

Section 6

Windows Driver

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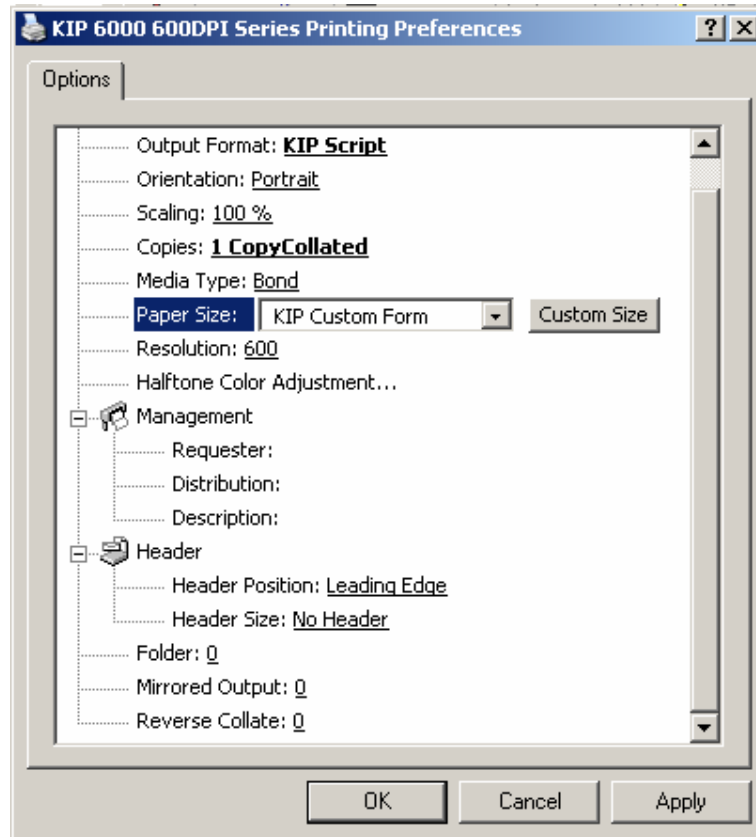
1.0 Introduction

1.1 Introduction

The **KIP Unified Windows Printer Driver (KUWPD)** allows windows printing from Microsoft Windows NT4 / 2000 / XP Operating systems as well as 2003 Server based applications.

The KIP Unified Windows Printer Driver is available for download from your local KIP website and is also supplied with your KIP 3000 Printer on the software CD.

1.2 Option Screen - Overview



Commencing from the top of the layout above, these are the main features on the KUWPD

Name	Feature / Function
Output Format	Selects the type of "language" for driver output
Orientation	Rotation of the page
Scaling	Allows scaling of an image to the page size if not supported in the application.
Copies	Selects the total number of prints
Media Type	Selects the output media type
Paper Size	Selects the page size from standard sizes or create a custom page size.
Resolution	Select the resolution to match the printer DPI
Halftone Color Adjustment	Allows dither pattern change from various colors from the within an application to the printed document.
Management	Allows accounting to be used from windows applications.
Header	Places a text header on the print for quick document identification
Folder	Allows the document to be folded (with optional folder)
Mirrored Output	Mirrors the image on the print
Reverse Collate	In a multi page document, reverse the print order

2.0 Function Details

2.1 Output Format

The KUWPD improves support for many Windows applications by providing dual output printer language capabilities. Selecting the *Output Format* in “Printing Preferences” or “Document Defaults” (NT4), *before* entering an application will select the proper output method.

KIP GL Output Format

The first output format the KUWPD is capable of is KIP GL (HPGL2/HP-RTL). CAD applications that may not have a compatible driver available can utilize KIP GL and achieve improved quality. The KIP GL output can be further enhanced by making changes to the Pen Table on the KIP Controller. Features already in the Default Pen Table on the KIP Controller such as Line Width Compensation and RTL Dither allow users to achieve improved quality when using the KIP GL output format.

KIP Script Output Format

The user can choose KIP Script (Postscript output) when printing from applications that function best when outputting Postscript data. For example; Adobe Acrobat functions best when using Postscript output, especially on images larger than E-size (Acrobat 6). Other graphics applications including MS-Word, Powerpoint, and Excel also work very well with KIP Script output. The KIP Script data can be smaller in file size and transmits quickly over networks.

NOTE

The KIP PDF Powerscript³ option is required for printing KIP Script data. Please contact your local KIP reseller for details.

NOTE

When using the KIP GL output format, the Default.PEN - Pen Table at the KIP Controller will also control some of the printing features. Features such as **Vector Line Dither Pattern**, **RTL Raster Dither**, **RTL Density**, **Line Width Compensation** are used during conversion for printing. These settings must be configured PRIOR to opening the KIP Unattend print queue.

NOTE

Certain applications work better depending on the *Output Format*.

- Applications using heavy raster or photographic data work best with KIP Script type output. Examples: Adobe Acrobat products, Adobe Illustrator Products, Adobe Photoshop Products and Corel Draw based products.
- Microsoft applications generally work well with either output format. Examples: Microsoft Word, Excel, Project.

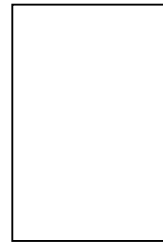
2.2 Orientation

There are two types or Orientation in the KIP driver: Landscape and Portrait.

Examples:



Landscape



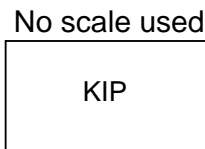
Portrait

Selection of the orientation should take into account the design or layout from within the application. If an incorrect orientation is selected the page size can be “rotated” incorrectly and image may be lost in the final printed output.

2.3 Scaling

Many Windows applications have their own scaling capabilities built into the "print menu". For example: Spicer and MS PowerPoint allow for some form of “Scale to Page” type feature. Some Windows applications such as MS Word and MS Excel do not allow for scaling to engineering and architectural wide format paper sizes. The “Scaling” feature in KUWPD allows the user to set a percentage to enlarge the document to fit the paper size desired when scaling is not included in the application.

Example:



2.4 Copies

Select the total number of copies you wish to print. The range is from 1 to 999.

2.5 Media Type

The KIP printer may have more than one media type installed. These types may include bond, vellum and film. This feature allows printing onto a media type of your choice of an installed kind.

2.6 Paper Size

Select the output page size. Please note that the KIP printer may have a roll installed that may be larger than the selection.

This is a feature that is very important in wide format printing from CAD applications and MS Excel. This is a feature that is required in CAD applications where the image size may vary from one image to the next such as: 36" x 60" for the first document then 24" x 80" for the next.

The Custom Size feature allows the users much simpler access for several capabilities:

1. Choose any paper size "on-the-fly" without adding new paper sizes to the operating system (Printers and Faxes→Server Properties→Forms).
2. Choose different and non-standard paper sizes for each and every document.
3. Choose very long paper sizes.
4. It is not necessary to exactly match the document length to the output length; the users can intentionally choose a longer length for the media size. For example, if the image is meant to fit on 36" wide media, but the user isn't sure about the length of the media required, the user can set a very long length (up to 200 feet) and the "white" space (extra paper) at the end of the document will automatically be removed. This prevents any waste in media without an image (KIP GL)

2.7 Resolution

Final output can be changed from 400 DPI to 600 DPI. Please select the DPI to match your printer DPI.



NOTE

The KIP 3000 is a 600 x 600 DPI device.

2.8 Halftone Color Adjustment

The KIP driver can be adjusted to allow colors from within your application to have different variance of shading. This provides the ability to increase or decrease the level of overall contrast of the grey tones on final output. Adjust the level as required to satisfy your final product requirements.

2.9 Management

The KIP 3000 has the ability to account for each print produced. This allows for job/department costing. Three fields exist in the driver to allow the user to include this information. This information may be mandatory if so desired at the time of driver installation. These fields may also include "drop menu" which allows the user to select from a list of predetermined accounting information. A password or PIN may also be used to only enable authorized users to submit prints.

The fields can be customized for individual company needs, but generally speaking these fields are:

- a) Name
- b) Job Number
- c) Description

Name, Job Number and Description fields under "Printing Preferences" or "Document Defaults (NT4)" can be set to use operating system environment variables.

Examples: The *Requester* field can be set to %Username%

The Description field can be set to %Computername%

2.10 Header

To easily recognize printed documents, text can be placed on the top of bottom of the print. The text header includes all the “Management” information as well as the file name.



2.11 Folder

If an optional folding device is installed onto the printer, select fold to allow the printer to determine which fold table to apply to the document. The patterns must be set by the technician in the KIP 3000 IPS.

2.12 Mirrored Output

The image can be mirrored as required by the user. This may be needed on translucent media or for other specialty applications.

2.13 Reverse Collate

If the document to be printed contains more than one page, collation may be important. To allow the pages to be reversed printed (last page first), select this function. Please note that the application must also support multiple page printing.

3.0 Installation

3.1 Prerequisites

Requirements at the Network Server or User Workstations

- a) The **KIP Unified Windows Printer Driver (KUWPD)** allows windows printing from Microsoft Windows NT4 / 2000 / XP Operating systems as well as 2003 Server based applications. (Windows 9x is not supported)
- b) Please ensure that your applications are as up-to-date as possible, in terms of version, available service packs, and hot fixes. This also includes the OS
- c) If you are updating your system from a previous installation, you will likely need the assistance and/or permission of a Network Administrator to remove the previous KIP Driver. Be sure to understand that any users connected to the previous shared version of the KIP Printer Driver on the Server, IPS, or Workstation will need to also remove that printer object and reconnect to the newly shared driver which will be installed.

KIP Unified Windows Printer Driver (KUWPD) offers HPGL2/HP-RTL and Postscript Language printing to KIP digital printers from Microsoft Windows NT4 / 2000 / XP / 2003 based applications (Windows 9x platforms not supported). The driver can be downloaded from your local KIP website and is included on your KIP 3000 Software CD.

KUWPD contains:

- printer driver files
- an installation utility (**Printman.exe**)
- a dedicated printer port monitor (KIP0) for Microsoft operating systems as described in the following pages.
- Once the KUWPD has been downloaded and uncompressed, the files can be placed directly on the workstation or server to which it will be installed or on a USB drive or CD. See **Appendix A** for details on the files and file structure.

**For new installations on a Workstation or Server see:
“Installation Process”**

**For updating from a previous installation of a KIP Printer see:
“Upgrade Installation”**

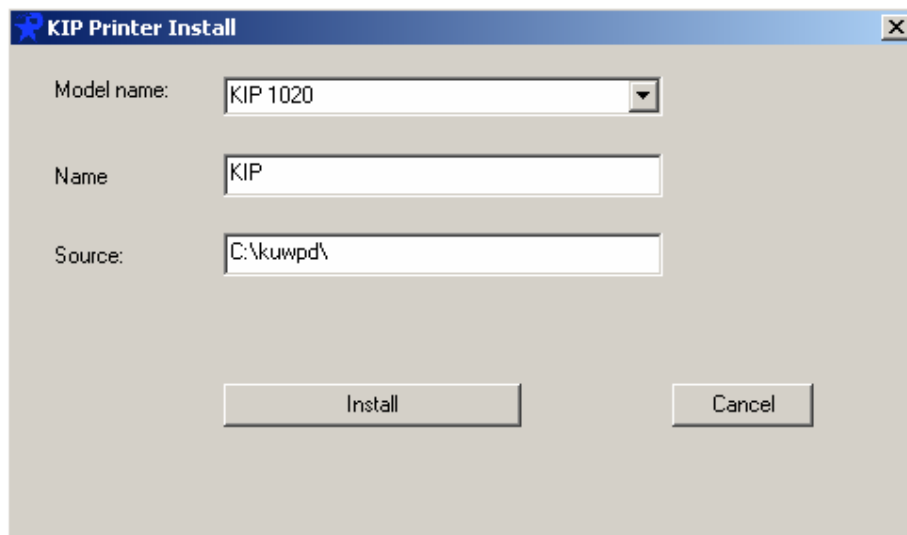
3.2 Installation Process - Automatic

KIP Unified Windows Printer Driver (KUWPD) can be installed on Microsoft Windows NT4, 2000, XP, 2003 platforms (Windows 9x platforms not supported) by using the provided **printman.exe** utility or by manually adding a port monitor (monitor.inf) and printer driver (plotter.inf). In both cases, Local Administrative rights are necessary.

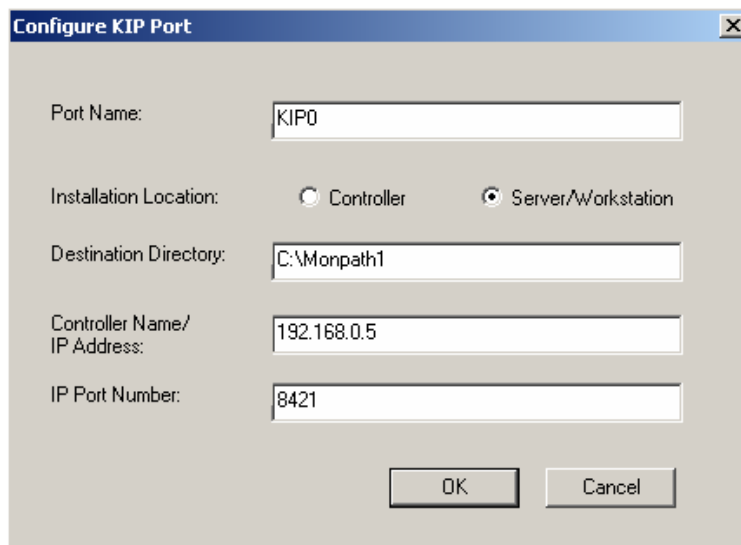
Printman Utility Installation Method:

Once the KUWPD has been downloaded and unzipped, the files can be placed directly on the workstation or server it will be installed at or on a USB drive or CD. See **Appendix A** for more information on the files and structure.

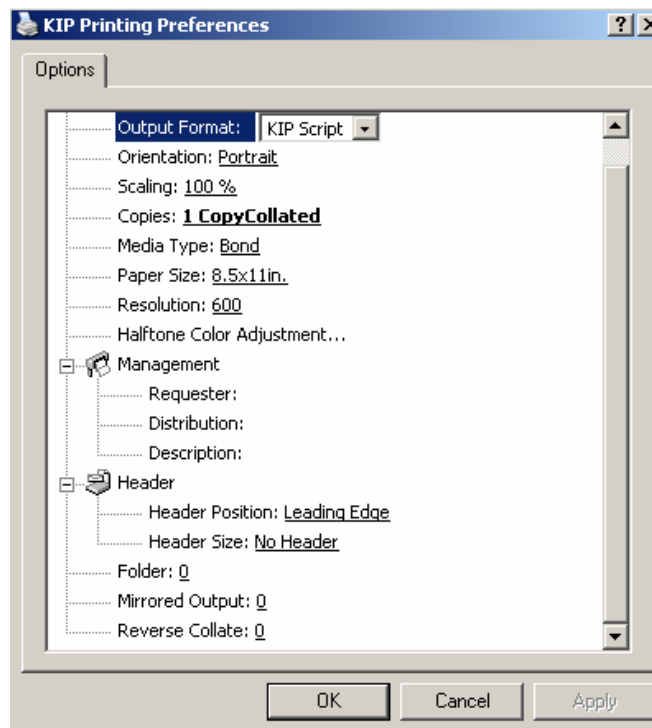
- a) Execute **printman.exe** from a Microsoft Windows NT4, 2000, XP, or 2003 operating system. An installation window is displayed:



- b) Select the appropriate KIP Printer from the *Model Name* drop down selection. (kip 3000) Do not change the *Name* and *Source Fields*
- c) Select *Install*. KIP printer port monitor is now installed.
- d) The following screen will appear.



- e) Do not change *Port Name*
- f) Choose *Server/Workstation* from *Installation Location*
- g) Do not change *Destination Directory*
- h) Provide the IP address **OR** hostname of your KIP printer for *Controller Name / IP Address*. It is important to add EITHER the hostname OR the IP address. Do not add both. This is the destination address.
- i) Do not change *IP Port Number*
- j) Click **OK**. The selected KIP Printer Driver is added to the system and assigned to the Printer Port monitor (KIP0).
- k) Installed printer can now be accessed from the Microsoft Printer Control Panel. If printer is not seen, press F5 to refresh the printer list
- l) Right-Click "KIP Printer" and select *Printing Preferences*. User Interface is displayed. For Microsoft Windows NT4, select *Document Defaults*



- m) The following settings will determine the initial defaults for the printer driver. These defaults will be acquired by client workstations connecting to the shared printer driver. Please note that some workstations may not be able to alter the Printer Preferences unless allowed by the network login.
- n) Select desired *Output Format** and make your selections for default paper size, orientation, *Management* functions*, and Header information.
- o) Click **OK** when finished.
- p) Share the printer to other network clients if required.

3.3 Installation Process - Manual

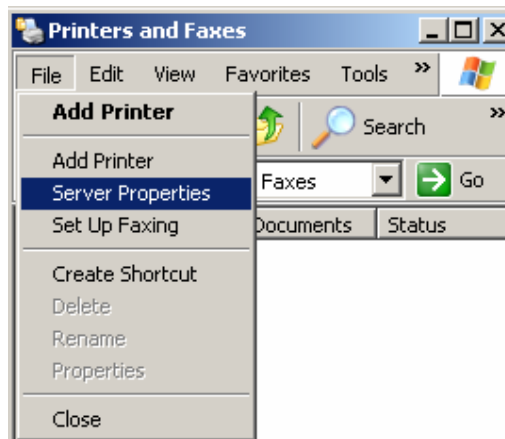
The **printman.exe** utility is designed to automate the installation of the KIP Port Monitor (KIP0) and the KIP Unified Windows Printer Driver (KUWPD). It is possible to install both components manually. Manual installation techniques may be necessary to satisfy IT and/or corporate requirements.

- a) Depending on your operating system, locate the appropriate folder that contains the monitor.inf for your system platform.*

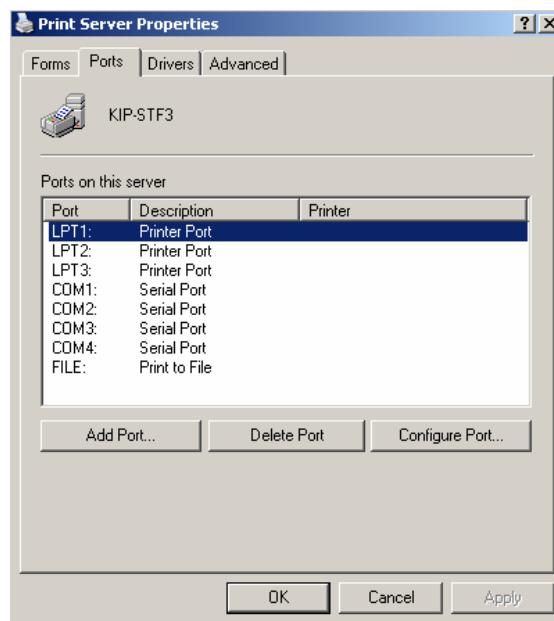
KUWPD \ WINNT4 = Microsoft Windows NT 4 Workstation / Server
KUWPD \ WIN2000 = Microsoft Windows 2000 Workstation / Server
KUWPD \ WINXP = Microsoft Windows XP, Microsoft Windows 2003 Server

- * Alternatively, you can use the Microsoft Standard TCP/IP port monitor (configured for LPR/LPD), however some functionality and transport speed will be lost. See *Printing Hints* section in Appendix.

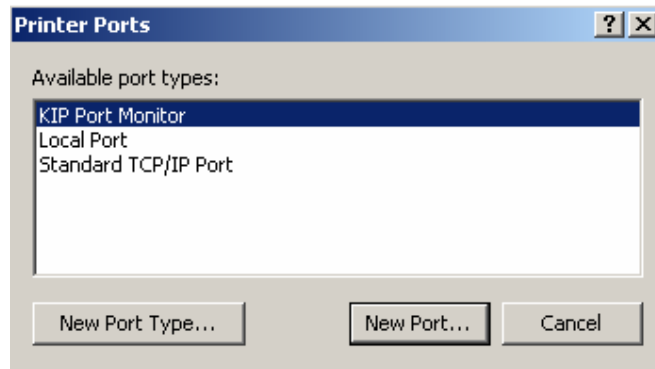
- b) From the Printers control panel, select *File, Server Properties*.



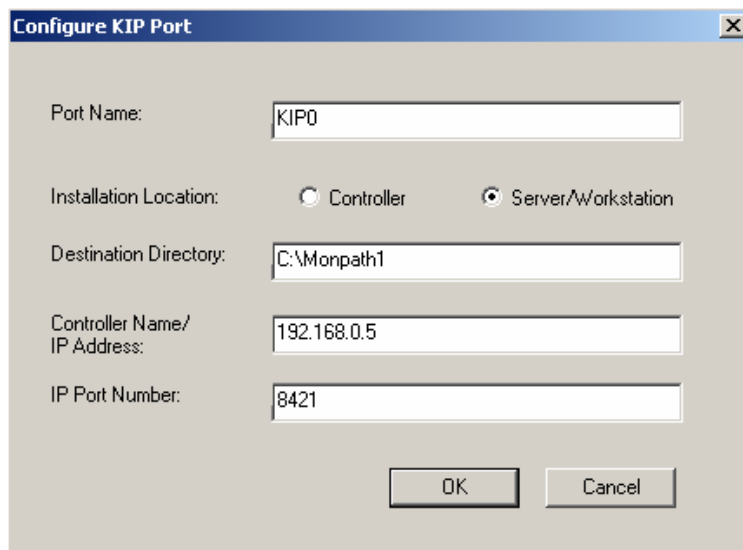
- c) Print Server Properties is displayed. Select *Ports* from available tabbed headings.



- d) Select *Add Port*. Printer Ports dialog is displayed. Select *New Port Type*.
- e) Browse to the appropriate operating system folder from the KUWPD distribution, and select *monitor.inf*. Select *OK*. *KIP Port Monitor* is added to Available Port Types.



- f) Select *KIP Port Monitor* and click *New Port*.
- g) Configure KIP Port:



- f) Do not change *Port Name* unless required*
* For multiple KIP printers, create an additional KIP Port per printer named KIP1, KIP2, KIP3....
- g) Choose *Server/Workstation* from *Installation Location*
- h) Do not change *Destination Directory*
- i) Provide the IP address **OR** hostname of your KIP printer for *Controller Name / IP Address*. It is important to add EITHER the hostname OR the IP address. Do not add both. This is the destination address
- j) Do not change *IP Port Number*
- k) Click *OK*. Port Monitor is now configured. Exit Print Server Properties.
- l) Continue printer installation by using *Add-Printer-Wizard*.

3.4 LPR / LPD Port

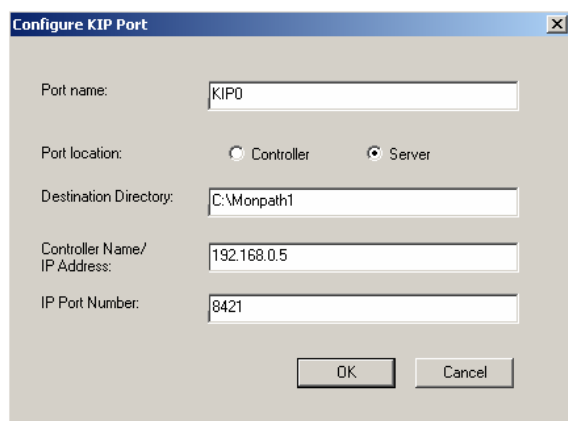
The Microsoft provided TCP/IP Port Monitor can be used as an LPR/LPD type of port instead of the KIP0 port. During configuration of TCP/IP Port Monitor, LPR must be used, with *LPR Byte Counting* enabled. LPR/LPD implementation requires a *Queue Name* to be defined. Use KIP as the queue name, in all uppercase lettering. This is the share name of the printer object on the KIP IPS by default.

3.5 Upgrade Process

Obtaining the Windows Driver Information if the KIP 3000 replaces another KIP system

For your current Windows Driver Setup, please obtain the following information prior to removing or uninstalling any component.

Obtain your current Windows Driver Configuration. In your Windows Driver, go to **Properties, Ports** and locate your information for the KIP0 port. Complete information within the table provided.



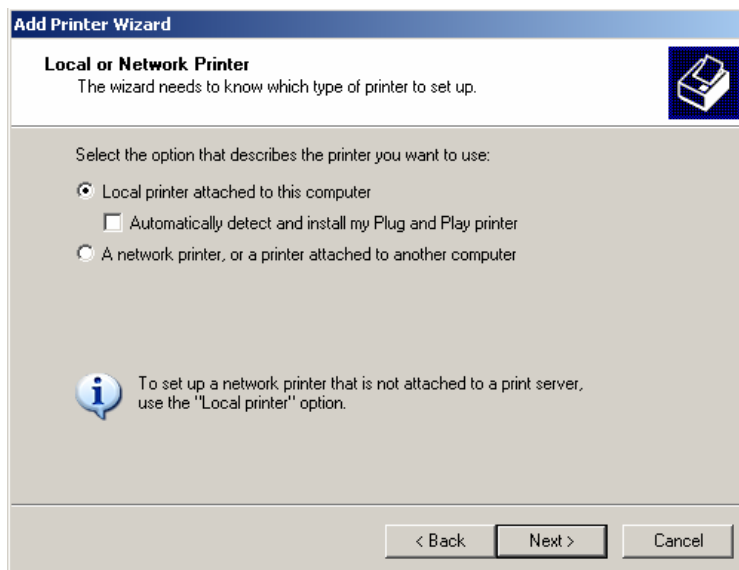
Port Name	
Port Location	
Destination Directory	
Controller Name / IP Address	
IP Port Number	

KIP Unified Windows Printer Driver (KUWPD) can be upgraded from previous versions of KIP Windows Printer Drivers on Microsoft Windows NT4, 2000, XP, 2003 platforms by manually adding the new printer driver (plotter.inf) to an existing KIP0 port. Local Administrative rights are necessary.

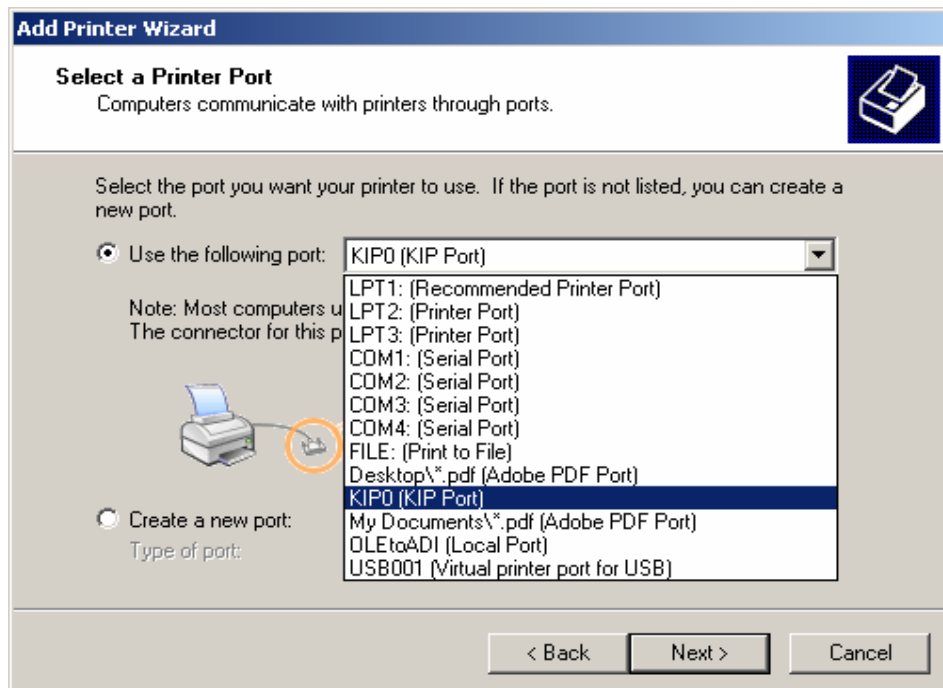
- a) Delete existing KIP printer driver object(s) from the Control Panel, Printers menu at the workstation(s) / server(s).
- b) Once the KUWPD has been downloaded and unzipped, the files can be placed directly on the workstation or server it will be installed at or on a USB drive or CD. See **Appendix A** for more information on the files and structure.

- c) From the Control Panel, Printers menu select “Add Printer”. When the Printer Wizard dialog is displayed* select *Local printer attached to this computer*. Click *Next*

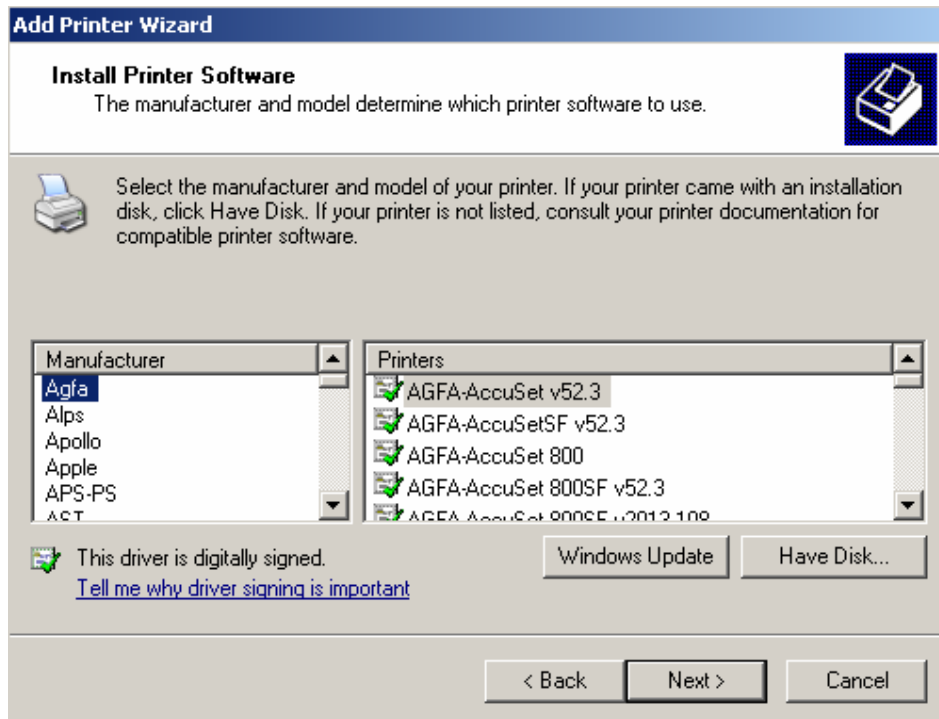
* Microsoft Windows NT4 screens will vary slightly from those shown



- d) Select *Using the Following Port*, and assign *KIP0*, or use *KIP1*, *KIP2* depending on the installation. Select *Next*.



- e) Install Printer Software dialog is displayed. Click *Have Disk*.



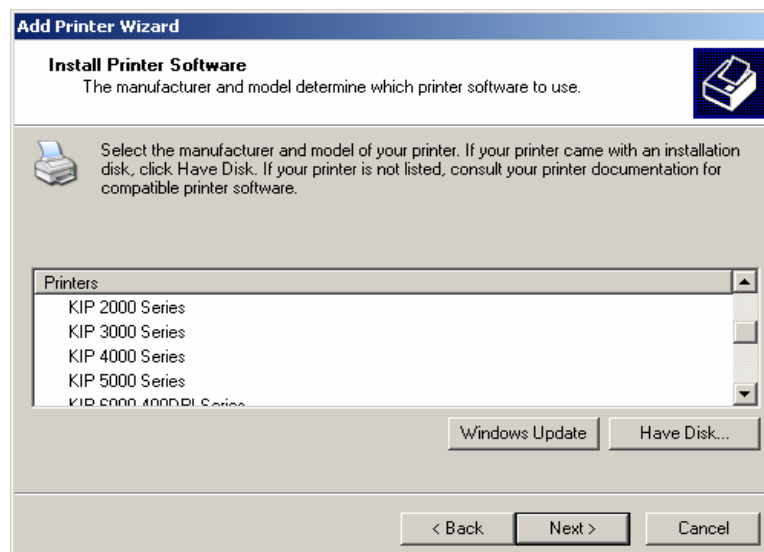
- f) Depending on your operating system, locate the appropriate folder that contains the `plotter.inf` for your system platform.

KUWPD / WINNT4 = Microsoft Windows NT 4 Workstation / Server

KUWPD / WIN2000 = Microsoft Windows 2000 Workstation / Server

KUWPD / WINXP = Microsoft Windows XP, Microsoft Windows 2003 Server

- g) Select the appropriate KIP Printer from the list displayed. Click *Next*



h) Provide a Printer Name when prompted. Select *Next*.

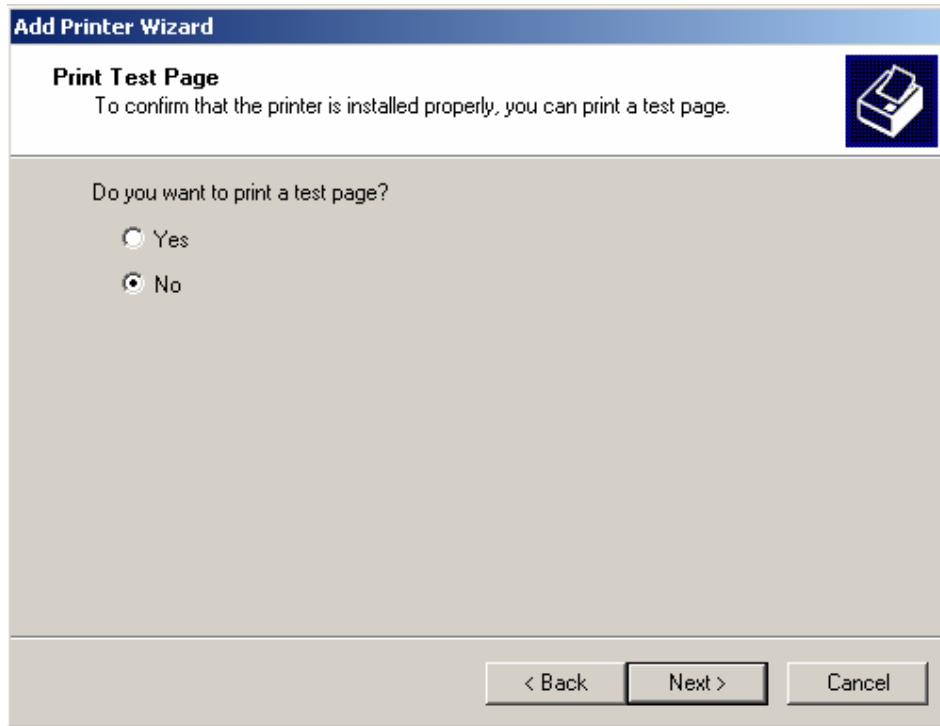
The screenshot shows the 'Add Printer Wizard' dialog box with the title bar 'Add Printer Wizard'. The main heading is 'Name Your Printer' with a sub-heading 'You must assign a name to this printer.' and a printer icon. The text below reads: 'Type a name for this printer. Because some programs do not support printer and server name combinations of more than 31 characters, it is best to keep the name as short as possible.' There is a text input field labeled 'Printer name:' containing the text 'KIP1020'. Below this is a question: 'Do you want to use this printer as the default printer?' with two radio button options: 'Yes' (unselected) and 'No' (selected). At the bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

i) Assign a shared name (if applicable)*. Select *Next*

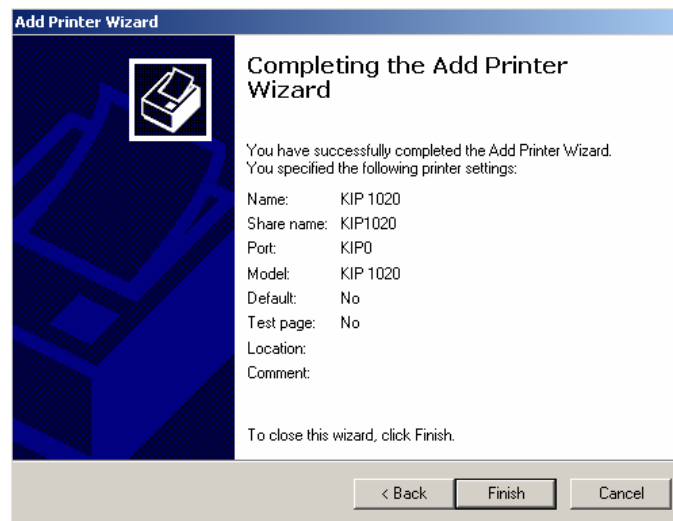
* If replacing a previously shared driver, it is possible to use the same share name.

The screenshot shows the 'Add Printer Wizard' dialog box with the title bar 'Add Printer Wizard'. The main heading is 'Printer Sharing' with a sub-heading 'You can share this printer with other network users.' and a printer icon. The text below reads: 'If you want to share this printer, you must provide a share name. You can use the suggested name or type a new one. The share name will be visible to other network users.' There are two radio button options: 'Do not share this printer' (unselected) and 'Share name:' (selected). The 'Share name:' option has a text input field containing the text 'KIP1020'. At the bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

j) Determine if you would like to print a Test Page when prompted. Select *Next*.

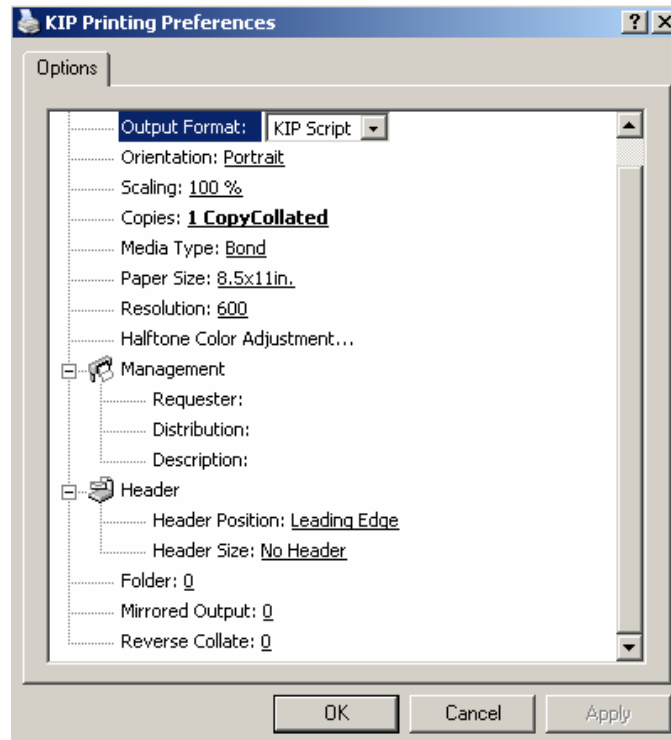


k) Completing the Add Printer Wizard dialog is displayed. Click *Finish*. Printer Driver is added to system.



l) Installed printer can now be accessed from the Microsoft Printer Control Panel*
* If printer is not seen, press F5 to refresh the printer list

- m) Right-Click KIP printer and select *Printing Preferences**. User Interface is displayed.
* For Microsoft Windows NT4, select *Document Defaults*



- n) The following settings will determine the initial defaults for the printer driver. These defaults will be acquired by client workstations connecting to the shared printer driver. Select these defaults prior to installing at client workstations. Please note that some workstations may not be able to alter the Printer Preferences unless allowed by the network login.
- o) Select the desired *Output Format** and make your selections for default paper size, orientation, Management functions*, and Header information.
* See *Printing Hints* section later in this document
- o) Click *OK* when finished.

! NOTE

If you wish to add additional KIP Printers, use the Add-Printer-Wizard, and select **KIP (c)** from the list of manufactures.

4.0 Appendix

4.1 File Structure Overview

When the printer driver is unzipped and copied to the Hard Disk of the system it will be installed on, the directory and file structure is as follows:

C:\KUWPD
C:\KUWPD\WINNT4
C:\KUWPD\WIN2000
C:\KUWPD\WINXP

KUWPD

- Printman.exe- Installation utility for Microsoft Windows NT4 / 2000 / XP / 2003. Provides a GUI for Printer Port Monitor and Printer Driver installation.
- Mfc71.dll- Microsoft DLL needed to run Printman
- Msvcr71.dll- Microsoft DLL needed to run Printman

WINNT4

- Kawntppm.dll- Printer Port Monitor for Microsoft Windows NT4 Workstation/ Server
- Kipgs24.ppd - Postscript Printer Definition File
- Kipgs400.ppd- Postscript Printer Definition File
- Kipgs600.ppd- Postscript Printer Definition File
- Kipgs1020.ppd- Postscript Printer Definition File
- Kuwntpd.dll- Printer Driver DLL for Microsoft Windows NT4 Workstation / Server
- Kuwntpdui.dll- Printer Driver User Interface for Microsoft Windows NT4 Workstation / Server
- Monitor.inf- Printer Port Monitor installation file Microsoft Windows NT 4 Workstation / Server
- Plotter.inf- Printer Driver installation file Microsoft Windows NT4 Workstation / Server

WIN2000

- Kaw2kppm.dll- Printer Port Monitor for Microsoft Windows 2000 / XP / 2003
- Kipgs24.ppd- Postscript Printer Definition File
- Kipgs400.ppd- Postscript Printer Definition File
- Kipgs600.ppd- Postscript Printer Definition File
- Kipgs1020.ppd- Postscript Printer Definition File
- Kuwxppd.dll- Printer Driver DLL for Microsoft Windows 2000 / XP / 2003
- Kuwxppui.dll- Printer Driver User Interface for Microsoft Windows 2000 / XP / 2003
- Monitor.inf- Printer Port Monitor installation file for Microsoft Windows 2000
- Plotter.inf- Printer Driver installation file Microsoft Windows 2000

WINXP

- Kaw2kppm.dll- Printer Port Monitor for Microsoft Windows 2000 / XP / 2003
- Kipgs24.ppd- Postscript Printer Definition File
- Kipgs400.ppd- Postscript Printer Definition File
- Kipgs600.ppd- Postscript Printer Definition File
- Kipgs1020.ppd- Postscript Printer Definition File
- Kuwxppd.dll- Printer Driver DLL for Microsoft Windows 2000 / XP / 2003
- Kuwxppui.dll- Printer Driver User Interface for Microsoft Windows 2000 / XP / 2003
- Monitor.inf- Printer Port Monitor installation file for Microsoft Windows XP / 2003
- Plotter.inf- Printer Driver installation file Microsoft Windows XP / 2003

4.2 Printing Hints

- **Issue:** Adobe Acrobat 6.X products, when printing with KIP GL output language and large size (E-Size or larger) documents has potential to miss or clip off data prematurely.
Solution: Adobe Acrobat 7.X products correct this issue. Acrobat 6.x requires the use of KIP Script output to solve this issue (choose KIP Script in the drivers **Printing Preferences** prior to opening Acrobat 6)
- **Issue:** Printing from Adobe products such as Acrobat Reader requires Postscript output.
Solution: Default the “Printing Preferences” of the KIP driver to KIP Script prior to opening the Adobe application. Printing of KIPScript data also requires the Powerscript3 option on the KIP Controller.
- **Issue:** The **output format** for driver **MUST** be chosen before entering an application to ensure proper output format.
Solution: Ensure **output format** is set in Printing Preferences before launching an application.
- **Issue:** Printing from AutoCAD products with large and/or complex amounts of embedded raster objects will cause a very large output file / spool file size.
Solution: It is suggested to use dedicated KIP ADI/HDI for complex raster printing from AutoCAD products.

