

User Manual

USB Print Server

LPV3-U2



BUFFALOTM

Unpacking and Setup

This section provides unpacking and setup information for the USB Print Server.

Unpacking

Open the shipping carton of the USB Printer Server and carefully unpack its contents. The carton should contain the following items:

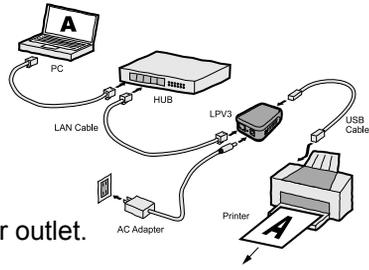
▶ Main unit (LPV3-U2)	1
▶ AC adapter	1
▶ Power cord	1
▶ USB A-to-B cable	1
▶ Ethernet cable	1
▶ Installation CD	1
▶ Manual (this user's guide)	1
▶ Warranty card	1

If any item is found missing or damaged, please contact your local reseller or retailer for replacement.

Setup

The setup of the USB Print Server is performed using the following steps:

- 1 Connect the USB Print Server into the included AC Adapter power cord, and attach the power cord to a power outlet.
- 2 Connect the included standard patch cable from the USB Print Server to a switch, hub, or router on your network.
- 3 Connect the included USB A-to-B cable to the USB Print Server and the USB Printer. Visually inspect all connections and verify that they are secured.

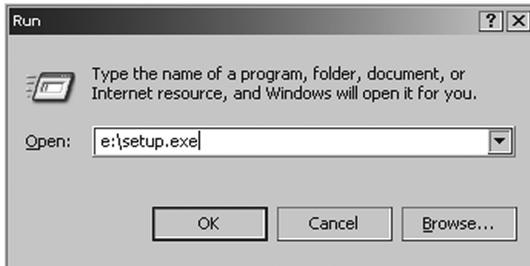


Software Installation - Windows Based PC's

Macintosh Procedure on Page 19

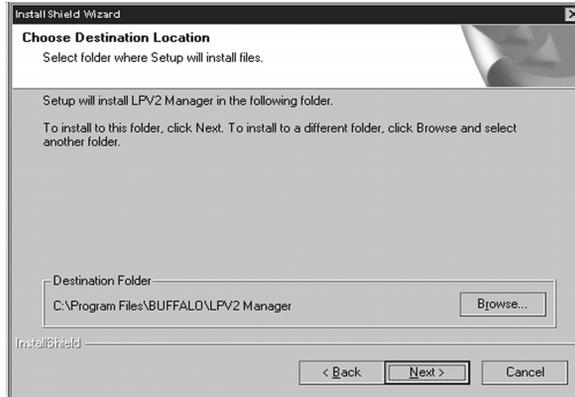
This section describes how to properly install and use the USB Print Server configuration software. Please follow the following steps to properly install the software:

- 1 Insert the included CD into a CD-ROM Drive.
- 2 Run the setup.exe program found on the root of the CD. This can be done by browsing to the CD or by going to the 'Start Menu', selecting 'Run...', and typing x:\setup.exe (Where x is the drive letter of the CD-ROM Drive), then press the **OK** button.

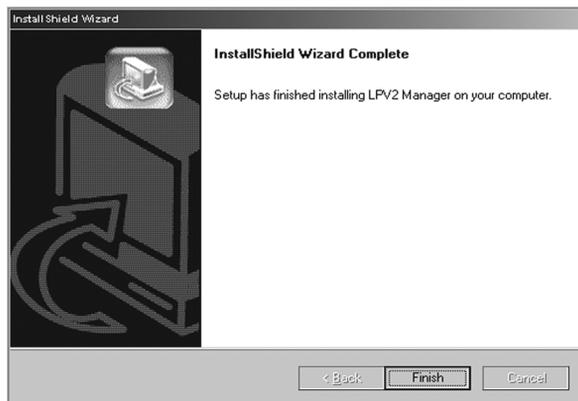


- 3 The Install Shield Wizard for LPV3 Manager will open up. Press the **Next** button.

- Press the **'Browse'** button if there is a specific location the manager should be installed to. Otherwise press the **'Next'** button and accept the default installation location.



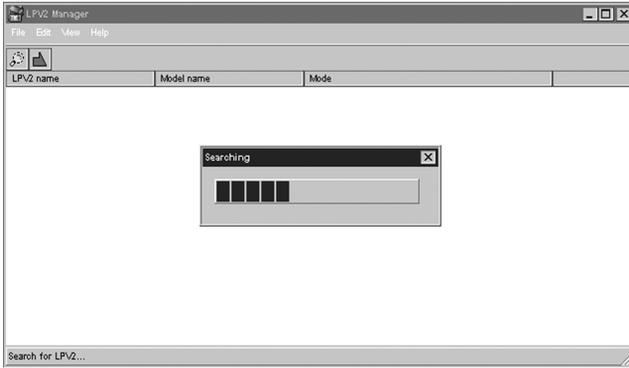
- The installation will continue and copy files to their necessary locations. When the installation is complete, press the **'Finish'** button.



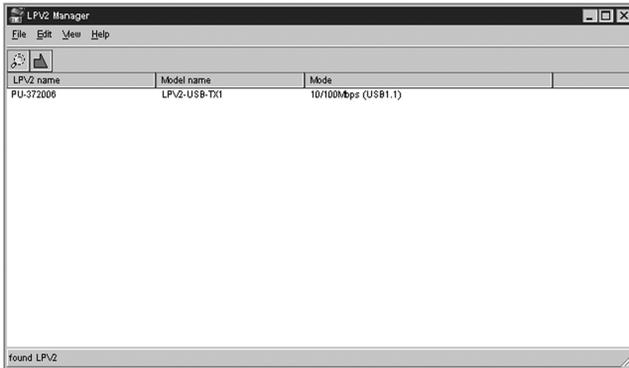
- Congratulations, the software has been successfully installed.

Using the Software

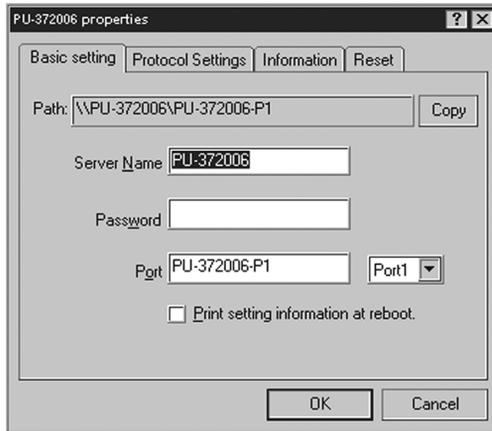
- ▶ Launch the software by finding the icon in the Start Menu. Press the 'Start' button, select 'Programs', select 'BUFFALO', select 'LPV3 Manager', and finally press the '**LPV3 Manager**' icon.
- ▶ The LPV3 Manager will launch and search for the USB Print Server on the network.



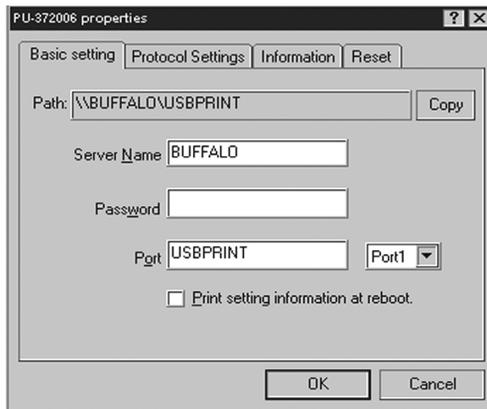
- ▶ The LPV3 Manager will display the USB Print Servers on the network.



- Configure the USB Print Server by double-clicking on the corresponding Print Server. This will open the USB Print Server's properties.

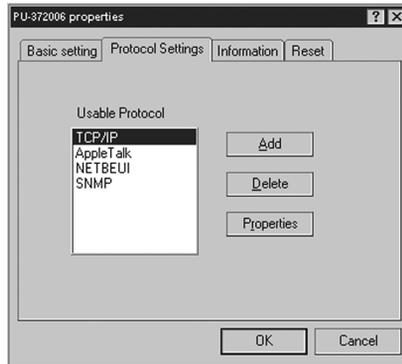


- The name of the USB Print Server can be changed by entering a new name in the 'Server Name' field. The Password and Port names can also be changed if desired. Record the name and port for later use.

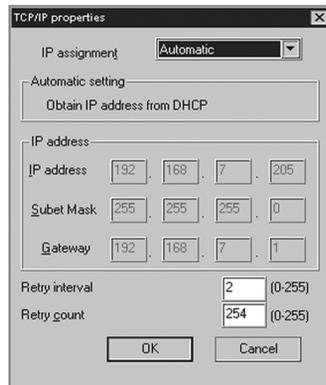


NOTE: The 'Password' option sets a password for the LPV3 Manager and web-based administration tool.

- ▶ To configure the protocol settings press the '**Protocol Settings**' tab. The protocol options are TCP/IP, AppleTalk, NetBEUI, and SNMP. To configure a protocol, select it and press the '**Properties**' button.



- ▶ TCP/IP Settings:

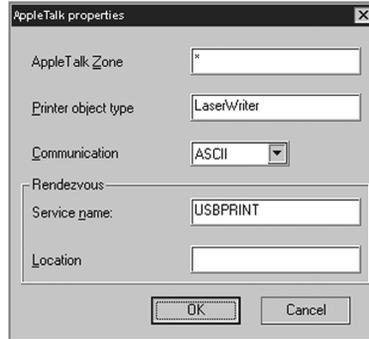


- ▶ Select the '**Manual Setting**' option from the drop-down menu if a specific IP address is desired. Otherwise leave the setting on Automatic. With Automatic used, the device will obtain its IP from a DHCP server. Record the IP address of the printer. When the selection is made, press the '**OK**' button.

NOTE: If DHCP is used, it is recommended to exit out of the program, reconnect to the Print Server through the Manager and record the new 'discovered' IP address. The IP address will be greyed out like above.

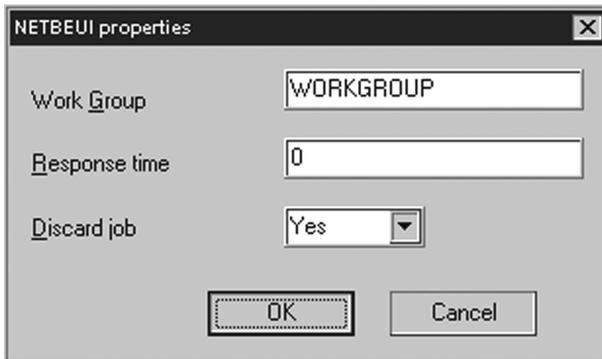
NOTE: It is recommended to use IP based printing for newer PC-only networks. If there are Macintoshes or older PC's on the network, then please configure the appropriate AppleTalk and NetBEUI settings.

▶ AppleTalk Settings:



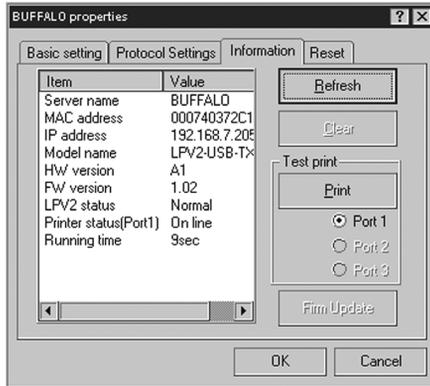
▶ If there are Macintosh computers on the network that wish to use the printer, then enter a '*Rendezvous Service Name*' in the field and press the '**OK**' button. This name is the friendly name Mac users will see when installing their printer.

▶ NetBEUI Settings:

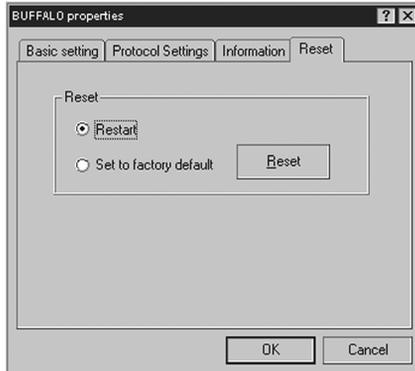


▶ If the printer is to be accessible via Network Neighborhood in Windows 98 and Windows ME, then enter the proper Work Group name for your Work Group. Once the settings have been set, press the '**OK**' button.

- ▶ To view information about the USB Print Server, press the **'Information'** tab. This tab will display the current information about the USB Print Server.



- ▶ To reset the device or to restore the factory default settings, press the **'Reset'** tab.



Restart: Reboots the USB Print Server

Set to Factory Default: Restores the factory default settings.

Once all settings have been changed, press the **'OK'** button.

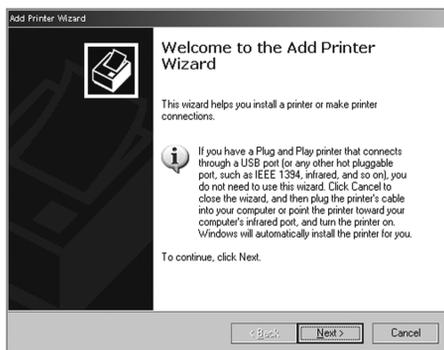
NOTE: Future configuration can be done using your web browser. Browse to <http://xxx.xxx.xxx.xxx> (where xxx.xxx.xxx.xxx is the configured IP address of the Print Server.)

Installing the Printer

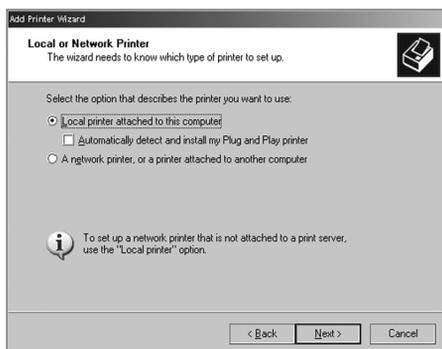
Windows 2000 & XP

Macintosh Procedure on Page 19

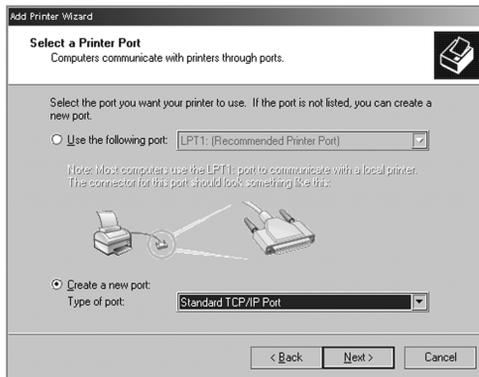
- ▶ Open the 'Printers and Faxes' folder. To do so, open the 'Control Panel' and then open the 'Printers and Faxes' folder. Double click on the 'Add Printer' icon. This will open the 'Add Printer Wizard'. Press the 'Next' button.



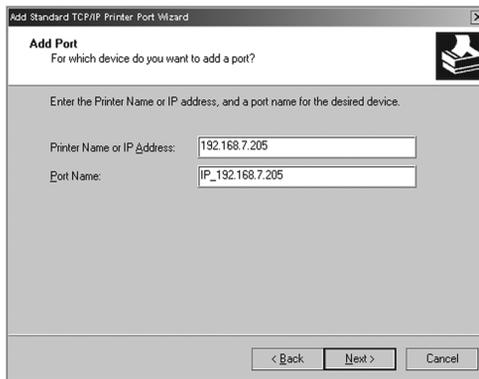
- ▶ Select 'Local printer attached to this computer'. Also, uncheck the 'Automatically detect and install my Plug and Play printer' check box. Press the 'Next' button when finished.



- ▶ Select '*Create a new port: Type of port:*'. From the pull down list, select '*Standard TCP/IP Port*'. Press the '**Next**' button.



- ▶ The 'Add Standard TCP/IP Printer Port Wizard' will open. Press the '**Next**' button.
- ▶ Enter the IP address of the USB Print Server into the field called '*Printer Name or IP Address:*'. The Port Name field will be filled automatically once the IP address is entered.

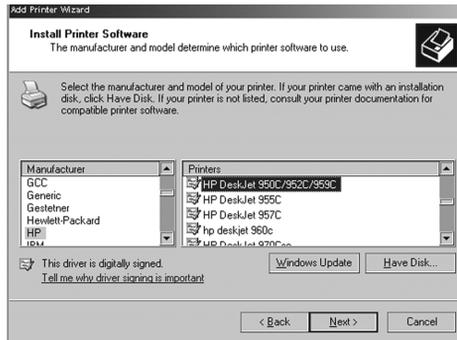


- ▶ Please enter the IP address recorded on *Page 6*. Once complete, press the '**Next**' button.

- ▶ The 'Additional Port Information Required' window will appear. Select 'Standard' device type and select 'Generic Network Card' from the pull down menu. Press the 'Next' button when finished.

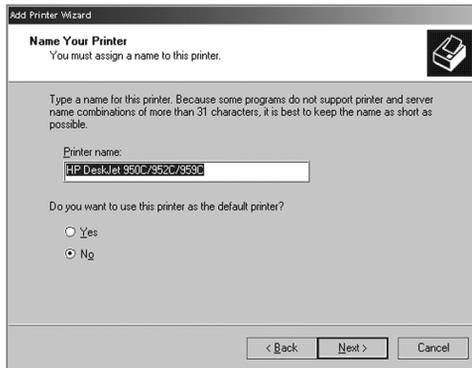


- ▶ A summary screen will appear. Press the 'Finish' button to continue setting up your USB Network Printer.
- ▶ The 'Install Printer Software' window will appear. Please select the proper printer from the list below, or refer to the printer manufacturer's driver location. Once the proper printer driver has been selected, press the 'Next' button.

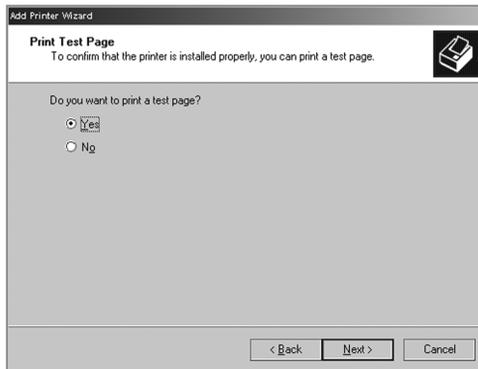


- ▶ **NOTE:** Press the 'Have Disk' button to install drivers from a CD-ROM or Floppy disk.

- 1 The 'Name Your Printer' window will appear. Enter an appropriate name or leave the default 'Printer name' if desired. Also, select if the printer is to be the default printer or not. Press the '**Next**' button when complete.



- 2 The 'Printer Sharing' window will appear. Select 'Do not share this printer' and click the '**Next**' button.
- 3 The 'Print Test Page' window will appear. Select 'Yes' to print a test page. Press the '**Next**' button when finished.



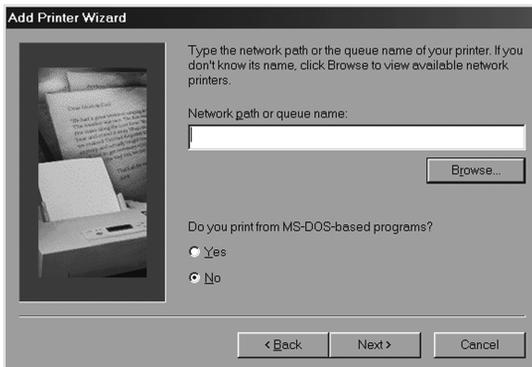
- 4 The 'Add Print Wizard' is now complete. Press the '**Finish**' button. Congratulations, your USB Network Printer has been installed.

Windows 98 & ME

- ▶ Open the 'Printers' folder. To do so, open the '**Control Panel**' and then open the '**Printers**' folder. Double click on the '**Add Printer**' icon. This will open the 'Add Printer Wizard'. Press the '**Next**' button.
- ▶ You will be prompted to select the type of printer to be installed. Select '**Network printer**' and press the '**Next**' button.

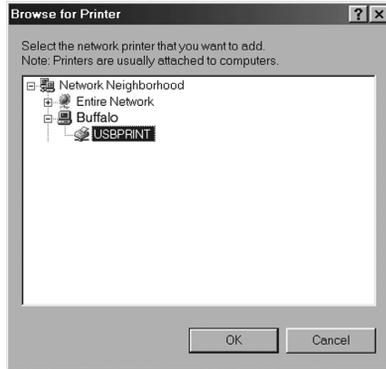


- ▶ A prompt for the '**Network path or queue name**' will appear. Press the '**Browse**' button.



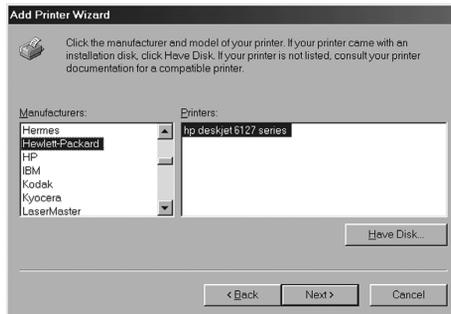
NOTE: You can enter the printer's path if you wish. The format should be \\PrintServer\PortName (where PrintServer and PortName are the same as set on *Page 5*). Press the '**Next**' button when finished.

- ▶ The 'Browse' dialog window will appear. Browse for the appropriate printer, select it, and press the '**OK**' button.



NOTE: If an error is displayed while browsing for the printer, then there is a network problem, or a problem with the 'PortName' set on *Page 5*. To remedy the problem, reset the Print Server to factory defaults by following the instructions on *Page 8*. Then restart the configuration from *Page 4*. If you still have problems, contact our 24/7 customer support at 1-(866) 752-6210.

- ▶ The 'Driver Selection' window will appear. Select the correct driver from the supplied list, or press the '**Have Disk**' button to select a driver supplied by the printer manufacturer. Once the proper driver has been selected, press the '**Next**' button.



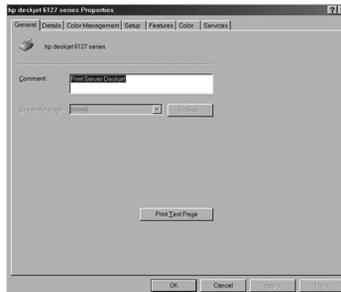
- ▶ The 'Printer Name' window will appear. Enter an appropriate name for the printer and press the **'Finish'** button.



- ▶ The USB Network Printer is now installed. A test print can verify that the printer is installed correctly. Find the printer in the Printer's folder, right click on its icon and select **'Properties'**.



- ▶ The 'Printer Properties' window will appear. Press the **'Print Test Page'** button to print a test page. If the test page prints, then your printer is setup properly.



Internet Printing Protocol (IPP)

Internet Printing Protocol (IPP) allows a computer in a remote location to print to an installed printer at a home or office over the internet. Practical applications would include printing to a work printer from home, printing to a work printer on a business trip, etc.

- ▶ IPP requires a full time internet connection at the location where the printer is installed.
- ▶ Port 631 is the default port for IPP. The router on the network needs to pass port 631 through to the local IP address of the USB Print Server. Please see the documentation for the router to setup port forwarding properly.
- ▶ The 'Port' name from *Page 5* will be needed.

Please follow the following steps to properly setup IPP:

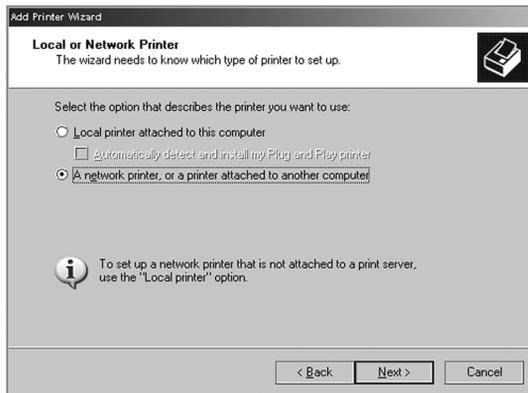
Windows 2000 & XP

- ▶ Open the '*Printers and Faxes*' folder. To do so, open the '*Control Panel*' and then open the '*Printers and Faxes*' folder. Double click on the '**Add Printer**' icon. This will open the 'Add Printer Wizard'. Click the '**Next**' button.



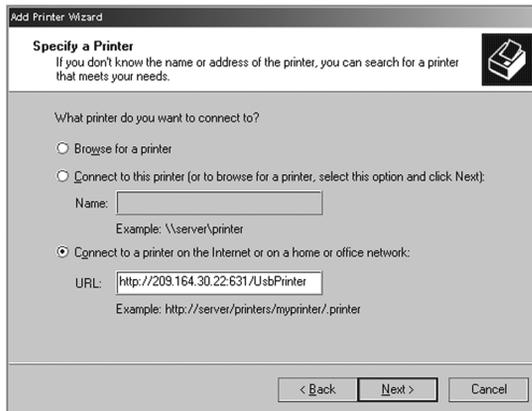
NOTE: Internet Printing Protocol (IPP) is **NOT** supported in Windows 98 or Windows ME due to a lack of TCP/IP printing support.

- 1 Select 'A network printer, or a printer attached to another computer'. Press the 'Next' button.

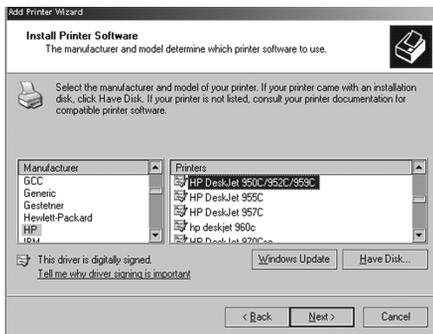


- 2 Select 'Connect to a printer on the Internet or on a home or office network:'. In the 'URL' field, enter: `http://IP_ADDRESS:631/PORTNAME` (using the 'Port' name from Page 5). Once complete, press the 'Next' button.

NOTE: The IP address inputted needs to be your external/Internet IP address, **NOT** the internal IP address. Consult your router documentation or ISP information to determine this IP address.

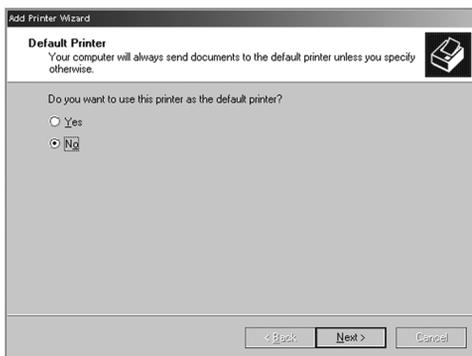


- ▶ The 'Install Printer Software' window will appear. Please select the proper printer from the list below, or refer to the printer manufacturer's driver location. Once the proper printer driver has been selected, press the **'Next'** button.



NOTE: Press the **'Have Disk'** button to install drivers from a CD-ROM or Floppy disk.

- ▶ The 'Default Printer' window will appear. Select if the printer is to be the default printer or not. Press the **'Next'** button when complete.



- ▶ The 'Add Print Wizard' is now complete. Press the **'Finish'** button. Congratulations, your IPP USB Network Printer has been installed.
- ▶ The printer will now be available in your 'Printers and Faxes' folder. You can print a test page by going to the printer's properties and pressing the **'Print Test Page'** button.

Macintosh Setup

Print Server Configuration

It is recommended that you connect the print server directly to your Apple computer using a cross over Ethernet Cable or connect the Apple computer and the print server to a hub or switch, to perform the initial configuration. The print server will attempt to obtain an IP address from a DHCP server if one is available, otherwise the print server will default to an IP address of **192.168.11.222**. If a DHCP server is available you will have to check the server's logs to determine which IP address the print server received.

- ▶ Open the 'System Preferences' from the Apple menu and select '**Network**'. Set 'Show' to '**Built-in Ethernet**'. Record the current settings; they will be needed later. Set 'Configure' to '**Manually**'. Enter **198.168.11.223** into the 'IP Address' field. Enter **255.255.255.0** into the 'Subnet Mask' field. Press the '**Apply Now**' button when finished.



- ▶ Open a Web Browser (Version 4.5 or later) and enter **192.168.11.222** into the 'Address' field. Press the Enter or Return key to continue.



- ▶ The 'Server Status' page of the USB Print Server will open. Press the '**Settings**' link to continue setting the Print Server up.

- ▶ The Basic Settings menu will appear. Enter an acceptable Print Server Name. This can be left as default if desired. The Web-based Configuration system can be password protected by entering and verifying a new password. Press the **'Set'** button when configuration is complete. A message will appear stating that the print server is rebooting. You will be prompted to login using the new password.

Connect USB Printer with Ethernet

Print Server LPV3-U2-US

▶ TOP Page	Basic Settings
▼ Settings	Printer Server Name <input type="text" value="PU-3D3085"/>
▶ Basic Settings	Administrator User Name <input type="text" value="root(can not be changed)"/>
▶ Network Settings	Administrator Password <input type="text"/> <input type="text" value="(confirm)"/>
▶ SNMP Settings	
▶ Management	
	<input type="button" value="Set"/>

- ▶ Click on the **'Network Settings'** link. Enter a fixed IP address or set the bullet to **'Obtain an IP address automatically'**. This will be the IP address used for PC-Based printing and for configuration. Store the IP address in a safe place in case you need to access the configuration options again. Press the **'Set'** button when configuration is complete. A message will appear stating that the print server is rebooting.

▶ TOP Page	Network Settings
▼ Settings	<input checked="" type="radio"/> Obtain an IP Address Automatically <input type="radio"/> Manual Setting
▶ Basic Settings	IP Address <input type="text" value="192.168.11.60"/>
▶ Network Settings	Subnet Mask: <input type="text" value="255.255.255.0"/>
▶ SNMP Settings	Default Gateway: <input type="text" value="192.168.7.1"/>
▶ Management	Rendezvous <input checked="" type="radio"/> Enable <input type="radio"/> Disable
	IPP port Number <input type="text" value="631"/>
	NETBEUI
	Work Group <input type="text" value="WORKGROUP"/>
	AppleTalk
	AppleTalkZone <input type="text" value="*"/>
	Printer Name (Port Name) <input type="text" value="P1"/>
	Printer Object Type <input type="text" value="LaserWriter"/>
	PostScript Level <input type="text" value="Level 2"/>
	Font Group <input type="text" value="Standard 35"/>
	<input type="button" value="Set"/>

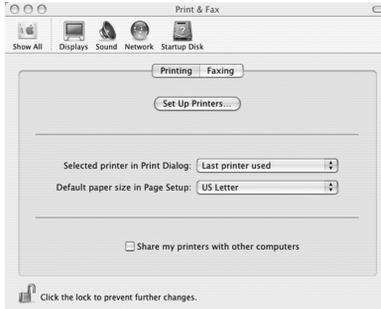
Rendezvous is enabled by default so if you are using this service in your network, the server will be discovered.
If used, enter AppleTalk info, otherwise leave in default condition.
After entering your settings, press the 'Set' button.
For further information please click on the '?' icon next to the area in question.

- Restore the TCP/IP settings. Open your 'System Preferences' and select '**Network**'. Set 'Show' to '**Built-in Ethernet**'. Restore the settings that were recorded previously. Use the '**Using DHCP**' option from the pull down menu if the IP address is to be automatically assigned. Otherwise, enter the proper static IP address information. Press the '**Apply Now**' button when configuration is complete.



Installing the Printer on your Macintosh

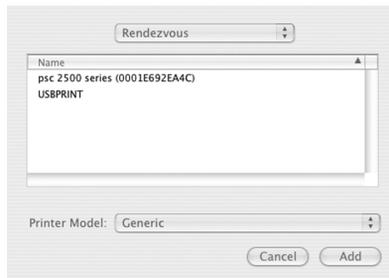
- ▶ Open the 'System Preferences' from the Apple menu and select '**Print & Fax**'. The 'Print & Fax' window will appear. Press the '**Set Up Printers...**' button.



- ▶ The 'Printer List' will appear. A dialog box may appear stating "You have no printer available." In this case press the '**Add**' button. Otherwise press the '**Add**' button from the graphical menu.



- ▶ A list of available printers will appear. In that list should appear the Rendezvous name set on *Page 7* or *Page 21*. Highlight the correct printer.



- Press the **'Printer Model'** pull down menu and select the proper hardware driver for the printer. The printer's CD-ROM may be needed to install the proper drivers if they're not already supplied. In this case, select the **'Other...'** option and provide the location of the proper driver file. Once the driver has been selected, press the **'Add'** button.



- Congratulations, the printer has been installed. The **'Printer List'** will now list the installed network printer. This window can be closed. You can now print to that printer.



Technical Specifications

LAN Standards:	IEEE 802.3u 100BASE-TX; IEEE 802.3 10BASE-T
Transmission Types:	100Mbps/10 Mbps; 100BASE-TX 4B/5B, MLT-3; 10BASE-T Manchester Coding
Access Media:	CSMA/CD
Media Interface:	RJ-45
USB Standard:	USB1.1, USB2.0
USB Connector:	USB A Connector (1)
Network Protocols:	NetBEUI; TCP/IP; Apple Talk; SNMP
Electric Current:	5.0V
Power Consumption:	500mA
Dimensions:	3.7 x 1.1 x 2.6 in. (92 x 28 x 52 mm.)
Weight:	3.2 oz. (90 g.)
Operating Temperature:	0-40 C; 20-80% non-condensing

Technical Support

Buffalo Technology offers toll-free technical support 24 hours a day, 7 days a week for this product. Customers in the United States and Canada can obtain technical support using the following information:

Web: www.buffalotech.com
E-mail: info@buffalotech.com
Telephone: 866-752-6210 (USA & Canada only)

FCC Warning

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.