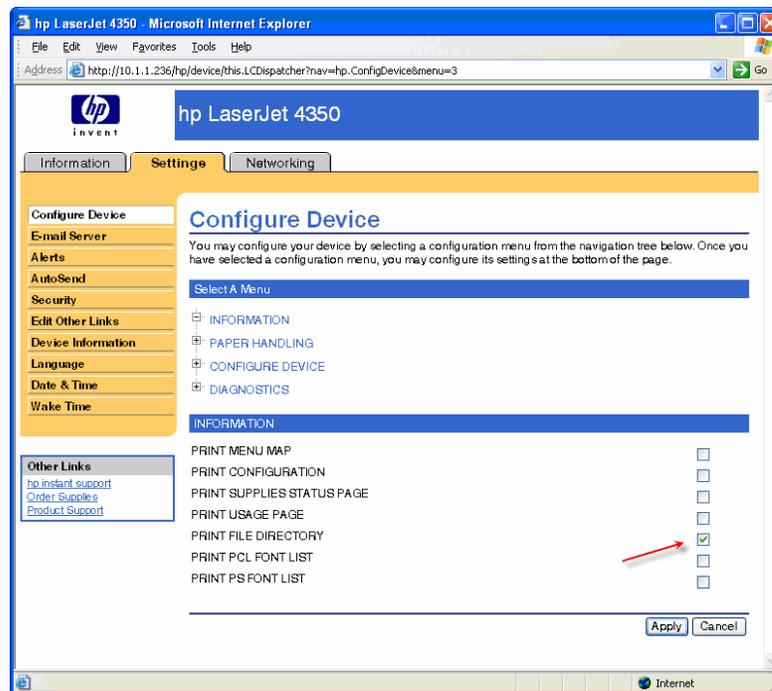
To accurately determine which logical storage location the I-O 3235 USB or CompactFlash card is located in, you will need to print a LaserJet file directory report. This can be done from the printer's front panel or through using the printer's web page.

To print the file directory report from the front panel, do the following:

1. Press the Check button to view the printer's menus.
2. Scroll to the Information menu option, and select it.
3. Scroll to the Print File Directory option, and select. A multiple page report will print.

To print the file directory report from the printer's web page, do the following:

1. Using a browser, navigate to the IP address of the LaserJet printer.
2. On the Settings tab, select Configure Device.
3. Under the Select a Menu section, click on the + box by Information to expand the menu options.
4. Under the Information section, check the box adjacent to the Print File Directory option.
5. Click the Apply button to cause the report to be printed.



A sample of the fire directory report is shown below:

HP Color LaserJet 3800 Printers		File Directory Page		Page 1
<b>Storage Information</b>				
Device Type: CARD SLOT				
Device Location: CARD slot 1				
Device Capacity: 2032 KB				
Free Space: 1900 KB				
Write Protect: DISABLED				
Permissions	Owner	File Size	Directory/File Name	
drwxrwxrwx	0	Directory	0:	
-rwxrwxrwx	0	24	.ugsvb	
drwxrwx---	0	Directory	0:\PermStore	
-rwxrwx---	0	18	ps_SP_FF.rst	
drwxrwxrwx	0	Directory	0:\PostScript	
drwxrwxrwx	0	Directory	0:\PjL	
<b>Storage Information</b>				
Device Type: USB STORAGE				
Device Location: USB STORAGE 1				
Device Capacity: 123 MB				
Free Space: 111 MB				
Write Protect: DISABLED				
Permissions	Owner	File Size	Directory/File Name	
drwxrwxrwx	0	Directory	1:	
-rwxrwxrwx	0	768	cfg_file.dat	
-rwxrwxrwx	0	29	webServer.info	
drwxrwxrwx	0	Directory	1:\PostScript	
drwxrwxrwx	0	Directory	1:\PjL	
drwxrwxrwx	0	Directory	1:\firmware	
-rwxrwxrwx	0	16	loc4xxx.dat	
drwxrwxrwx	0	Directory	1:\firmware\lj3800_1.00	
drwxrwxrwx	0	Directory	1:\firmware\lj3800_1.00\I-O_Corp	
drwxrwxrwx	0	Directory	1:\firmware\lj3800_1.00\I-O_Corp\lib	
-rwxrwxrwx	0	980984	t01s3800.d11	
-rwxrwxrwx	0	32044	scs3800Locz.d11	
-rwxrwxrwx	0	209288	scs3800Menu.d11	
-rwxrwxrwx	0	88132	scs3800SysVar.d11	
-rwxrwxrwx	0	32300	ipds3800Locz.d11	
-rwxrwxrwx	0	246476	ipds3800Menu.d11	
-rwxrwxrwx	0	97092	ipds3800SysVar.d11	
drwxrwxrwx	0	Directory	1:\firmware\lj3800_1.00\I-O_Corp\app	
-rwxrwxrwx	0	21864	t01s3800.exe	
drwxrwxrwx	0	Directory	1:\firmware\lj3800_1.00\	
drwxrwxrwx	0	Directory	1:\firmware\lj3800_1.00\	
drwxrwxrwx	0	Directory	1:\firmware\lj3800_1.00\	
-rwxrwxrwx	0	9436	ChaiInstaller_lj3800.d11	
-rwxrwxrwx	0	159040	ChaiInstaller_lj3800.pgm	
drwxrwxrwx	0	Directory	1:\firmware\ljm4345mfp_1.00	
drwxrwxrwx	0	Directory	1:\firmware\ljm4345mfp_1.00\I-O_Corp	
drwxrwxrwx	0	Directory	1:\firmware\ljm4345mfp_1.00\I-O_Corp\lib	
-rwxrwxrwx	0	1126852	t01s220.d11	
-rwxrwxrwx	0	42148	scsm220Locz.d11	
-rwxrwxrwx	0	288320	scsm220Menu.d11	
-rwxrwxrwx	0	108032	scsm220SysVar.d11	
-rwxrwxrwx	0	42404	ipdsm220Locz.d11	
-rwxrwxrwx	0	340748	ipdsm220Menu.d11	

To find the logical storage location for the I-O 3235, look down the Directory/File Name column. You are looking for a line in bold letters like “1:\firmware\lj3800\_1.00\I-O\_Corp”.

- The “1:” at the beginning of the directory/file name indicates that the LaserJet printer is accessing the I-O 3235 in logical storage location 1 even through the USB or CompactFlash card is physically installed in card slot 2.
- The “lj3800” indicates the LaserJet model. The I-O 3235 contains all the LaserJet models on it. You only need to find one of the entries to identify the logical storage location.

The logical storage location dictates which I-O 3235 firmware file to use:

- If the I-O firmware entry in the Directory/File Name column shows a “0” at the beginning of the firmware entry for I-O as shown in the example above, then use the I-O 3235 firmware update file that has the “\_fsa0” reference in the name (see description of the firmware file above).
- If the directory entry begins with a “1”, use the file that has the “\_fsa1” reference.
- If the directory entry begins with a “2”, use the file that has the “\_fsa2” reference.

## Firmware Update Procedure

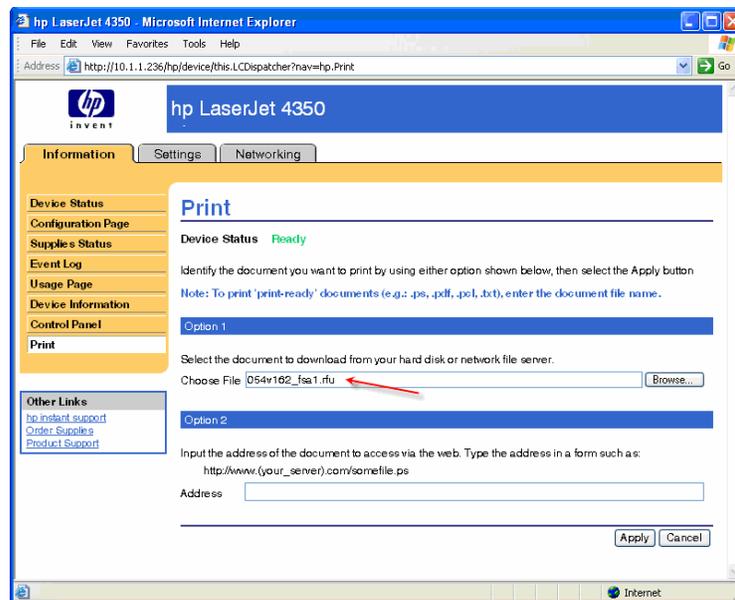


**NOTE:** THE INSTRUCTIONS BELOW WERE CREATED USING AN LASERJET 4350. THE SCREENS ARE SIMILAR FOR OTHER LASERJET MODELS.

1. Obtain the I-O 3235 USB or CompactFlash firmware update files. Store them in a temporary folder on your PC.
2. Using a browser, navigate to the IP address of the LaserJet printer.
3. Change to the Print menu, and enter the name of the I-O 3235 firmware file. Click Apply to send the file. Please be patient – it will take a minute or two for the file to be downloaded.



**TIP:** USE THE BROWSE BUTTON TO NAVIGATE TO THE TEMPORARY FOLDER WHERE YOU PLACED THE FIRMWARE UPDATE FILES IN STEP 1 ABOVE.



4. When the download is complete, the printer will restart and the new firmware will be active.

## 3235 Self-Test

There are several ways to generate printer tests to verify the installation and configuration of the 3235. All of the printer tests regarding the 3235 are accessed from the printer's front panel.

### Information Page



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**NOTE:** THIS OPTION IS ONLY AVAILABLE ON THE 3235-010 DIMM.

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Step through the printer's main menu until you see the IPDS Information section. The first option is to Print the IPDS Information Page. The page will show the current software version of the 3235.

### Printer Configuration Page

From the printer's main menu, step through the menu options until you see the Information Menu. Select the option to Print Configuration. Several pages will be printed. This will show all installed options in the printer. If the 3235 is properly installed, you will see the reference under the "Installed Personalities and Options" section. You will also see an 3235 configuration page which will show the current software version.

### Printer Menu Map

From the printer's main menu, step through the menu options until you see the Information Menu. Select the option to "Print Menu Map". The menu map will show all available options on the 3235 and the current settings.

## **Command & ASCII Dumps**

The 3235 includes two different dump modes. These are helpful in diagnosing IPDS to PCL conversion problems.

### **Command Dump**

An IPDS Command Dump can be useful to diagnosis problems with your IPDS print jobs.

The IPDS Command Dump will print a listing of IPDS commands received from the host. A description of each command received along with the command number and numeric settings is printed.

To activate the IPDS Command Dump Mode, wait until all printing is completed, then end the printer's writer at the host.

1. Step through the main menu until you come to the IDPS OPTION MENU.
2. Step through the IPDS OPTION MENU until you come to the COMMAND DUMP option.
3. Select COMMAND DUMP ON and save the option.
4. Restart the printer's writer at the host and resend the print job.

The information contained in the IPDS Command Dump, will be best interpreted with the help of I-O's Technical Group.

### **ASCII Dump**

The ASCII Dump will print a listing of PCL commands ASCII data received from the host.

To activate the ASCII Command Dump Mode, wait until all printing is completed, then end the printer's writer at the host.

1. Step through the main menu until you come to the IDPS OPTION MENU.
2. Step through the IPDS OPTION MENU until you come to the ASCII DUMP option.
3. Select ASCII DUMP ON and save the option.
4. Restart the printer's writer at the host and resend the print job.

The information contained in the ASCII Command Dump will be best interpreted with the help of I-O's Technical Group.

## Data Capture



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**NOTE:** THIS PROCESS APPLIES ONLY TO THE I-O 3235-052, 3235-053 & CAPELLA MHP COMPACTFLASH PRODUCTS.

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1. Prior to performing this process, copy the contents of the Tools | Data Capture directory located on the I-O 3235 Utility CD into a temporary directory on your hard drive. Then run these commands from that temporary directory.
2. From any Windows PC on the TCP/IP Network run the "Enable.bat" file.

This batch file will use the "MHP\_Enab.exe" program to Enable the 3235 Solution to first Encrypt each received Job (inside the printer) and then temporarily Store the encrypted job in the LaserJet. Whenever the printer is Power Cycled any previously-captured printer files will be deleted.

The syntax for this job is:

```
enable.bat
```

or

```
enable.bat [IP address of the HP printer]
```

3. From the Host computer print a job to the LaserJet.
4. From the Windows PC run the "Get.bat" file.

This Batch file will use the "MHP\_Get.exe" program to Disable Job Capture and then Retrieve/Decrypt each stored Job from the printer and save it on the Windows PC. As each Job is being saved on the PC it is automatically being Deleted from the printer. The retrieved jobs are saved on the PC in sequentially numbered files named "MHP\_001" thru "MHP\_xxx". The captured Job file(s) and a "MHP\_Get.log" Status file will be placed into a subdirectory named "MHP\_Jobs" that is be created in the same directory that the "MHP\_Get.bat" file was run from.

The syntax for this job is:

```
get.bat
```

or

```
get.bat [IP address of the HP printer]
```

5. Send the files to I-O Technical Support.

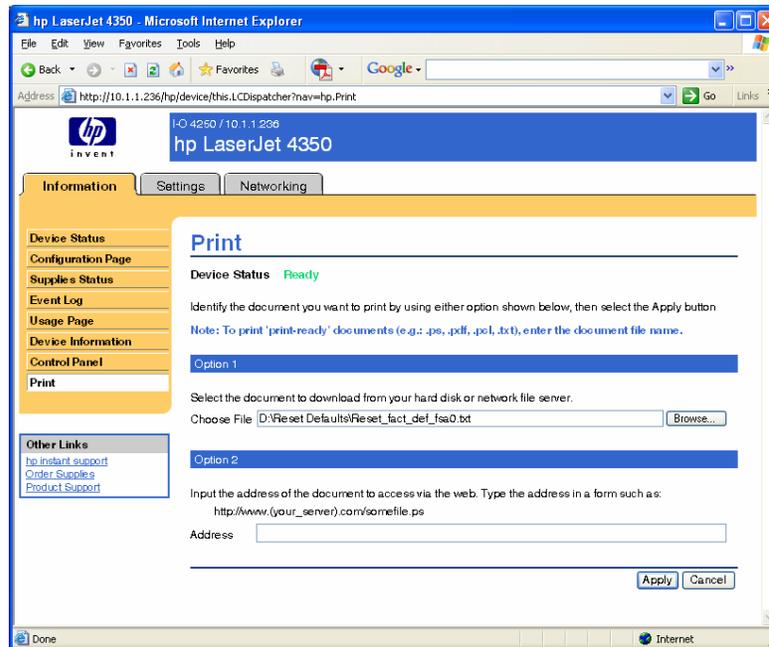
## Restore Factory Defaults



**CAUTION:** THIS PROCESS APPLIES ONLY TO THE I-O 3235-052, 3235-053 & CAPELLA MHP COMPACTFLASH PRODUCTS.

To restore factory defaults, a file containing the factory defaults is sent to the LaserJet printer. This is accomplished by doing the following:

1. Using a browser, navigate to the LaserJet printer's Web page.
2. Select the Print option from the left panel.



3. In the Option 1 section, browse to the location where the restore factory defaults files are stored. For example, on the 3235 Utilities CD, D:\Tools\Reset Defaults\.
4. Select one of the following files based upon which "logical storage location" the 3235-052/053/MHP CompactFlash:
  - Reset\_fact\_def\_fsa0.txt for logical storage location 0
  - Reset\_fact\_def\_fsa1.txt for logical storage location 1
  - Reset\_fact\_def\_fsa2.txt for logical storage location 2



**CAUTION:** MAKE SURE THAT YOU HAVE SELECTED THE PROPER FILE FOR THE LOGICAL STORAGE LOCATION.

5. Press Apply. The Web page will be updated showing that the file has successfully been printed.

### Print

Document successfully submitted  
K:\beta\_cs\hpCF\Reset\_fact\_def\_fsa0.txt

6. Cycle the power on the LaserJet printer.

## Errors

The following is a brief list of problems that may occur. Please refer to I-O's Knowledge Base, the **IPDS Reference Manual** and the **SCS Reference Manual** document for a more complete listing of errors, troubleshooting hints and FAQ's.

<b>Problem</b>	<b>Solution</b>
<ul style="list-style-type: none"> <li>The laser printer with the 3235 installed in it will not respond to a Ping.</li> </ul>	<ul style="list-style-type: none"> <li>✓ If you have problems pinging the printer:           <ul style="list-style-type: none"> <li>• Verify the configuration of the AS/400, including the printer's correct TCP/IP address and any intervening devices such as routers and bridges.</li> <li>• Verify that the AS/400 line description is varied on, the printer is turned on, and that the printer is also turned on and shows a status of READY.</li> <li>• Verify that the AS/400 TCP/IP interface is active.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>My LaserJet will either not boot, or does not show the 3235 on the configuration page.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Upgrade the firmware of the printer to the most currently released version.</li> <li>✓ Make sure that the "Default Personality" setting on the front panel is set to "Auto".</li> </ul>
<ul style="list-style-type: none"> <li>The 3235 shows up on the configuration page and the IPDS menu's appear in the menu map printout, but there is no IPDS printing.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Make sure that the "IPDS MODE" front panel menu option is set to active.</li> <li>✓ Make sure that the "Default Personality" setting on the front panel is set to "Auto".</li> </ul>
<ul style="list-style-type: none"> <li>IBM host pages get printed in with LAN pages.</li> </ul>	<ul style="list-style-type: none"> <li>✓ The LaserJet's 1/0 time out value must be set to a minimum of 15 seconds longer than the AS/400's PSF "Release Timer" setting. By default, the AS/400 setting is for 15 seconds. Therefore the printers 1/0 time out value would be 30 seconds.</li> </ul>

## Paper Source PCL Tray Reference

The following table has been included for your convenience. These values may have been changed without notice by the manufacturer. Please refer to the specific LaserJet printer's technical documentation for confirmation of the correct source command numbers.

Model s →	2410 2420 2430 4100 mfp M3035 mfp	3700	3000 3800 5200 P3005	4100 4200 4250 4300 4350 9055 9065	4600 4650 5500	4345 mfp M4345 mfp	M3035 mfp	4700	4730 mfp	9000	9000 mfp
Paper Source ↓											
Manual feed, paper	2	2	2	2	2	2	2	2	2	2	2
Tray 1 – Multi-Purpose	4	4	4	4	4	4	4	4	4	4	4
Tray 2 – 1 <sup>st</sup> Cassette	1	1	1	1	1	1	1	1	1	1	1
Tray 3 – 2 <sup>nd</sup> Cassette	5	5	5	5	5	5	5	5	5	5	5
Tray 4 – 3 <sup>rd</sup> Cassette				8	8	8	8	8	8	20	20
Tray 5						9	9	9			
Tray 6							10	10			
Envelope Feeder		6		6	6	6					
Manual feed, envelope		3		3	3					3	
Auto Select	7	7	1	7	7	7	7	1	1	7	7

# Manufacturer's Warranty & Repair Policy

## **Manufacturer's One Year Limited Warranty (United States)**

The following warranty applies only to products purchased and operated within the United States.

I-O Corporation (I-O) warrants this product against defects in material and workmanship for a period of one year commencing from date of purchase by the original customer, when operated and maintained in accordance with I-O's published specifications. I-O's liability shall be limited, at its option and expense, to refund to buyer the actual amount paid by buyer or to repair or replace any defective or nonconforming product or part thereof, F.O.B. I-O's authorized repair depot. Buyer may obtain a replacement product by meeting the terms of the I-O Customer On-Site Exchange Repair Policy in effect at the time of the request.

THE EXPRESS WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. OTHERWISE, THE PRODUCTS ARE SOLD AS IS WITHOUT FURTHER OBLIGATION OR LIABILITY ON THE PART OF I-O. I-O EXPRESSLY EXCLUDES ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

EXCEPT AS EXPRESSLY SET FORTH HEREIN, IN NO EVENT SHALL I-O BE LIABLE FOR ANY CLAIMS OR DAMAGE ARISING DIRECTLY OR INDIRECTLY FROM THE FURNISHING OR FAILURE TO FURNISH PRODUCTS, SPARE OR REPLACEMENT PARTS, INFORMATION OR SERVICES HEREUNDER. UNDER NO CIRCUMSTANCES SHALL I-O BE LIABLE IN ANY WAY FOR INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO LOST BUSINESS OR PROFITS, WHETHER OR NOT FORESEEABLE AND WHETHER OR NOT BASED ON BREACH OF WARRANTY, CONTRACT, OR NEGLIGENCE.

I-O shall not be liable for non-performance or delays hereunder due to causes beyond its control. These shall include, but not be limited to, acts of God, wars, strikes, fires, flood, storm, earthquake, shortages of labor or materials, labor disputes, transportation embargoes, acts of any government or agency thereof.

MODIFICATIONS OR RECONFIGURATION OF THE HARDWARE BY ANYONE OTHER THAN I-O OR I-O'S AUTHORIZED REPAIR FACILITY WILL VOID THIS HARDWARE WARRANTY.

## **Customer On-Site Exchange Repair Policy**

Terms, Conditions, and Limitations  
Effective May 1, 1994<sup>a</sup>

For products covered by the I-O Corporation (I-O) Manufacturer's Limited Warranty (United States), I-O's Customer On-Site Exchange (COE) Repair Policy provides customers with a replacement unit for a defective product, subject to the following terms and conditions:

### **Call Customer Support**

If a product fails, call I-O Customer Support for assistance at (801) 972-1446.

### **Verify Product Failure**

I-O will verify the product serial number, warranty coverage and product failure.

You are responsible for assisting in verifying the product failure.

When I-O Customer Support verifies a product failure they will issue a Return Merchandise Authorization (RMA) number for the failed product.

### **Replacement Units**

Replacement units are shipped from I-O's stock of refurbished units, subject to availability.

Replacement units carry the same warranty as remaining on the original product.

I-O's COE Repair Policy applies only to warranted product failures. Buyer guarantees payment for non-warranted product repairs or replacement.

Buyer will pay reasonable labor and handling charges for each product returned for repair which is found to have no defect.

### **Return Your Failed Unit**

When you return the failed product it must be shipped freight prepaid. Always note the RMA number on the outside of the package.

### **Install the Replacement Unit**

You are responsible for installing the replacement unit.

After receiving the replacement unit please call I-O Customer Support if any assistance is required.

<sup>a</sup> I-O reserves the right to change the terms and conditions of this policy without notice.

## **Manufacturer's One Year Limited Warranty (International)**

The following warranty applies only to products purchased or operated outside the United States.

I-O Corporation (I-O) warrants this product against defects in material and workmanship for a period of one year commencing from date of purchase by the original customer, when operated and maintained in accordance with I-O's published specifications. I-O's liability shall be limited, at its option and expense, to refund to buyer the actual amount paid by buyer or to repair or replace any defective or nonconforming product or part thereof, F.O.B. I-O's authorized repair depot. Buyer may obtain warranty service by meeting the terms of the I-O Return-to-Depot Repair Policy in effect at the time of the request.

THE EXPRESS WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. OTHERWISE, THE PRODUCTS ARE SOLD AS IS WITHOUT FURTHER OBLIGATION OR LIABILITY ON THE PART OF I-O. I-O EXPRESSLY EXCLUDES ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

EXCEPT AS EXPRESSLY SET FORTH HEREIN, IN NO EVENT SHALL I-O BE LIABLE FOR ANY CLAIMS OR DAMAGE ARISING DIRECTLY OR INDIRECTLY FROM THE FURNISHING OR FAILURE TO FURNISH PRODUCTS, SPARE OR REPLACEMENT PARTS, INFORMATION OR SERVICES HEREUNDER. UNDER NO CIRCUMSTANCES SHALL I-O BE LIABLE IN ANY WAY FOR INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO LOST BUSINESS OR PROFITS, WHETHER OR NOT FORESEEABLE AND WHETHER OR NOT BASED ON BREACH OF WARRANTY, CONTRACT, OR NEGLIGENCE.

I-O shall not be liable for non-performance or delays hereunder due to causes beyond its control. These shall include, but not be limited to, acts of God, wars, strikes, fires, flood, storm, earthquake, shortages of labor or materials, labor disputes, transportation embargoes, acts of any government or agency thereof.

MODIFICATIONS OR RECONFIGURATION OF THE HARDWARE BY ANYONE OTHER THAN I-O OR I-O'S AUTHORIZED REPAIR FACILITY WILL VOID THIS HARDWARE WARRANTY.

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## **Return-to-Depot Repair Policy Terms, Conditions, and Limitations**

Effective May 1, 1994<sup>a</sup>

For products covered by the I-O Corporation (I-O) Manufacturer's Limited Warranty (International), I-O's Return-to-Depot (RTD) Repair Policy provides customers with warranty service for a defective product, subject to the following terms and conditions:

### **Call Customer Support**

If a product fails, call I-O Customer Support for assistance at:  
(801) 972-1446 for all locations outside the United States.

### **Verify Product Failure**

I-O will verify the product serial number, warranty coverage and product failure.

You are responsible for assisting in verifying the product failure

When I-O Customer Support verifies a product failure they will issue a Return Merchandise Authorization (RMA) number to authorize return of the failed product.

### **Select Your Preferred Repair Location**

I-O's Customer Support Representative will assist you in identifying the nearest I-O authorized repair depot.

I-O's Customer Support Representative will provide you with an RMA transmittal form referencing the assigned RMA number and the authorized repair depot address.

### **Return Your Failed Unit**

Return the failed product to the I-O authorized repair depot previously identified, enclosing the RMA transmittal form. When you return the failed product it must be shipped freight prepaid.

I-O's RTD Repair Policy applies only to warranted product failures. Buyer guarantees payment for non-warranted product repairs.

Buyer will pay reasonable labor and handling charges for each product returned for repair which is found to have no defect.

### **Install Your Repaired Unit**

I-O's authorized repair depot will service the faulty unit and return it to you, freight prepaid.

You are responsible for installing the returned unit.

After receiving the repaired unit please call I-O Customer Support if any assistance is required.

<sup>a</sup>I-O reserves the right to change the terms and conditions of this policy without notice.

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# European Compliance Statement

This product is in conformity with the protection requirements of EC Council Directives 72/23/EEC, and 89/336/EEC on the approximation of the laws of the Member States relating to: Standard EN60950 (Safety of Information Technology Equipment); Standard EN50082-1 (Generic Immunity Standard for Residential, Commercial, and Light Industrial Products); and Standard EN55022 (Limits and Methods of Measurement of Radio Interference from Information Technology Equipment).

This product also complies with the European Union Restriction of Hazardous Substances (RoHS) Directive (2002/95/EC) which restricts the use of lead (Pb), mercury, cadmium, hexavalent chromium and two brominecontaining flame retardants: PBB (polybrominated biphenyls) and PBDE (polybrominated diphenyl ethers) in electrical and electronic products.

**WARNING:** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.