HAWKING® TECHNOLOGY

Wireless Multifunction USB Print Server   **HMPS1A**

website **www.hawkingtech.com**
e-mail **techsupport@hawkingtech.com**

USER'S MANUAL ▶▶

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LIMITED WARRANTY

Federal Communication Commission
Interference Statement

FCC Part 15
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution

This equipment must be installed and operated in accordance with provided instructions and a minimum 20 cm spacing must be provided between computer mounted antenna and person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.
Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of March 9, 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE).

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8, 2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

EU Countries Intended for Use

The ETSI version of this device is intended for home and office use in Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.
The ETSI version of this device is also authorized for use in EFTA member states: Iceland, Liechtenstein, Norway, and Switzerland.

Table of Contents

Chapter 1   Introduction

Thank you for purchasing the HMPS1A Wireless Multifunction USB Print Server (in the following referred to as "Server"). This Server is designed to connect your Printer to your network, allowing all network users' access to share the printer at the same time.

1.1   What is described in this Manual

This manual provides introductory information as well as detailed instructions on how to set up and manage the HMPS1A in various network environments.

To fully benefit from this document, you should be familiar with basic networking principles. The instructions described in this manual are based on the settings in a new Server. To reload the Factory Parameters, you can reset this Server back to Factory Default, which will restore most of the settings. For details, please refer to the chapter "Restore Factory Defaults".

1.2   Customer Support

Should you require any technical assistance, please contact your product reseller. Or you can visit our website at http://www.hawkingtech.com for latest product information.

Chapter 2   Product Overview

2.1   Package Contents

Verify that nothing is missing from the package by using the checking list below. Please contact your dealer if anything is missing or damaged. All packing materials are recyclable. Please confirm the items in the package below:

- This Server (HMPS1A)
- CD (Hawking Wireless Multifunction USB Print Server setup software, User's Manual and Quick Installation Guide)
- Power Adaptor (5V/1A)

2.2   Product CD

This CD provides easy-to-use multifunction print server software, User's Manual and Quick Installation Guide.

2.2.1   Start-up Procedures

If your computer is configured to auto start CDs, this CD will start automatically when inserted. You can also navigate to the CD and start the autorun.exe file from within the Windows file manager. On Mac, just go into the software folder on the CD and double click on the Control Center dmg file.

2.3   Physical Description

1. **Power Adaptor Connector:** for DC IN 5V/1A power adaptor
2. **Reset Button**: for restoring the parameters to the default values
3. **Network Connector:** connected to a twisted pair category 5 cable
4. **USB Host Port:** USB 1.1/2.0 low, full, and Hi-Speed compliant
5. **On/Off:** on/off switch
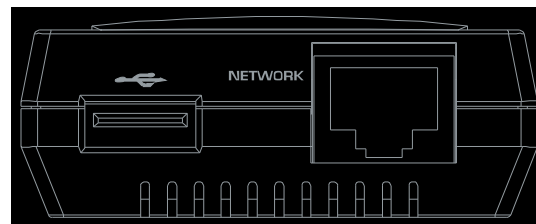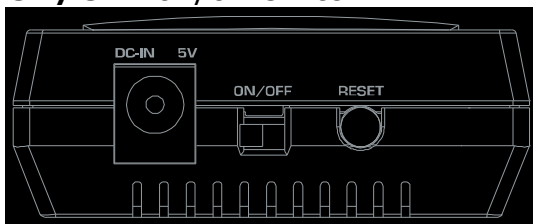
6. **Indicators**
    - *Power Indicator* is lit while power is applied. If it is not lit, or if it blinks, there is a problem with this Server or power adapter.
    - *WLAN* will flicker when any WiFi device is connected to it (either to the WiFi network or if a Smartphone/Tablet is connected to it)
    - *LAN* is lit while network is applied. If it is not lit, it indicates that this server

does not connect to the network or is in wireless mode.
- *USB Indicator* is lit when a USB device connects to a USB Port of this Server.

2.4 Supported USB Devices

The HMPS1A supports the following types of USB devices.

- USB Printer
- USB multifunction printer (MFP/AIO)
- USB scanner
- USB storage (like USB external HD, flash disk, and digital camera)

Chapter 3   Basic Installation

3.1   Connecting the Hardware

1. Make sure that your USB device is switched off and that the Server's Power Adapter is disconnected.

2. Connect the USB device to the USB port with a USB cable.

3. Connect the Server to the network with a twisted-pair category 5 cable, 10baseT or 100baseTX.

4. Turn on the USB device and make sure is ready for use.

5. Connect the Power Adapter to the Server. The power indicator will light up and the USB indicator will flash in turn. When the Link indicator lights up, the Server is correctly connected to the network. When the USB indicator stops flashing, the Server starts to work normally.

3.2   Assigning an IP Address to the Server

3.2.1   Preliminary

■   If you have a DHCP server on your network, your Server will receive an IP address automatically. The IP address will then appear on the *setup software* when it detects your print server. If your DHCP server does not give an IP address to the Server, the Server will use the automatic private IP addressing IP: 169.254.0.0. ~ 169.254.255.255

■   If you are not working in a DHCP network, you need to manually set the Server's IP address.

3.2.2   IP Address

Unless you are assigning an IP address using DHCP, you must obtain an unused IP address from your network administrator.

3.2.3   Methods for Setting the IP Address

You can set the IP address of your Server using one of the following methods, depending on your network operating environment:

■   Automatic IP Address Assignment

■   Manual IP Address Assignment

3.2.4 Server Names and Server Name Rules

The default server name of the Server is "*HMPS1A*".   If you put two or more Servers in your local area network, to avoid using the same server names you have to change the server names by using the setup software or the server's web pages. If your server name is longer than 15 characters, the server uses only the first 15 characters.

3.2.5 Setting the IP Address Using DHCP

Follow the instructions below to get an IP address using DHCP:

1. Edit or create a scope in the DHCP manager of the DHCP daemon. The entries included in this scope should contain the following parameters:
    *   range of IP addresses
    *   subnet mask
    *   default router IP address
    *   DNS server IP address
    *   lease duration

2. Activate the scope. The Server automatically gets the DHCP parameters. If you are using DNS, you may include at least one DNS server IP address in the DHCP scope or manually set the DNS server IP address using Server's web pages or the HMPS1A's setup software.

3.2.6 Setting the IP Address Using the HMPS1A Software

1. Install the Setup Software. The Setup Software is available on the Product CD.

2. Start the Hawking Print Server software window will appear.

    On Windows, it will appear until Start, Programs, Hawking, Control Center
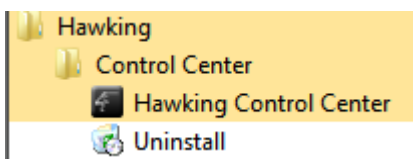
    On Mac, it will appear in your dock

3. If the tool finds multiple Servers in your local area network, you will have to select

one Server from the Server List.
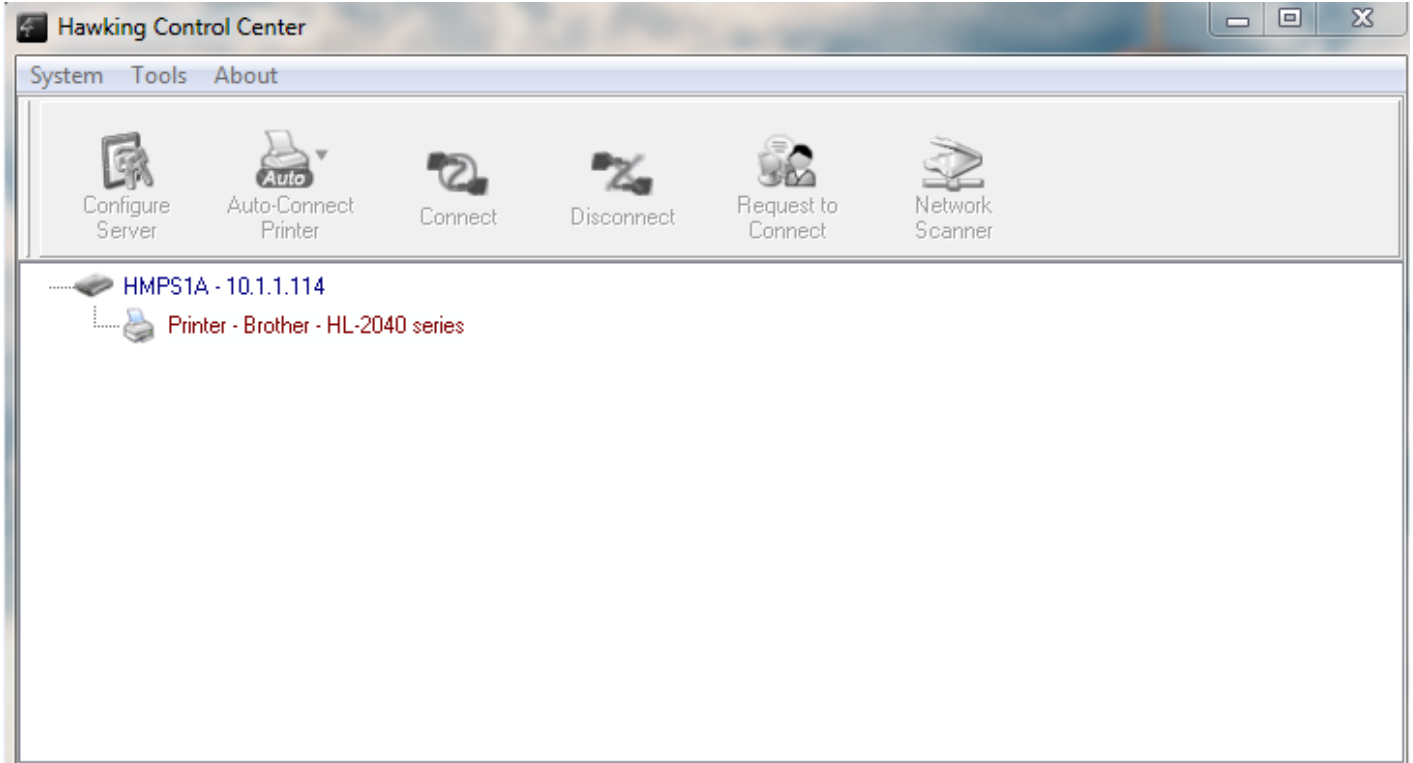
4. Double click the highlighted server (or click the "Configure Server" button. This will open a web browser prompting you for a user name/password.
Default Username: admin
Default Password: admin
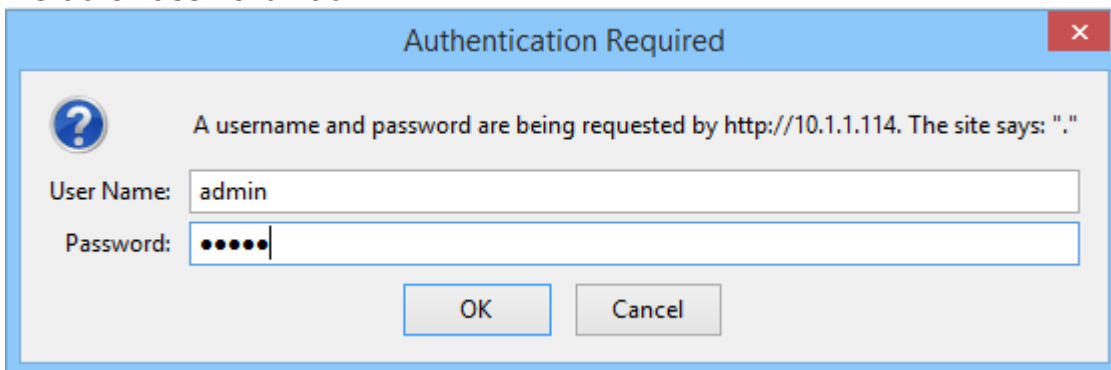
5. After clicking ok, the web interface of the HMPS1A should appear

6. Click the button corresponding to your choice of IP setting methods (check the disable DHCP box if you wish to use a static IP). When assigning a static IP address you also have to define Subnet Mask. The default IP of the HMPS1A is 192.168.1.100

Current IP:	10.1.1.114
DHCP	☐ Disable
IP Address:	172.1.1.1
Subnet Mask:	255.255.255.0
Default Gateway:	172.1.1.254
DNS	☐ Disable
DNS IP:	
Update	

7. Click Update to save your setting and then click reboot now to save your settings. You have now finished the procedure of setting the IP address.

Change setting successfully!

Your changes have been saved. The router must be rebooted for the changes to take effect.
You can reboot now, or you can continue to make other changes and reboot later.

Reboot Now   Reboot Later

Chapter 4   Using the HMPS1A

4.1   Introduction

The goal of this product is to provide network support for USB devices. We developed a new technology called "NetUSB" to achieve this goal. Basically, the "NetUSB" is a "USB over IP" technology that transparently redirects all USB packets to a TCP/IP network channel. "NetUSB" allows you to use USB devices as if they were connected directly to your PC although they are actually remotely connected to the HMPS1A.

4.2   Connect & Disconnect

"NetUSB" allows you to use USB devices as if they were connected directly to your PC although they are actually remotely connected to the HMPS1A. The "connect" operation is a software operation that simulates an actual USB device plug-in. That is to say, when you do a "connect" operation in the HMPS1A setup software, the PC can then detect a USB device's plug-in, even though you did not physically plug in a USB device to your computer. Similarly, the "disconnect" operation is a software operation that simulates the disconnection of the USB device. Once the connect operation is successful, the operations to use that USB device are just the same as if the USB device is directly connected to the PC.

If a USB device is "connected" by a PC, we say that PC has the ownership of the USB device. Only one PC can get the ownership of a USB device at the same time. Therefore, if a USB device is connected by one PC, no other PC can connect this USB device until this USB device is disconnected.

4.3   Subnet Issue

Before using the NetUSB technology, you must first make sure that your PC can access the HMPS1A via TCP/IP. The simplest way to do this is using HMPS1A's setup software to search for the HMPS1A server on the network and change its IP address to be the same subnet as your PC. If the server and your PC are not in the same TCP/IP subnet, the HMPS1A's setup software will show the server in red, as shown in the following figure. You must change the IP address (or use DHCP) of the server so that the server and your PC are in the same subnet. The HMPS1A setup software will show these servers in blue, meaning you can access these servers by the NetUSB technology.
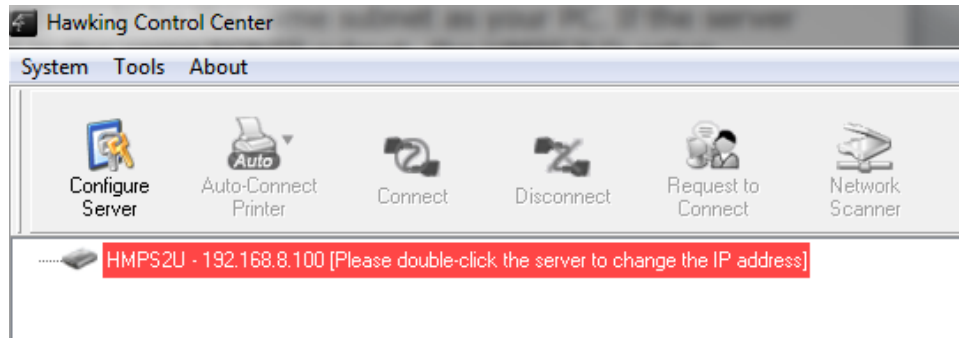
4.4 Installation of a USB Device

Some USB devices, like printers or MFPs (multifunction printers), require you to install manufacturer provided driver (usually included on the printer's CDROM).

A. Insert the device's CDROM into the CD drive and run the "install program".
B. Follow the instructions of the installation program to install driver.
C. When the installation program asks you to plug-in the USB device, run the "Hawking Control Center" software.
D. In the Control Center software, select the HMPS1A that has the desired USB device attached.
E. Click the desired USB device as the following figure.
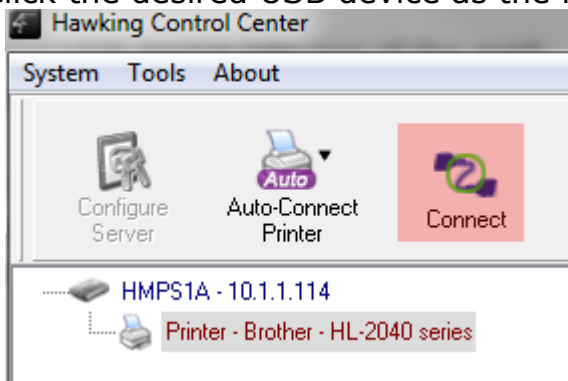
Note: On Mac, the "Connect" button is denoted by

F. Click the "Connect" button. Then the message "Manually Connected by your_computer_name" will be shown, as the following figure.

G. Now, the installation program will detect the USB device and continue to install driver.

H. After the installation is completed, click the USB device in the HMPS1A Software and then click the "Disconnect" button to disconnect the USB device.

Note: On Mac, the "Disconnect" button is denoted by:

Now the driver of your USB device is installed.

4.5   Auto-Connect Printer

The method described in section 4.4 is called manual-connect, which means users must manually connect the USB printer before using that device, and must manually disconnect the USB printer device after using the device, otherwise no one else can connect. However, for printers and scanners (and MFPs), the HMPS1A supports auto-connect so users don't need to manually connect/disconnect. This sections show you how to do this.

After the driver is installed as described in section 4.4, you can see a newly created printer in the setup software's "Printers and Faxes". Follow the steps below to do a NetUSB auto-connect printing.
*Note: This method only supports printers. Other USB devices such as Hard Drives, Speakers, Cameras, cannot use this method. They must use the standard Manual Connect.

A. In the HMPS1A software, click the USB device server that has the desired printer (or MFP) attached.
B. Click the desired printer (or MFP).
C. Click the "Auto Connect Printer" button and choose "Set Auto-Connect Printer".

   Note on Mac, the "Auto Connect Printer" is denoted by
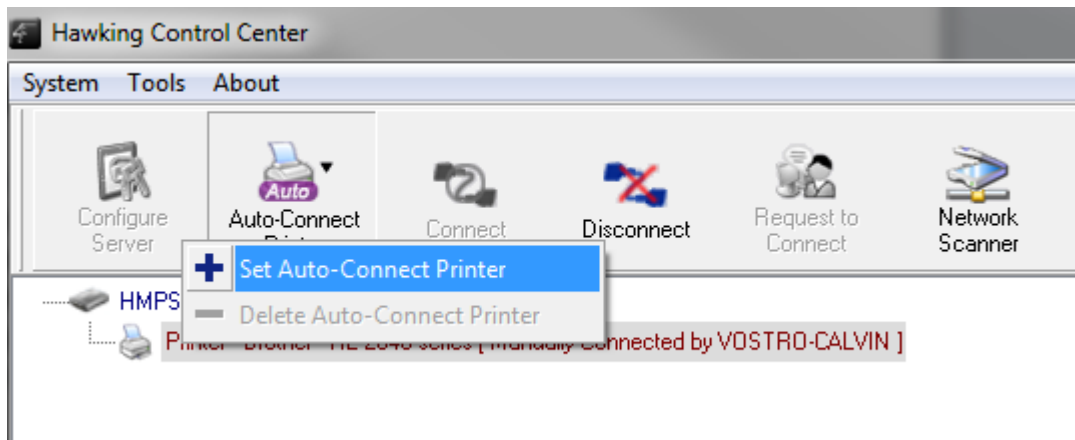
The following figure will appear.
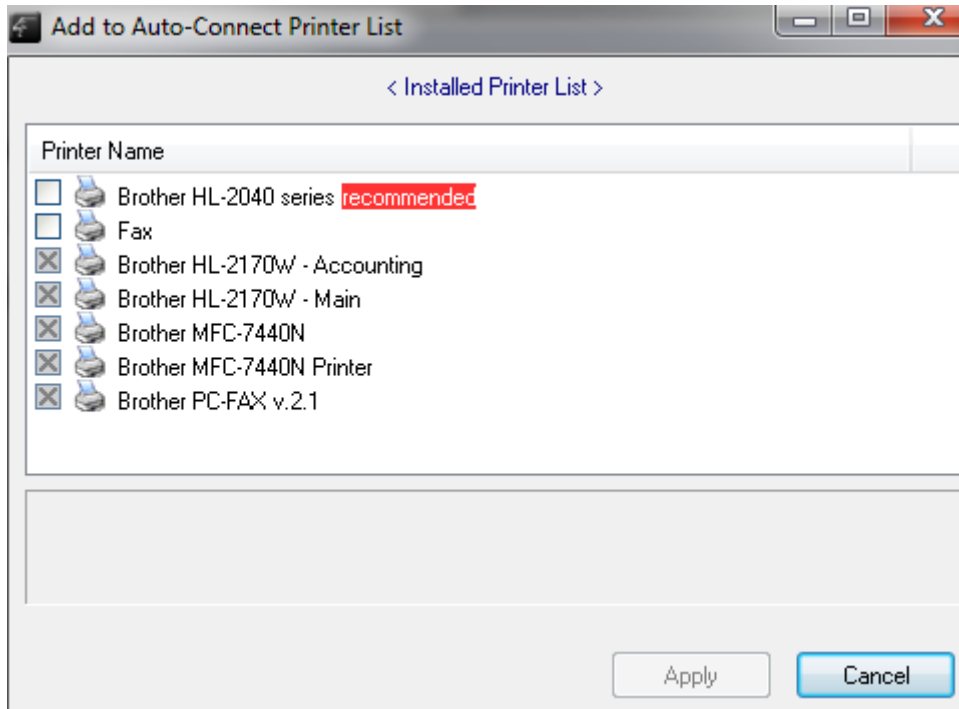
D. Choose the desired printer. The desired printer must be the printer that matches the printer attached on the USB device server (this is a physical printer). Then click the "Apply" button.

E. The printer will then be marked as an "Auto-Connected Printer" in red. If you choose "Auto-Connected Printer List" in the "Tools" menu, you can see a newly created item that describes the association between the Windows printer and the physical printer on the server.
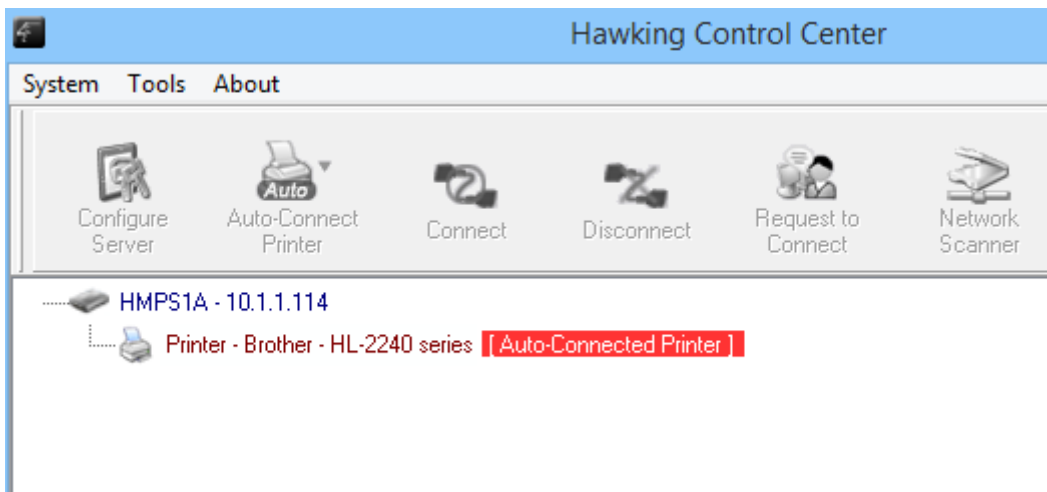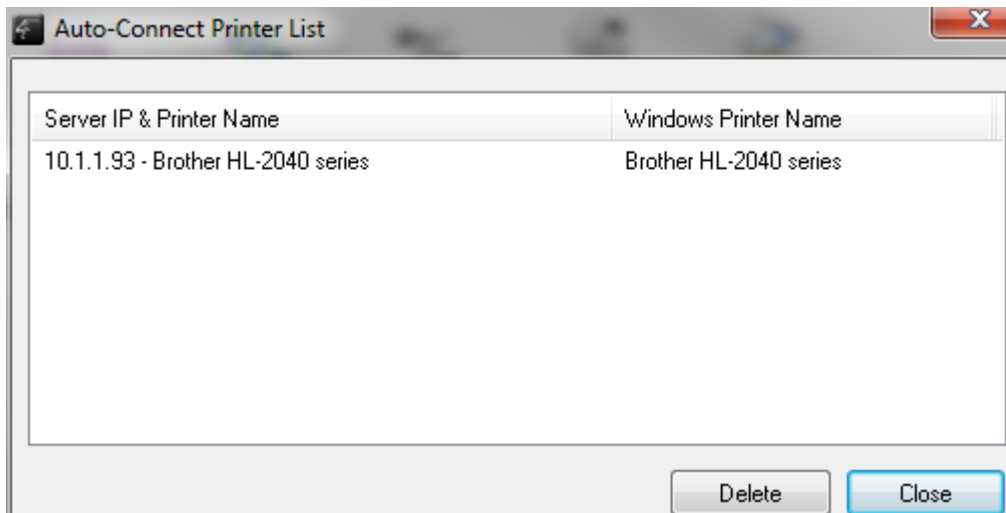
F. Try to issue a print job to the desired printer. You will see the HMPS1A will automatically do a connect operation and allow you to print.

G. Even you already properly setup an auto-connected printer, the HMPS1A software must be running (in the background) while a print job is issued. This means you should have the HMPS1A software run every time after you login into your computer. In order to skip this manual operation, you can make the HMPS1A run automatically after you login to your computer. To do this, choose the "Configuration" item in the "Tools" menu. The following window will appear. Click on the check box and then on the "OK" button. This feature is enabled by default.
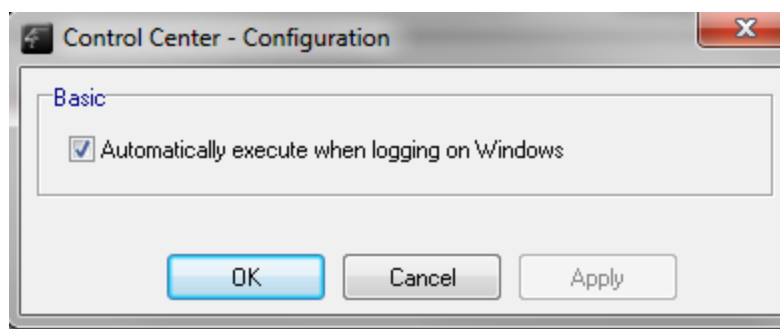
If you would like to break the association between the Windows printer and the physical printer, just click on the association and click the "Delete" button in the "Auto-Connected Printer List".

4.6   Network Scanner

For NetUSB scanning, we recommend you use Network Scanner as the following steps.

A. In the HMPS1A software, click the HMPS1A that has the desired MFP (or scanner) attached.
B. Click the desired MFP (or scanner).
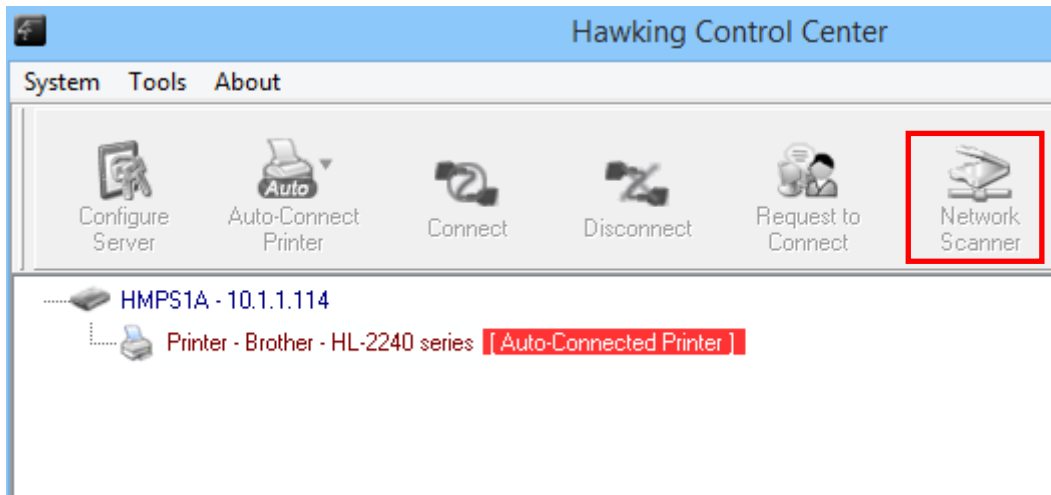
C. Click the "Network Scanner" button. Note: On Mac, the "Network Scanner" button is denoted by
   You should see that the HMPS1A will automatically do a "connect" operation. The following window will appear.
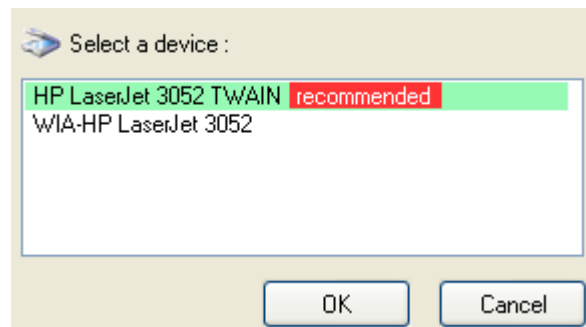
D. Choose one of TWAIN or WIA item. Click "OK". The following window will appear.

HP Photosmart 2600 TWAIN

Picture Name and Destination

Select a name and destination for your pictures.

1. Type a name for this group of pictures :

   Picture

2. Select a file format :

   JPG (JPEG Image) ▾

3. Choose a place to save this group of pictures :

   D:\My Document\My Pictures\   Browse ...

Picture Information

No. 0 Page.

Location :

Picture :

Width * Height :

Dimensions :

Resolution :

Bit Depth :

File Size :

Scan   Close   Scale :   🔍 🔍 ⬚ ✛ 💾

E. Follow the usual steps to do scanning.
F. After the scanning, close the "Auto-Connect Scanner" window.

4.7   USB Storage

You must use "manually connect" for USB storage. If the USB storage is a flash drive, the new disk is a "removable disk".
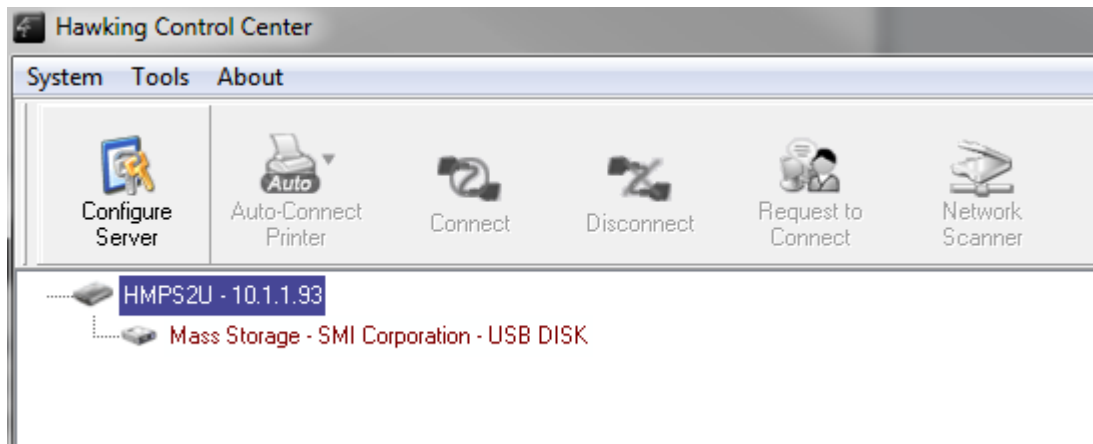
Select the Mass Storage device and after Windows installs a driver, you should see the storage icon in the system tray.

On Mac, the disk will appear on your desktop.

You can now use the new disk as a general disk.

After you finish the disk operations, click the storage icon in the system tray and choose "Eject USB Mass Storage Device" to remove the USB storage, as the following figure.

On Mac, be sure to drag the disk to your trashcan to properly eject the USB drive.

Then, in the HMPS1A software, click the USB storage device and click the "Disconnect" button to disconnect the USB storage device.
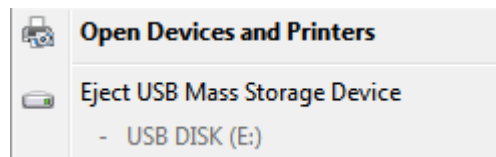
4.8   Request to Connect

If a USB device is manually connected by another user on the network, you cannot use the device until they disconnect. We offer a mechanism to notify the other user.   It is called "Request to Connect".

Note: On Mac, the "Request to Connect" button is denoted by
The user on one computer can click the "Request to Connect" button in the HMPS1A software. The following window appears.

At this moment, the user on the other computer currently connected to the HMPS1A will see the following window:

The user will choose to accept or reject. If accepted, the HMPS1A user will automatically disconnect and the other user will automatically connect.

4.9   Quitting the HMPS1A Setup Software

The HMPS1A setup software doesn't really quit if you click the "X" box (close box) at the top right corner of the window. Instead, it just minimizes itself to the system tray. There are two ways to really close the software. The first way is choosing "Exit" item in the "File" menu in the software. The second way is right-clicking the icon of the software in the system tray and choosing the "Exit" item.

4.10   Limitations

There are some limitations to use the NetUSB technology.

A. Only supports Windows XP/Vista/7/8 and Mac OS 10.6+. Windows 98/ME are not supported.

B. Only one PC can get the ownership of the same USB device at the same time.

4.11 Apple Airprint™

The HMPS1A supports Apple Airprint, allowing your Apple smartphone/tablets to print.

Minimum Requirements:

For AirPrint
-iPad (all models)
-iPhone (3GS or later)
-iPod touch (3rd generation or later)

Go into your settings and go to Wi-Fi.   Select the HMPS1A Wireless network and connect to it

Open the App that you wish to print.   Apple apps such as Mail, Safari, Photos, Camera, Maps, and other apps that have a print feature can be used with the HMPS1A.

To print, Tap   ⤺ or   ⬆ on your screen and then tap 🖨 to print

Choose your printer.

Cancel   **Printer Options**

Printer   Select Printer >

< Back   Printer

Canon MP490 series (81:96:c1) 0
HMPS1A

Pick the number of copies, then press "Print".

Cancel   **Printer Options**

Printer   Canon MP490 series (81:... >

1 Copy   −   +

Print

Chapter 5   The Server's Web Pages

5.1   Introduction

The HMPS1A has a web user interface.   Users may use the web pages to see the HMPS1A's system status and configure the device.   You may access this page by running the HMPS1A's software and clicking configure or by directly typing in the IP address of the device into your web browser.   The default username: admin, password: admin

5.2   Using the Server's Web Pages

5.2.1   Changing the SSID and password

Model Name	HMPS1A
SSID	HMPS1A
Password	

Apply Changes

■ **Model Name**
   ◆ Firmware Version: the current version of the firmware of the device
   ◆ Model Name: the model name of the product
   ◆ SSID: the Wireless and ID of the HMPS1A
   ◆ Password: the password to access the HMPS1A wirelessly

5.2.2   Setting up Wireless

To set up the Wireless configuration, go down to the wireless section and click on "Connect to Another AP"

AP	HawkTech
State	Not Connected

Connect to Another AP

■ **Available Wireless Networks**

SSID	Select
HawkTech	Select
HP-Print-6A-Photosmart 5520	Select
fanieintl	Select
BioNet	Select
BIONETWIFI	Select

- A selection of WiFI networks will appear. Choose yoru network and click "Select"
- If your network has security, it will prompt you to enter a key. Type in your wireless key. If your key is unknown, please contact your network administrator or manufacturer of your router. Click "Connect" when done.

5.2.3   Setting up IP Address

- **IP Address:** Click the button corresponding to your choice of IP setting methods (check the disable DHCP box if you wish to use a static IP). When assigning a static IP address you also have to define Subnet Mask. The default IP of the HMPS1A is 192.168.1.100
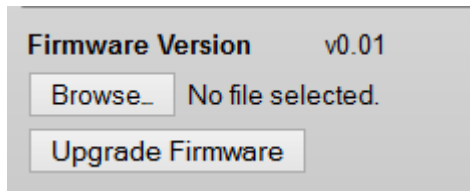
You can also enter in your Gateway and DNS if needed.

5.2.4   Firmware Upgrade

■   **Firmware upgrade:** if there is a new firmware that addresses an issue or adds features, you can check www.hawkingtech.com.   Any firmware will be posted there.   Please download and save it to your computer.
To upgrade firmware: click Browse and select the file you downloaded and click "Upgrade Firmware"

Chapter 6   Troubleshooting

This chapter provides useful information to help you resolve difficulties that you may experience with your Server. Fault symptoms, possible causes, and remedial actions are provided within a quick reference table. This Server's USB ports only support MFPs, printers, scanners, and USB mass storage.

6.1   LED Indicators

Indicators	Behavior	Description
Power	On	Power On
	Off	Power off/System error
WLAN	On	Will flicker if any WiFi device is connected to it
LAN	On	Network connected
	Off	No physical connection to network or wired connection isn't being used
USB	On	USB device connected
	Blinking	Connected USB device error
	Off	No physical connection to USB device

6.2   Firewall

If firewall software has been installed on your PC, it may block the communication between the PC and the HMPS1A so that the HMPS1A cannot work properly. To solve this problem, either disable the firewall or configure the firewall to allow the following TCP and UDP ports:
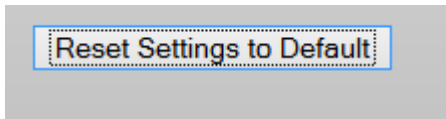
7303, 7305, 7411, 20005
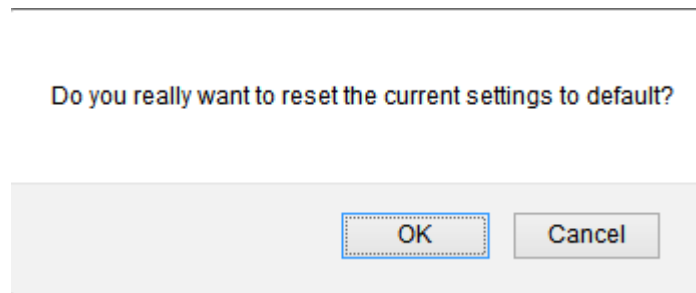
Chapter 7   Restore Factory Defaults

You may restore the HMPS1A default parameters by one of the following methods.

7.1   Using the Server's Web Pages

1. Go to the Server's web page and click **Reset Settings to Default**

    Reset Settings to Default

2. Click "OK" on the following message

    Do you really want to reset the current settings to default?

    OK   Cancel

3. Wait for the message to end

    Reload setting successfully!

    The Device is booting.
    Do not turn off or reboot the Device during
    this time.

    Please wait 45 seconds ...

    Wait for the device to reset.   Done!

7.2   Using Reset Button

Plug in the power adaptor while pressing the Reset button until the USB indicator blinks, usually around 30 seconds.   After that, plug off the power adaptor and then plug in the power adapter again to restart the Server. Finally, the Server will operate using the Factory Default values.

7.3   Default Parameters List

General Information
- Server Name: HMPS1A

TCP/IP
- Automatically get IP by DHCP: Enabled
- Static IP: Disabled
    - IP Address: 192.168.1.100
    - Subnet Mask: 255.255.255.0

User Accounts
- Administrator: admin
- Password: admin