KODAK PROFESSIONAL ML-500
Digital Photo Print System

User's Guide

P/N 6B8614

Eastman Kodak Company

343 State Street

Rochester, New York, 14650

Using This Manual and Workflow Overview

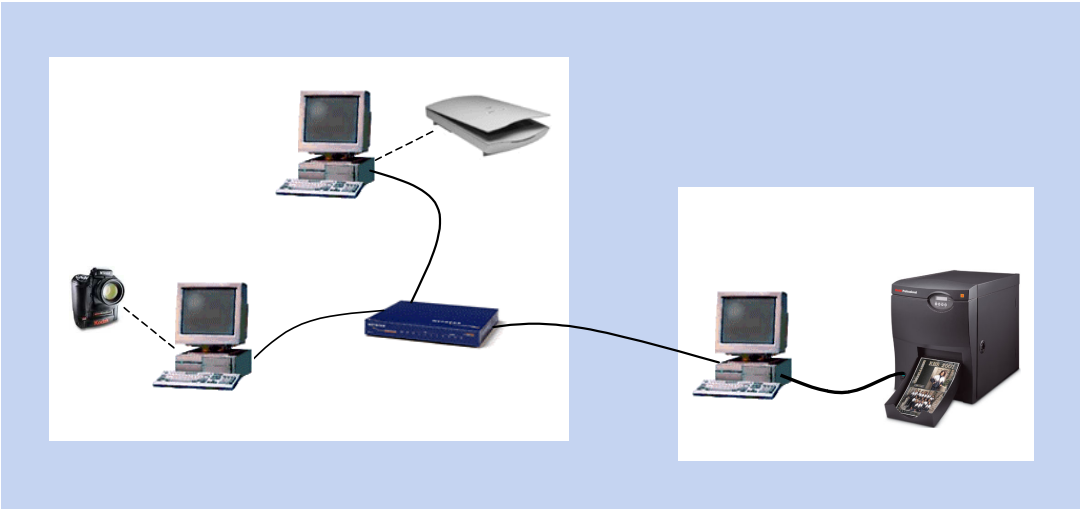
This online manual will help you install and use the KODAK PROFESSIONAL ML-500 Digital Photo Print System.

As you use this manual, click the following items to access the associated information:

- ✔ Entries in the Table of Contents or Index
- ✔ Page numbers in blue text
- ✔ The Contents, Back, Next, or Index buttons at the bottom of each page

The diagram on the next page shows a sample workflow between the ML-500 client and server systems.

ML-500 Digital Photo Print System Workflow



Client Systems

These systems represent client systems in the ML-500 workflow. They are networked to the server that is connected to the ML-500 printer. If you will be using the ML-500 WINDOWS printer driver to print, the driver must be installed on the clients.

Server Systems

The system connected to the ML-500 printer is considered the server. The ML-500 Printer Utilities are installed on this system. If you will be using the ML-500 WINDOWS driver to print, the port monitor and the printer driver(s) must be installed on the server before installing the printer drivers on the client systems.

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

System Requirements (ML-500 Utilities)

- ✔ 800 MHz PENTIUM III processor with minimum 512 MB of memory
- ✔ WINDOWS 2000 Professional (Service Pack 2, or latest), WINDOWS 2000 Server (Service Pack 2, or latest) with Services for MACINTOSH installed, WINDOWS 2000 Advanced Server (Service Pack 2, or latest) with Services for MACINTOSH installed, or WINDOWS XP Operating Systems
- ✔ Color monitor with an 800 x 600 pixel resolution
- ✔ OHCI compliant IEEE 1394 card and IEEE 1394 cable for connecting to printer included
- ✔ A minimum of 10 GB available storage on hard drive

Installing the ML-500 Utilities

If you are installing the ML-500 Utilities for the first time, use the KODAK PROFESSIONAL ML-500 Digital Photo Print System CD (see page 3) that was included with your ML-500 system.

Install the software in the following order:

- ✔ ML-500 Utilities
- ✔ Port Monitor (see page 7)
- ✔ Printer Drivers (see page 10)

Upgrading to a New Version of the ML-500 Utilities

Uninstalling a Previous Version

If you are upgrading to a new version of the ML-500 Utilities, you must first uninstall the previous version. You can then install the new version.

1. From the **Start** menu select **Settings**, then select **Control Panel.**
2. Select **Add / remove programs**.
3. Remove the previous version of the ML-500 Print Utilities. (It is not necessary to uninstall the port monitor or printer drivers.)

Downloading and Installing the ML-500 Utilities from the Kodak Web Site

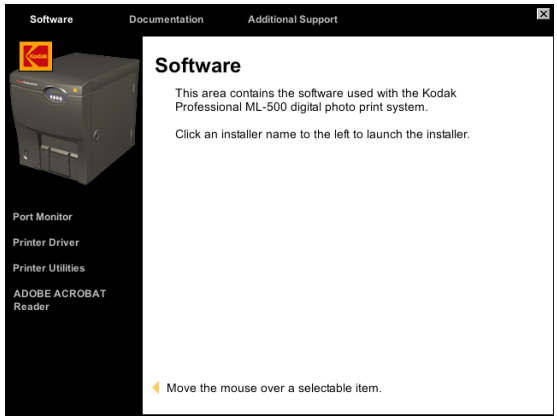
Software updates for the ML-500 printer can be found on the KODAK web site.

1. Go to the following Web site: http://www.kodak.com/global/en/service/software/ML500/ml500Software.jhtml.
2. Follow instructions on the screen for downloading and installing the software.

Installing the ML-500 Utilities from the CD

1. Choose the KODAK PROFESSIONAL ML-500 Digital Photo Print System CD with the appropriate language.
2. Insert the CD in your CD drive.
3. Select a language.

The Software screeen listing all software components on the ML-500 Software CD appears.



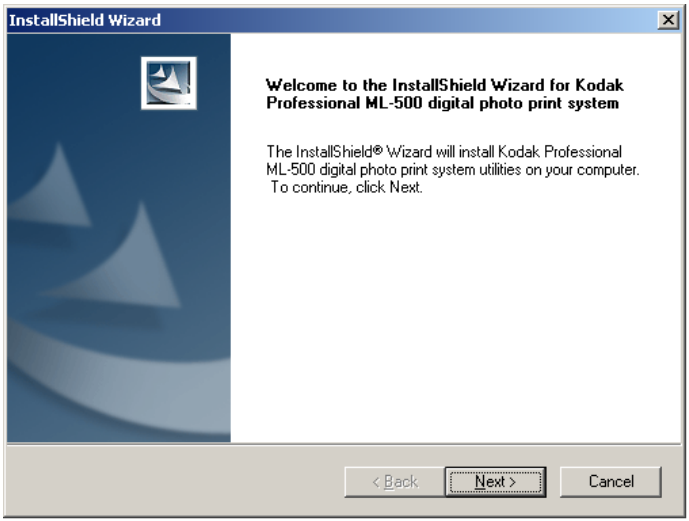
NOTE: At the top of this screen you can select **Documentation** or **Additional Support** for more information.

4. Click **Printer Utilities** to launch the installation wizard.

   A dialog box warns you to quit other open

applications and disable virus protection software. Follow those instructions then click **OK**.

5. Click **Next** on the Welcome screen.

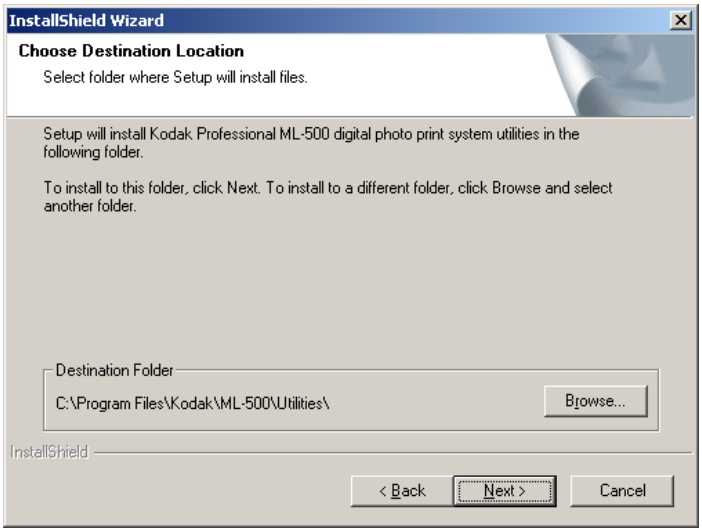


6. Click **Yes** on the License Agreement screen.

7. On the Customer Information screen, enter your user name and company name. Click **Next**.

IMPORTANT: You must enter both your user name and company name before you can continue.

8. On the Choose Destination Location screen, click **Next** to install the Utilities in C:\Program Files\Kodak\ML-500\Utilities\ or click **Browse**, select another folder, then click **Next** to install the Utilities in the selected folder.



9. Click **Next** on subsequent screens then click **Finish** on the final screen.

System Requirements (Port Monitor and Printer Drivers)

The port monitor is installed on the server system. Therefore, the system requirements for the port monitor are the same as for the ML-500 Utilities. See page 1.

To install the printer drivers, your client system must have the following minimum hardware and software:

WINDOWS 2000/XP Operating Systems

- ✔ 350 MHz PENTIUM III processor with a minimum of 256 MB of memory
- ✔ WINDOWS 2000 (Service Pack 2, or latest), WINDOWS 2000 Server (Service Pack 2, or latest), WINDOWS 2000 Advanced Server (Service Pack 2, or latest) or WINDOWS XP
- ✔ Color monitor with an 800 x 600 pixel resolution

WINDOWS 98/ME Operating Systems

- ✔ 350 MHz PENTIUM III processor with 64 MB of memory
- ✔ WINDOWS Millennium or WINDOWS 98 Second Edition
- ✔ Color monitor with an 800 x 600 pixel resolution

WINDOWS NT Operating System

- ✔ 350 MHz PENTIUM III processor with 64 MB of memory
- ✔ WINDOWS NT 4.0 Workstation with Service Pack 6a (or latest) or WINDOWS NT 4.0 Server with Service Pack 6a
- ✔ Color monitor with an 800 x 600 pixel resolution

IMPORTANT: If using the WINDOWS printer drivers to print, you must install the port monitor and the drivers on the server system, then share the printer drivers with the client systems.

MACINTOSH Operating System

- ✔ 300 MHz G3 processor or higher
- ✔ 128 MB of memory or higher
- ✔ MAC OS 10.2.3 or higher
  (OS 10.2.3 or higher is required to use the Custom Paper Size panel.)
- ✔ Color monitor with 800 x 600 pixel resolution or higher

IMPORTANT: *WINDOWS 2000 Server or WINDOWS 2000 Advanced Server is required for sharing the Source Folder using File Services for MACINTOSH with the APPLETALK Protocol.*

Installing the Port Monitor and Drivers

Provided with your printer are ML-500 Drivers for WINDOWS 98/Me, WINDOWS NT 4.0, WINDOWS 2000/XP and MACINTOSH Operating Systems.

IMPORTANT: *If you will be printing from client systems to the ML-500 printer, you must first install the port monitor and printer driver(s) on the server system (the same computer the Printer Utilities were installed on). You must also share the printer driver(s) with the client system(s).*

NOTE: Refer to "ML-500 Digital Photo Print System Workflow" at the beginning of this manual for a description of client and server systems.

NOTE: Verify that a Source folder has been created (see page 44) before installing the port monitor.

Install the port monitor and drivers in the following order:

1. Install the port monitor on the server system.

   The server must be WINDOWS 2000 or WINDOWS XP.

2. Install the WINDOWS 2000/XP driver on the server system (see page 10).

3. If the client operating system is Windows 98, WINDOWS Me (see page 12), or WINDOWS NT 4.0 (see page 12), you must install that driver on the server before installing it on the client.

4. Install the appropriate WINDOWS driver (see page 13) or MACINTOSH driver (see page 14) on the client system.

Installing the Port Monitor on the Server

The ML-500 port monitor sends print jobs to the source folder when printing from a printer driver. The port monitor must be installed on the server system.

1. Verify that a Source folder has been created (see page 44) before installing the port monitor.

   If a Source folder does not exist, start the Print Server application (see page 41) and a Source folder will be automatically created in the default path: (C:\ML-500 Source Folder).

IMPORTANT: If you don't do this, you will not be able to complete step 12.

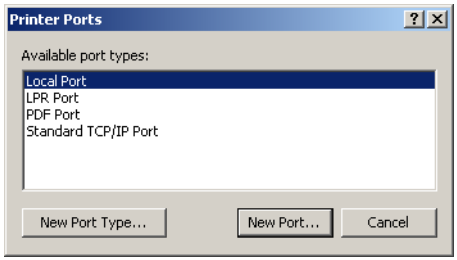
2. Insert the KODAK PROFESSIONAL ML-500 Digital Photo Print System CD.

3. Select a language.

4. Click **Port Monitor** to display the Print Server Properties screen.

5. Click **Add Port**.

6. Click the **Add Port** button.
7. Click the **New Port Type...** button.



8. On the CD drive, browse to the Port Monitor folder in the appropriate language folder (for example, <CD drive>:\English\Port Monitor).
9. Select the appropriate .INF file:

   WINDOWS 2000: select the MONITOR.INF file.

   WINDOWS XP: select the EKSDPM.INF file.
10. Click **Open**, then click **OK**.
11. Select **Kodak Source Directory Port** from the list then click the **New Port...** button.
12. Specify a port number (1-999) and the name of the Source folder you wish to use. Click **OK**. Close dialog boxes until the Printers window comes to the front.

    If you did not verify the Source folder in step 1, you will not be able to complete this step.
13. Install the appropriate ML-500 printer drivers for the operating system you will be printing from. Be sure to select the EKSD local port for the printer driver to use, and share the printer over the network.

    See the following instructions for specific installation details.

Installing WINDOWS Printer Drivers

Installing the WINDOWS 2000/XP Driver on the Server System

1. Insert the KODAK PROFESSIONAL ML-500 Digital Photo Print System CD.
2. Select the appropriate language.
3. Click Printer Drivers to display the Add Printer Wizard screen.
4. Follow the Add Printer Wizard instructions. Choose the appropriate settings for the wizard dialog boxes, as outlined here:
   - ✔ **Local or Network Printer** dialog box
     a. Select **Local Printer.**
     b. Uncheck **Automatically detect and install my Plug and Play printer**.
     c. Click **Next**.
   - ✔ **Select the Printer Port** dialog box (WINDOWS 2000), **Select a Printer Port** dialog box (WINDOWS XP)

     Choose **Use the following port** and select the EKSDn port where n is the number that was used when the port monitor was installed. Click **Next**.
   - ✔ **Add Printer Wizard** dialog box (WINDOWS 2000), I**nstall Printer Software** dialog box (WINDOWS XP)

     This dialog box displays a list of manufacturers and their associated printers.
     a. Click the **Have Disk...** button to display the Install from Disk dialog box.
     b. Click the **Browse...** button to display the Locate File dialog box.

IMPORTANT: By default, the Add Printer Wizard displays the last .INF file installed (the Port Monitor .INF file). DO NOT choose the Port Monitor .INF file; this file will not install the driver.

c. Navigate to the directory on the CD where the ML500.inf file resides, for example, <CD_drive>:\English\Print_Driver\Win_XP_Win_2000).

d. Open this file. The Install From Disk dialog box reappears.

e. Click **OK**.

The Kodak Professional ML-500 printer appears in the list.

f. Click **Next**.

✔ **Name your Printer** dialog box

Click **Next** to accept the default selections or choose an appropriate printer name. Select whether or not you want this to be the default printer.

✔ **Printer Sharing** dialog box

Choose **Share as:** so that the printer will be accessible from clients printing with drivers. Provide a share name to be displayed on the network.

✔ **Location and Comment** dialog box

Optionally supply a location and comment that is displayed in the Printers list.

✔ **Print Test Page** dialog box

Select **No**.

✔ **Completing the Add Printer Wizard** dialog box

Click **Finish**.

✔ **Digital Signature Not Found** dialog box

Click **Yes** to continue the installation.

5. If the new printer driver is not listed in the Printers window after the installation is complete, select **Refresh** from the **View** menu.

6. If you plan to use the logo feature in the driver, you must disable advanced printing.

a. Right-click the ML-500 printer and select **Properties**).

b. Click the **Advanced** tab.

c. Uncheck **Enable advanced printing features**.

Installing the WINDOWS 98/Me Driver on the Server System

1. From the **Start** menu select **Settings**, then select **Printers**. Right-click the ML-500 printer and select **Properties**.
2. Click the **Sharing** tab and click the **Additional Drivers** button.
3. Select the INTEL WINDOWS 9x environment and version and click **OK**.
4. You will be prompted to place the ML-500 Software CD in your drive. Ensure the CD is in the drive and click **OK**.
5. Browse to the **English/Printer_Driver/ Win 98 Win Me** folder on the CD and select the ML500.INF file. Click **OK**.
6. The driver will be installed and the Sharing tab reappears. Click **Close**.

Installing the WINDOWS NT Driver on the Server System

1. For proper operation of the WINDOWS NT 4.0 printer driver, you must first install the WINDOWS 2000 printer driver (see page 10) on the ML-500 Print Server.
2. After installing the WINDOWS 2000 printer driver, install the WINDOWS NT 4.0 printer driver on the same Print Server using the KODAK PROFESSIONAL ML-500 Digital Photo Print System CD. When asked to select a port, choose the same EKSDn port as selected for the WINDOWS 2000 printer driver. Be sure to specify a share name that identifies this driver specifically for WINDOWS NT 4.0 users.

NOTE: Do not install this driver under the Additional Drivers window of the WINDOWS 2000 printer driver's Sharing tab. You would have no control over the default printing preferences.

Installing the WINDOWS Drivers (any version) on the Client System

From the client system, browse to the print server system and install the shared printer on the client:

1. Check that your computer is properly connected to your network.
2. From the **Start** menu select **Run**.
3. Type \\"system name" where "system name" is the name of the system running the ML-500 Printer Utilities. Click **OK**.
4. Based on your client operating system, right-click the appropriate ML-500 printer name and select **Open**.

NOTE: There will be one printer listed for WINDOWS 98, Me, 2000 and XP Operating Systems and one printer listed for WINDOWS NT 4.0 Operating System.

5. The ML-500 driver will be installed on the client system. If the new printer driver is not listed in the Printers window after the installation is completed, click the **View** menu and select **Refresh**.
6. Ensure the Print Server Application is running on the server, and you are ready to print from the client system.

Installing the MACINTOSH Printer Driver

Installing the MACINTOSH Driver on the Client System

1. Double-click the ML-500.pkg file.
2. Enter the Administrator name and authorization password.
3. Respond to the ReadMe and License prompts.
4. Select the startup disk volume for the destination.
5. Click **Install** or **Update**.
6. Restart your computer.

NOTE: It is not necessary to install the MACINTOSH printer driver on the server system.

Uninstalling the MACINTOSH Printer Driver

1. Remove the ML500 folder from the Library/Printers/Kodak folder on the volume used to start your MACINTOSH computer.

NOTE: You may need to change permissions for the folder or log in as root to remove this folder.

2. In Print Center, delete the printer from the printer list.

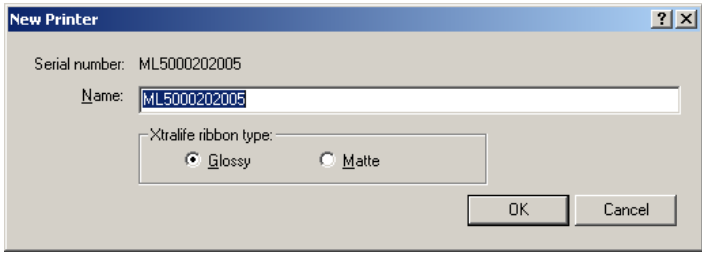
Before You Can Print (WINDOWS Operating Systems)

Before using the KODAK PROFESSIONAL ML-500 Digital Photo Print System, you must do the following:

- ✔ Name your printer in the ML-500 Utilities software.
- ✔ Set preferences in the Print Server application (see page 16).
- ✔ Ensure the appropriate XtraLife option is set in the Configuration application (see page 16).

Naming the Printer

After installing the Printer Utilities software, start the ML-500 Utilities (see page 20). The following dialog box appears:



- ✔ Enter a printer name in the Name field (for example, ML-500 Printer) and click **OK**.

Setting Print Server Preferences

1. Start the Print Server application (see page 41).
2. From the **Server** menu select **Server Preferences**.
3. Change the Source folder, if needed (see page 44).

   The Print Server application monitors this folder for files and places them in the print queue. A default source folder (c:\ML-500 Source Folder) is used if you don't change source folders.
4. Select a log file, if needed (see page 44).

   The log file is a text (*.txt) file where all actions performed by the ML-500 Print Server are recorded. A default log file (c:\program files\Kodak\ML-500\Utilities\<printer name>.txt) is used if you don't select a different one.
5. Change print job settings, if needed (see page 48).

Selecting the XTRALIFE Option

1. Start the Configuration application (see page 25).
2. Click the **General** tab (see page 27).
3. Verify that the XTRALIFE ribbon type is set to the type of ribbon you are using on the printer (Glossy or Matte). See page 30.

Once you have completed these preparations, TIFF or JPEG files placed in the source folder will be printed.

Before You Can Print (MACINTOSH Operating System)

After you have installed the MACINTOSH printer driver on the client system, you must do the following before printing:

1. **On the WINDOWS server:** Enable File Services for MACINTOSH Operating System (see page 18).
2. **On the WINDOWS server:** Share the WINDOWS Source folder (see page 18).
3. **On the MACINTOSH client:** Add the ML-500 printer to the Printer List (see page 19).

IMPORTANT: WINDOWS 2000 Server or WINDOWS 2000 Advanced Server is required for sharing the Source Folder using File Services for MACINTOSH with the APPLETALK Protocol.

Once you have completed these steps, print jobs going to the ML-500 printer from any application, are placed in the WINDOWS Source folder. The print server queue settings determine when the job is printed.

Enabling File Services for MACINTOSH Operating System

On the WINDOWS 2000 Server or Advanced Server System:

1. Right-click **My Network Places** and choose **Properties**.
2. Select **Advanced** in the Menu bar and choose **Optional Networking Components** to display the WINDOWS Optional Networking Components wizard.
3. Check the **Other Network File and Print Services** check box and click **Details**.
4. Select **File Services for Macintosh**.
5. Click **OK**.

   All necessary files are copied to your system.

NOTE: You may be prompted to insert the WINDOWS Server CD.

Sharing the Server's Source Folder

The Source folder resides on the WINDOWS server. ML-500 jobs are queued there for printing. This folder must be shared for you to access it. Once the Source folder is shared, you can set up the MACINTOSH driver so that print jobs are sent to the Source folder.

On the WINDOWS 2000 Server or Advanced Server System:

1. Right-click **My Computer** and choose **Manage**.
2. Expand the **Shared Folders** in the left panel and select **Shares**.
3. Right-click and select **New**, then select **File Share**.
4. Browse to the Source folder that has been set up on the WINDOWS server.
5. Type a share name, for example, ML500.
6. Be sure **Macintosh Share** (not **Windows**) is checked.

Adding the ML-500 Printer to the Printer List

On the MACINTOSH client:

1. Open the **Print Center**.
2. Click **Add**, choose **Kodak File** from the **Printing Protocol** list, then click **Select**.
3. Navigate to the WINDOWS Source folder and click **Choose**.
4. Click **Add**.

   A new printer with the same name as the Source folder should appear in the printer list.

This section provides an overview of the ML-500 Print Utilities and the ML-500 applications that work with the KODAK PROFESSIONAL ML-500 Digital Photo Print System.

ML-500 Utilities

The ML-500 Print Utilities acts as a program launcher for the following ML-500 applications:

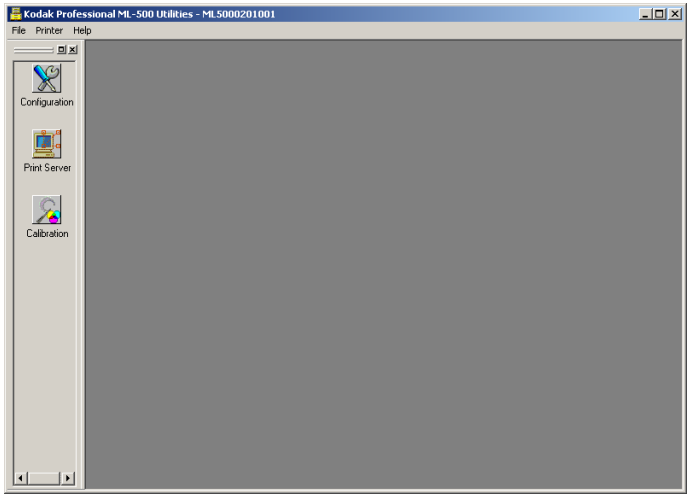
Configuration (see page 25): Lets you change printer settings and monitor printer and media status

Print Server (see page 41): Lets you print images on the ML-500 printer

Calibration (see page 75): Lets you control the color balance and density of images printed on the ML-500 printer

Starting the ML-500 Utilities

✔ From the **Start** menu select **Programs**, then select **Kodak Professional ML-500 Utilities**.



NOTE: To add a shortcut to your desktop, right-click **Kodak Professional ML-500 Utilities** in the **Start** menu. Choose **Send to**, then choose **Desktop (create shortcut)**.

Utility Bar

The Utility Bar is located at the left of the ML-500 Utilities screen. It contains icons that represent the ML-500 applications. Double-clicking an icon opens the application. If two or more applications are open, you can bring an application to the front of the viewing window by clicking its icon in the Utility Bar.

You can move the Utility Bar anywhere on the screen.

To move the Utility Bar using the grab handles:

1. Position the cursor over the grab handles.

2. Click and drag the Utility Bar to a new location. Dragging the Utility Bar to the right or left of the viewing window attaches it to that edge.

To move the Utility Bar using the floating window button:

1. Click the floating window button. 

   The Utility Bar detaches from the edge of the screen.

2. Position your cursor over the title bar.
3. Click and drag the Utility Bar to a new location. Dragging the Utility Bar to the right or left of the viewing window attaches it to that edge.

Turning the Utility Bar On or Off

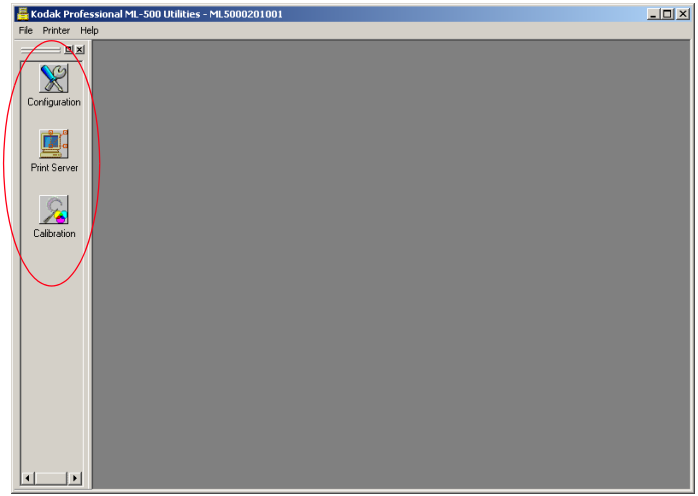
✔ From the **File** menu select **Utility Bar**.

ML-500 Print Utilities

Starting ML-500 Applications

✔ From the **File** menu select **Open Configuration**, **Open Print Server**, or **Open Calibration**.

Alternatively, double-click the appropriate icon on the Utility Bar.

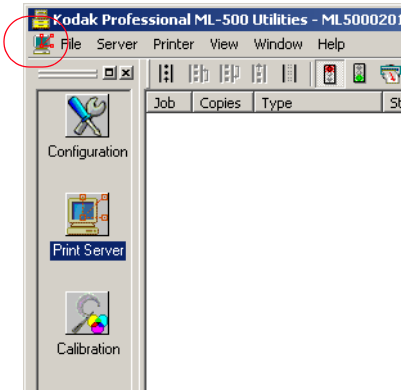


Closing the ML-500 Applications

✔ Click the ☒ at the upper right of the screen, for example, the Configuration screen.

*IMPORTANT: If you select **Exit** from the **File** menu, all ML-500 applications close.*

Alternatively, press the **Ctrl** and **F4** keys or click the icon next to the File menu.



Selecting a Printer

If more than one printer is installed on your computer, you can choose the printer that you wish to use:

1. Leaving the ML-500 Utilities open, close all other running ML-500 applications.

   If you proceed without closing applications, dialog boxes may appear to confirm closing of each application.

2. From the **Printer** menu, select a printer.

Arranging and Viewing Open Applications

When two or more applications are running, you can arrange their windows to suit your preference:

✔ From the **Window** menu select:

Cascade: Application windows appear stacked upon one another

Tile: application windows share window space equally

Arrange Icons: organizes minimized application icons

Configuration (if already open): makes ML-500 Configuration current

Print Server (if already open): makes ML-500 Print Server current

Calibration (if already open): makes ML-500 Calibration current

NOTE: In Cascade view, the top window reflects the current application. In Tile view, the highlighted window is current. To make another window current, simply click it, or select it from the Window menu.

Exiting the ML-500 Utilities

IMPORTANT: You can exit the ML-500 Utilities at any time; however, if any ML-500 applications are running, you will be prompted to close them. If you continue exiting the ML-500 Utilities, open applications will be interrupted and closed, and unsaved information may be lost. Whenever possible, make sure to close running applications before exiting the ML-500 Utilities.

1. Exit all running applications.
2. From the **File** menu select **Exit**.

   Alternatively, click the  at the upper-right of the ML-500 Utilities window, or press **Alt** and **F4**.

Overview

Using the ML-500 Configuration application you can change printer settings such as power saver, print speed, and image length. You can also:

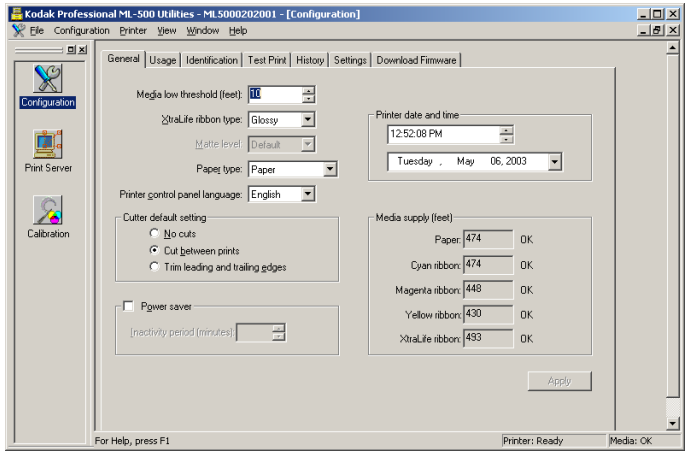
- ✔ Monitor the printer and media status
- ✔ Obtain serial numbers and firmware versions
- ✔ View the error history
- ✔ Make a test print
- ✔ Adjust color alignment and cutter
- ✔ Download new firmware

Getting Started

Starting the Configuration Application

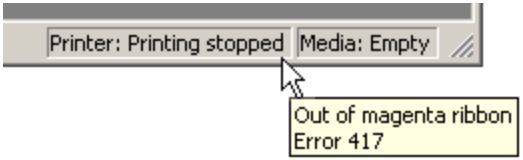
- ✔ Click the Configuration icon on the Utility bar.

The Configuration screen appears.



Status Bar

The Status Bar, located at the bottom of the window, shows the current state of the printer and media.



One of the following printer states appears: Ready, Initializing, Printing, Printing stopped, Canceling, Setup, Cooling, or Not found.

One of the following media states appears:

- ✔ **OK** (all ribbon and paper supplies exceed the low state)
- ✔ **Low** (any ribbon or paper supply is at or below the low state)
- ✔ **Empty** (any ribbon is missing or empty, or paper supply is empty)
- ✔ **Unknown** (the state of any ribbon or paper supply is unknown)

Showing or Hiding the Status Bar

- ✔ From the **View** menu select **Status Bar**.

Refreshing the Configuration Screen

To update the screen with current printer information:

- ✔ From the **View** menu select **Refresh** or press the **F5** key.

Closing the Configuration Application

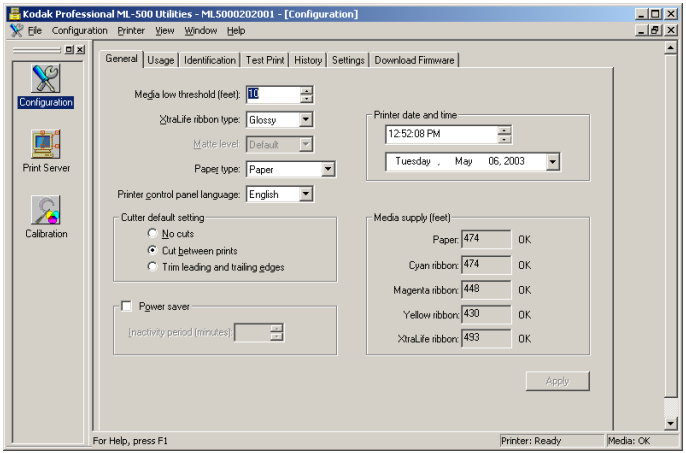
- ✔ Click the ⊠ at the upper right of the Configuration screen.

*IMPORTANT: If you select **Exit** from the **File** menu, all ML-500 applications close.*

Setup

General Tab

Most setup functions are accessed through the General tab.



Selecting a Language for the Printer Control Panel

The Printer control panel on the front of the ML-500 printer provides status and error information. When you first set up the ML-500 printer, you should select the language to appear in the Printer control panel.

1. Click the **General** tab.
2. Select **English**, **French**, **German**, **Italian**, **Spanish**, or **Portuguese**.
3. Click **Apply**.

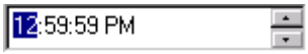
Setting the Time and Date

Set the time and date when first setting up the ML-500, then as needed.

The printer time and date are associated with printed images.

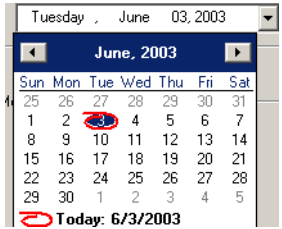
1. Click the **General** tab (see page 27).
2. To change the time:

   Click a field, for example, hours, then use the arrows to select the appropriate number. Repeat for each field.



3. To change the date:

   Click the arrow next to the month to display a monthly calendar.



   Use the arrows at the top of the calendar to select the correct month and year.

   Click the date.

4. Click **Apply**.

Setting the Power Saver

To conserve energy, the ML-500 goes into a power save state after a specified period of inactivity. You can specify the amount of time that the printer remains inactive before the power saver takes effect.

1. Click the **General** tab (see page 27).
2. Select the **Power saver** check box if it is not already selected.
3. Select the number of minutes of inactivity.
4. Click **Apply**.

NOTE: Pressing any printer button "awakens" the printer from the power saver.

Setting the Media Low Threshold

You can specify the media low threshold. When the ribbon or paper reaches this threshold, a media low status appears in the Status Bar and in the Media Supply area on the General tab.

1. Click the **General** tab (see page 27).
2. Enter a number between 10 and 500 ft (3.018 and 152.4 m).
3. Click **Apply**.

Selecting the XTRALIFE Ribbon Type

You can select glossy or matte ribbon type. (Matte is usually used for portrait work.)

1. Click the **General** tab (see page 27).
2. Select a ribbon type.
3. If you selected Matte, you can specify a **Matte level** or use the default.

   The range is -4 to 4, with 4 providing the highest matte level and -4 the lowest.
4. Click **Apply**.

Selecting the Paper Type

You can specify the type of paper used in your printer. Currently there is only one paper type, but there may be others in the future.

1. Click the **General** tab (see page 27).
2. Select a paper type.
3. Click **Apply**.

Choosing Default Settings for the Cutter

1. Click the **General** tab (see page 27).
2. Choose an option:

   No cuts - the paper will not be cut

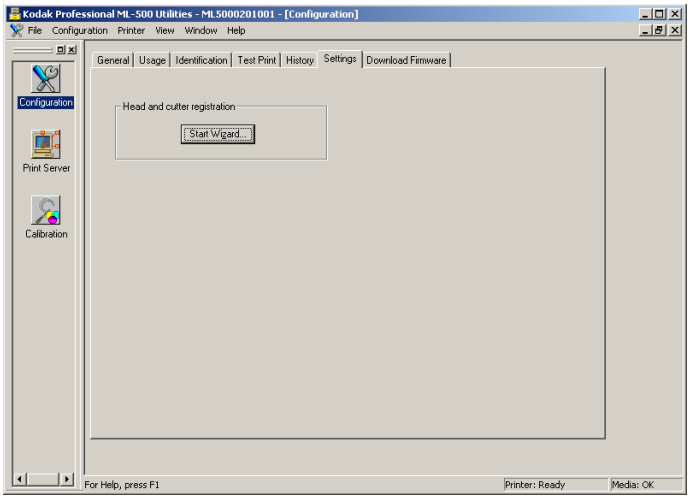
   Cut between prints - the paper will be cut once between images

   Trim leading and trailing edges - the paper will be cut twice between images to remove leading and trailing edges

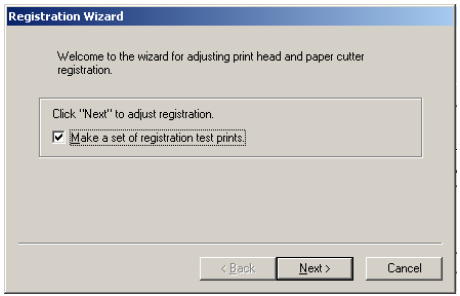
3. Click **Apply**.

Adjusting Print Head and Paper Cutter Registration

1. Click the **Settings** tab.

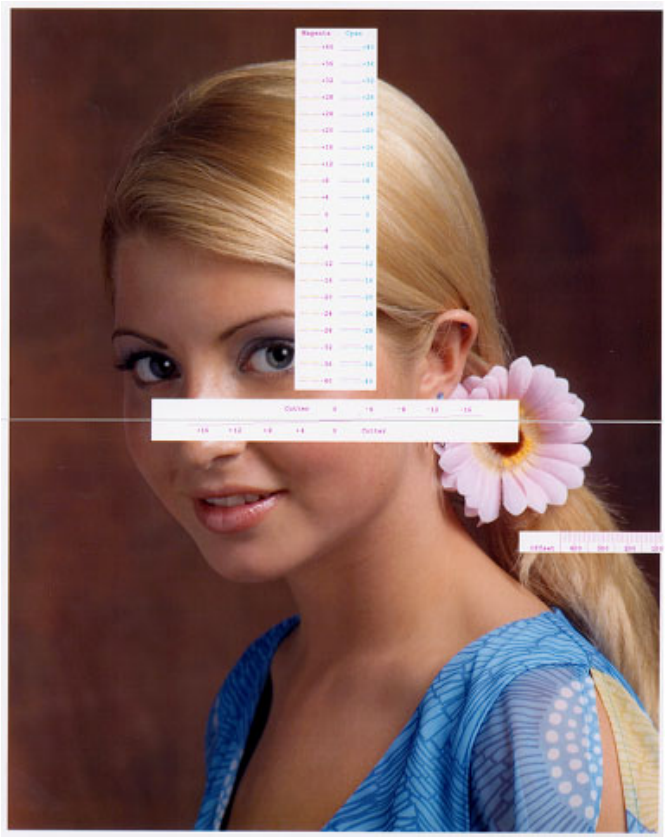


2. Click **Start Wizard.**



3. Click **Next** on the Registration Wizard screen.
   A registration test print is sent to the printer.
4. Examine the test print and note the number closest to the following occurrences:
   - ✔ Magenta: magenta and yellow converge
   - ✔ Cyan: magenta and cyan converge
   - ✔ Cutter: the point at which the cutter intersects the diagonal line

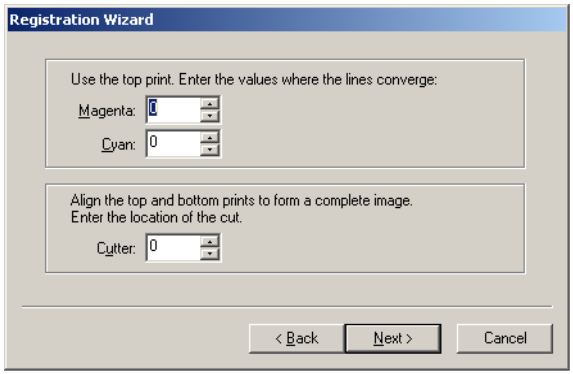
NOTE: Ideally all values are zero.



5. Enter the Magenta, Cyan, and Cutter values from the registration test print and click **Next**.

   Valid entries for Magenta and Cyan are -64 to +64.

   Valid entries for the cutter are -16 to +16



6. Click **Next** to print another test print or click **Finish** to close the wizard.

Viewing and Changing Printer Names

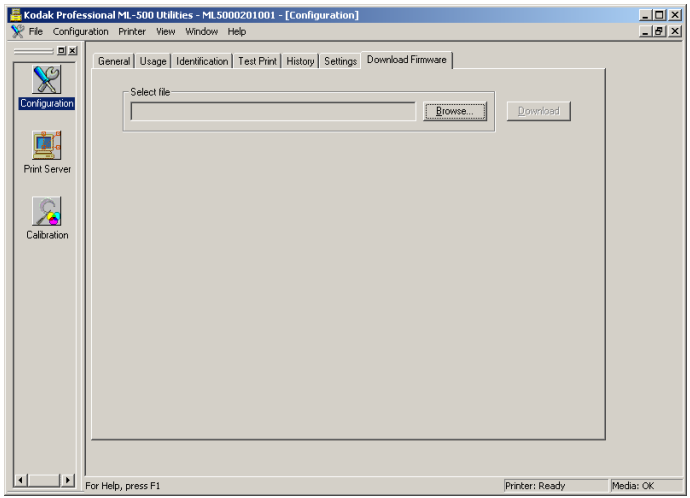
1. From the **Printer** menu select **Edit List**.
2. Under **Name**, highlight the name of the printer you wish to change and type a new name.
3. Click **OK**.

Downloading Firmware

You may occasionally need to download new firmware for your printer. One file contains all firmware, regardless of what is new.

IMPORTANT: Do not turn off the printer or remove any cables during the download process. If you do, the download will not complete and the previous firmware version will be used.

1. Download the firmware file from the Kodak Web site (http://www.kodak.com/global/en/service/software/ML500/ml500Software.jhtml) to your computer hard drive.
2. Click the **Download Firmware** tab.



3. Click **Browse**.

4. In the **File Open** dialog box, navigate to the folder containing the downloaded firmware (.rom) file.
5. Select the firmware file.
6. Click **Download**.

   A message indicates the approximate download time and an elapsed time indicator shows the progress of the download.
7. If the download was successful, you will be instructed to power the printer off / on. Wait for "Ready" to appear in the printer's control panel, then click **OK**.

   If the download was not successful you will be instructed try again, then, if repeated attempts are unsuccessful, to obtain service for your printer.

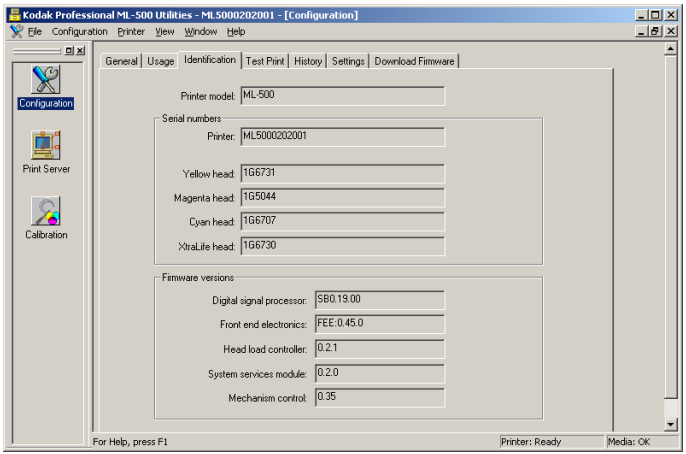
Checking Status

Checking Printer Identification

✔ Click the **Identification** tab to view the following:

Serial numbers for the printer and print heads

Firmware versions for printer components



Checking Printer and Media Status

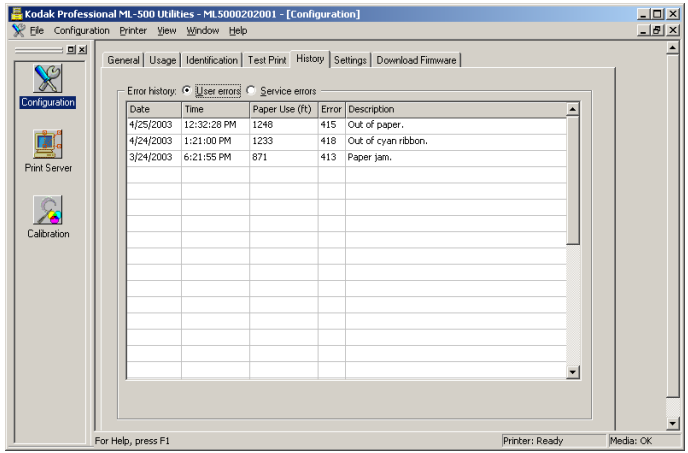
There are several ways to check printer and media status:

- ✔ The Status Bar (see page 26) indicates the current state of the printer and media
- ✔ The General tab (see page 27) shows the amount of available media
- ✔ The Usage tab (see page 37) shows information about printer and media usage

Viewing History

To view the error history for your printer:

1. Click the **History** tab.

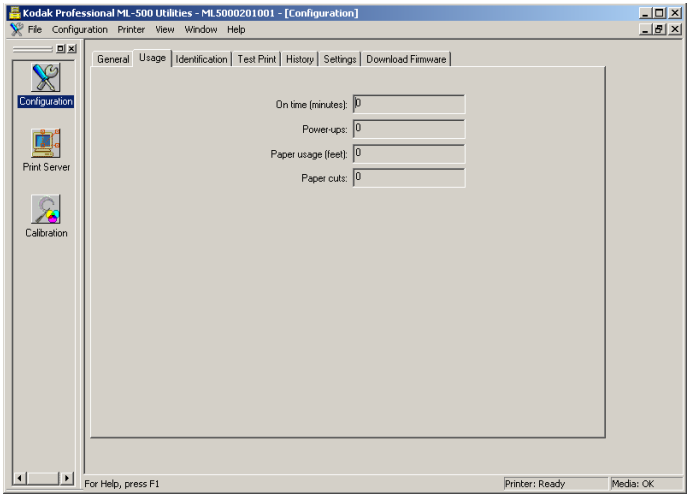


2. Click **User errors** or **Service errors** to view dates and times of errors, paper usage, and descriptions of errors.

Checking Printer Usage

To view information about the current printer's usage, the amount of paper used on the printer, and the number of paper cuts:

✔ Click the **Usage** tab.



Checking the Media Supply

To view information about each type of media on the current printer:

✔ Click the **General** tab (see page 27) to view the following:

Amount remaining for each type of media (paper, and cyan, magenta, yellow, and XtraLife ribbon)

State of each type of media (OK, Low, Empty, Unknown)

NOTE: Text appears red in the Low and Empty states.

Saving a Report

You can save a report showing history, serial numbers, and firmware versions. The report is saved in a text file (.txt), which can be opened by an application such as NotePad.

1. From the **Configuration** menu select **Save Report**.
2. In the Save Printer Configuration Report dialog box, select a folder in which to save the report.

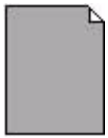
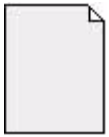
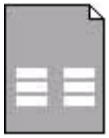
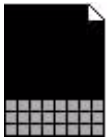
   The file is named Printer Configuration Report.txt. You can change the name if you wish.
3. Click **Save**.

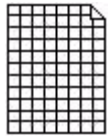
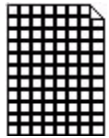
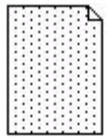
Making a Test Print

You can make a test print and look for artifacts such as dust spots, lines, or banding. Some patterns bring out certain artifacts better than others.

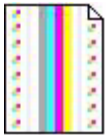
1. Click the **Test Print** tab.
2. Select the number of copies to be printed (1 - 600).
3. Select a pattern (see the table on the next few pages) then Click **Print**.

Configuration

Pattern	Output
#1 Mid gray	
#2 Min gray	
#3 Boxes on mid gray	
#4 Grid on gray	

Pattern	Output
#5 One pixel grid	
#6 Two pixel grid	
#7 Max gray	
#8 Offset dots	

Configuration

Pattern	Output
#9 Registration squares	
#10 Matte XtraLife	
#11 Max CMYX- gray	

Overview

Using the KODAK PROFESSIONAL ML-500 Digital Photo Print Server application, you can manage basic and custom printing of JPEG (*.jpg), TIFF (*.tif), and Rosetta (*.ros) image files.

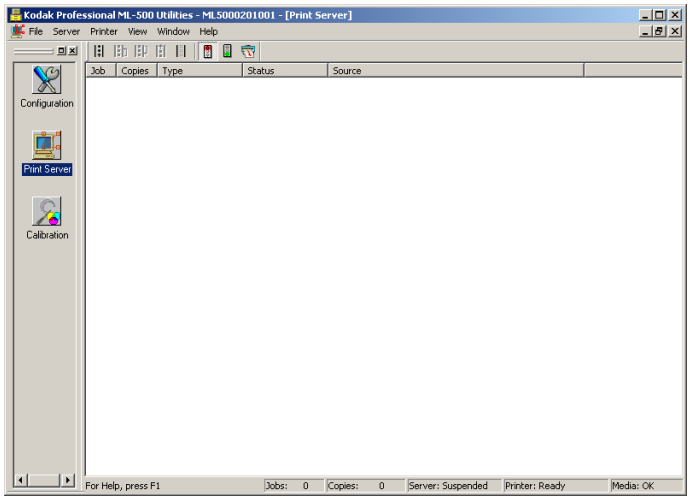
NOTE: Rosetta files are created by the Print driver.

In addition to printing individual image files, you can print packages or layouts (see page 59).

Getting Started

Starting the Print Server Application

✔ Click the Print Server icon on the Utility bar.



Status Bar

The Status Bar, located at the bottom of the window, provides helpful information about printing status.

The following table describes the Status Bar fields.

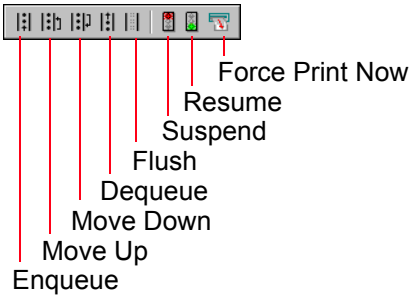
Indicator	Description
Jobs	The total number of print jobs in the print queue
Copies	The total number of copies for all print jobs in the print queue
Server	The current state of the ML-500 Print Server (Running, Suspended, or Force Printing)
Printer	The current state of the printer status (Ready, Initializing, Printing, Printing Stopped, Canceling, Setup, Cooling, Not Found)
Media	The current state of the ribbon and paper media (OK, Low, Empty, Unknown)

Showing or Hiding the Status Bar

✔ From the **View** menu select **Status Bar**.

Tool Bar

A Tool Bar appears at the top of the Print Server screen. It provides shortcuts to functions that you access through the menus.



Using the Tool Bar

✔ Click a Tool Bar button to access the associated function.

Showing or Hiding the Tool Bar

✔ From the **View** menu select **Tool Bar**.

Closing the Print Server Application

✔ Click the  at the upper right of the Print Server screen.

*IMPORTANT: If you select **Exit** from the **File** menu, all ML-500 applications close.*

Changing the Source Folder

The Source folder is designated for printing image files. When an image file is placed in the Source folder, a print job is created and placed in the print queue.

A default Source folder (c:\ML-500 Source Folder) has been created.

If you wish to change the default, do the following:

1. From the **Server** menu select **Server Preferences**.
2. Next to Source Folder, click **Browse**.
3. Select a folder to use as the Source folder, then click **OK**.

NOTE: If the print queue is suspended, print jobs are not created until printing resumes.

Selecting a Log File

The log file is a text (*.txt) file where all actions performed by the ML-500 Print Server are recorded. The file contains the date and time the ML-500 Print Server is started and stopped, as well as the date and time of printing activities.

A default log file (c:\program files\Kodak\ML-500\ Utilities\<printer name>.txt) has been created.

If you wish to change the default, do the following:

1. From the **Server** menu select **Server Preferences**.
2. Next to Log file, click **Browse**.
3. Select or create a folder and log file name, then click **Open**.
4. Click **OK**.

Printing and the Print Queue

Making Prints

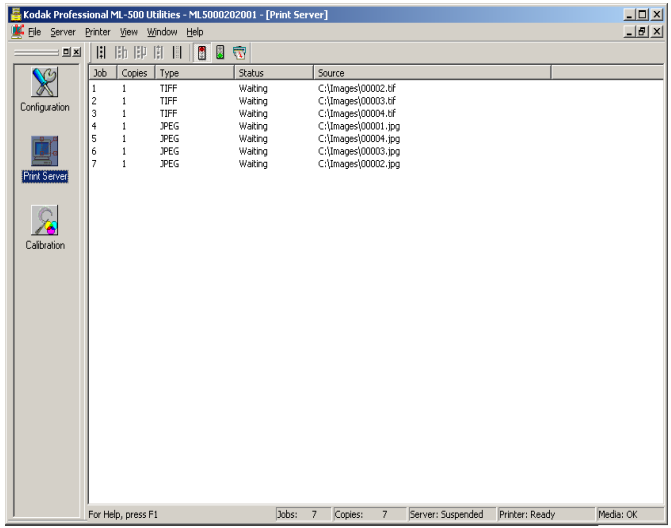
You must create a print job before an image file can be printed. Print jobs that appear in the print queue are sent to the printer. Once a print job has completed, it disappears from the print queue.

Image files that don't print are temporarily stored in the Failed Jobs folder instead of being sent to the print queue. The Failed Jobs folder is located within the Source folder. Check this folder occasionally for image files that failed to print.

If you allocate disk space (see page 68), successfully printed image files are sent to a Successful Jobs folder after leaving the print queue. The default disk space allotted for the Successful Jobs folder is 0, so images are not sent there unless you allocate space. Like the Failed Jobs folder, the Successful Jobs folder is a temporary storage area that is located within the Source folder.

Adding Print Jobs to the Print Queue

Jobs in the print queue appear on the Print Server screen.



To create a print job when images are on a different computer than the ML-500 Print Server:

NOTE: Images are deleted from the Source folder after a job has run.

✔ Copy an image file into the Source folder (see page 44).

To create a print job when images are on the same computer as the ML-500 Print Server:

NOTE: Images are not deleted after a job has run.

✔ Drag and drop individual image files or groups of image files into the print queue on the Print Server screen. Change settings, if needed, then click **OK**.

✔ Manually create a print job using the Enqueue command (see page 47).

Unless you specify otherwise, printing starts when one print job is in the print queue. You can change the print queue limits (see page 68), or you can override them by forcing printing (see page 65).

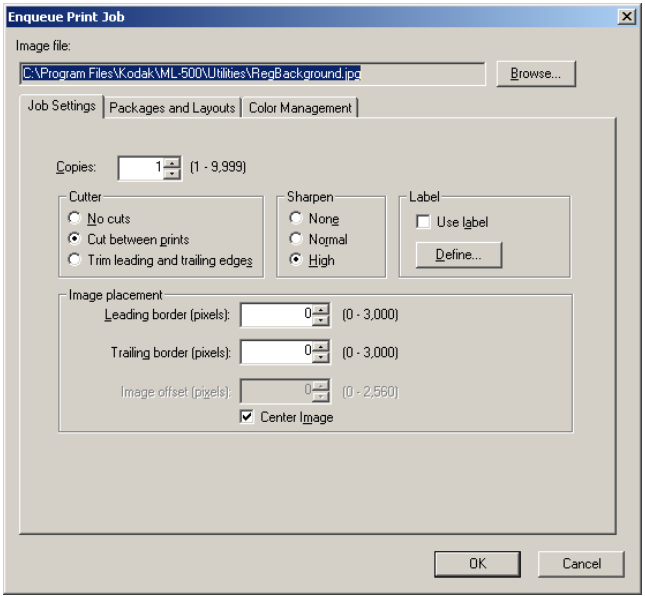
When you increase the number of jobs before printing starts by changing the print queue limits, less paper is used.

NOTE: If printing does not start, check that printing is not suspended (see page 64).

Print Server

Manually Creating a Print Job

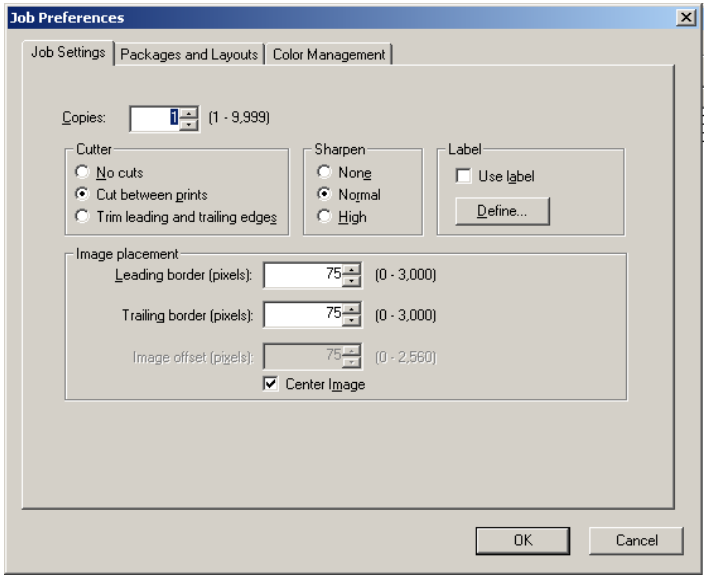
1. From the **Server** menu select **Enqueue or press the Enqueue Tool Bar button**.



2. Next to Image File, click **Browse** to locate the image file or files, then click **Open**.
3. Change other settings, if needed, then click **OK**.
4. To initiate printing, select **Resume** from the **Server** menu.

Print Job Settings

Print settings are used to change a variety of features, from altering a print's appearance to specifying print queue options. Change settings using the Job Preferences dialog boxes.



See the table on next few pages for descriptions and default values for the settings.

Print Setting	Description	Default Value	Allowable Range	See
Copies	Specifies the number of copies to print	1	1 - 9999	Selecting the number of copies to print (see page 54)
Cutter	Specifies how to cut the paper	Cut between prints	No cuts Cut between prints Trim leading and trailing edges	Choosing paper cutting boundaries (see page 55)
Sharpen	Specifies the level of image sharpness	Normal	None Normal High	Sharpening images (see page 56)
Use label	Specifies whether to use a label and allows selection of label text	(Unchecked) Define: Date and time stamp (checked) Black (selected)		Labeling prints (see page 56)
Leading border (pixels) *	Specifies the amount of white space that prints before the image	75	0 - 3000	Adjusting borders on prints (see page 57)

Print Setting	Description	Default Value	Allowable Range	See
Trailing border (pixels) *	Specifies the amount of white space that prints after the image	75	0 - 3000	Adjusting borders on prints (see page 57)
Image offset (pixels) *	Specifies the amount of white space that prints on the left side of the image	Not applicable if Center Image box is checked, otherwise 75	0 - 2560	Adjusting borders on prints (see page 57)
Center image	Ensures that an equal amount of white space prints on both sides of the image	(Checked)		Adjusting borders on prints (see page 57)
Color management	Enables the use of color management for the print	Off		Using color management (see page 58)
Input profile	Specifies the input profile to use for printing	sRGB Color Space Profile	Files with the extension ICC or ICM	Using color management (see page 58)
Use embedded profiles	Specifies use of embedded profiles for images if any are available	(Checked)		Using color management (see page 58)

Print Setting	Description	Default Value	Allowable Range	See
Output profile	Specifies the output profile to use for printing	ML-500 3Color Photo Gloss	Files with the extension ICC or ICM	Using color management (see page 58)
Rendering intent	Specifies the type of output for the print job	Perceptual (for photos)	Perceptual (for photos) Saturation (for graphics) Colorimetric (for closest match)	Using color management (see page 58)
Package	Specifies the layout of the package being printed	None		Selecting a print package or layout (see page 59)
Layout	Specifies the layout of the image being printed	None		Selecting a print package or layout (see page 59)
Scaling	Specifies the preferred scaling type	Scale to fit	Scale to fit Scale to fit	Selecting a print package or layout (see page 59)

* 300 pixels = one inch

Displaying a Dialog Box for Changing Print Job Settings

You can change job settings for the following:

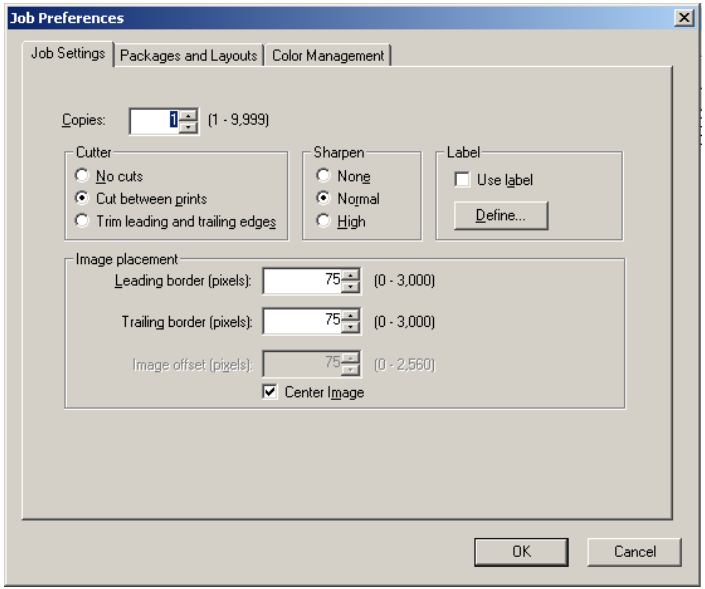
- ✔ Jobs in the Source folder
- ✔ When manually enqueuing files
- ✔ For jobs already in the queue

A different dialog box is used for each method. All dialog boxes contain the same tabs.

To change settings for all jobs in the Source Folder:

- ✔ From the **Server** menu select **Job Preferences**.

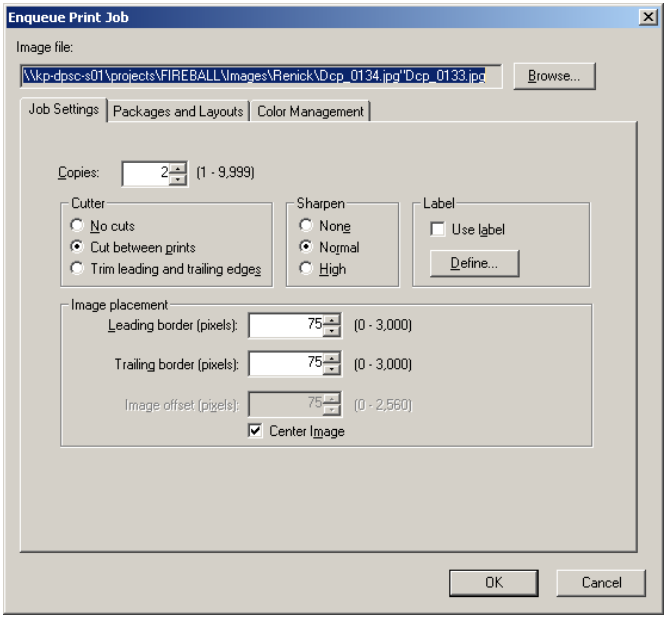
  The Job Preferences dialog box appears.



To change settings when manually enqueuing jobs:

1. From the **Server** menu select **Enqueue**.

   The Enqueue Print Job dialog box appears.

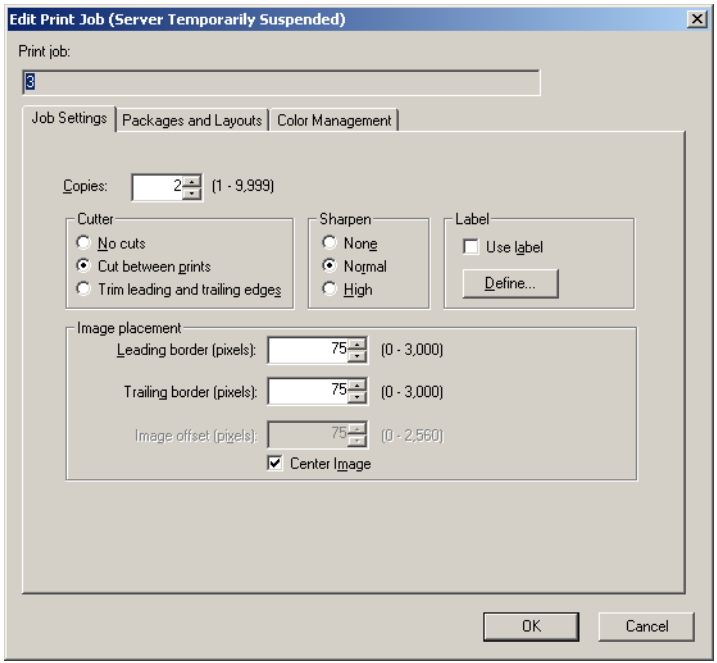


To change settings for jobs already in the queue:

1. In the Print Server window, click the job or jobs for which you wish to change print settings. (Press and hold the **Ctrl** key while clicking to select multiple jobs. Press and hold the **Shift** key while clicking to select a range of jobs.)
2. Right-click the highlighted job (or any one of the highlighted jobs if more than one is highlighted).

NOTE: You cannot change print settings for jobs that are in Printing or Sending status.

The Edit Print Job dialog box appears.



Selecting the Number of Copies to Print

You can change the number of copies for a print job.

1. Display a dialog box for changing print job settings (see page 52).
2. Select the **Job Settings** tab.
3. Next to Copies, select the number of copies, between 1 (default) and 9999, to print.
4. Click **OK**.

NOTE: For Rosetta (*.ros) image files, this setting is controlled by the ML-500 Printer Driver and cannot be changed using the ML-500 Print Server.

Choosing Paper Cutting Boundaries

WARNING:
The cutter is very sharp and can cause injury. Stay away from the cutter when the printer is running.

You can choose how prints are cut, or you can choose not to cut prints at all:

1. Display a dialog box for changing print job settings (see page 52).
2. Select the **Job Settings** tab.
3. Under Cutter, select an option.

   No Cuts - the paper will not be cut

   Cut between prints (default) - the paper will be cut once between images

   Trim leading and trailing edges - the paper will be cut twice between images to remove leading and trailing edges

4. Click **OK**.

Sharpening Images

1. Display a dialog box for changing print job settings (see page 52).
2. Select the **Job Settings** tab.
3. Under Sharpen, select an option:

   None - No sharpening is applied. Use when sharpening is applied elsewhere in the imaging chain.

   Normal (default) - Moderate amount of sharpening is applied. Use with images that have good sharpness.

   High - Increased sharpening is applied. Use with images that have less than optimal sharpness.
4. Click **OK**.

NOTE: For Rosetta (*.ros) image files, this setting is controlled by the ML-500 Printer Driver and cannot be changed using the ML-500 Print Server.

Labeling Prints

You can add labels (up to 256 characters) to your prints to help identify them.

The text label you create appears below the image and adds 1/2 inch to the trailing border.

1. Display a dialog box for changing print job settings (see page 52).
2. Select the **Job Settings** tab.
3. Under Label, select **Use Label**.
4. Click **Define**.
5. Select from the options under Information and Text color. You can enter additional text in the Custom text box.
6. Click **OK** to close the Define Label dialog box.
7. Click **OK**.

NOTE: If the Use Label option is checked and the default settings are not changed, the date and time are printed in black.

Adjusting Borders on Prints

You can reposition an image on a print, which changes the thickness of the white borders around the image.

The default spacing for leading and trailing borders is 75 pixels, and the Center Image box is checked. This ensures that there will be equal amounts of white space on the top and bottom of the image, and equal space on the left and right of the image.

NOTE: 300 pixels = 1 in. = 2.54 cm (for example, 900 pixels = 3 in. = 7.62 cm)

1. Display a dialog box for changing print job settings (see page 52).
2. Select the **Job Settings** tab.
3. Change the settings under Image Placement:
   - ✔ Next to Leading Border, select the amount of white space, between 0 and 3000, that will print before the image.
   - ✔ Next to Trailing Border, select the amount of white space, between 0 and 3000, that will print after the image.
   - ✔ To change the amount of white space that will print on either side of the image, deselect the **Center Image** box. Next to Image Offset, select the amount of white space, between 0 and 2560, from the left edge of the paper to the left edge of the image. The amount on the right side of the image will decrease by this amount.

NOTE: For 8 inch paper, you may need to adjust the print head and paper cutter registration (see page 32) to center the image.

4. Click **OK**.

NOTE: For Rosetta (*.ros) image files, this setting is controlled by the ML-500 Printer Driver and cannot be changed using the ML-500 Print Server.

Using Color Management

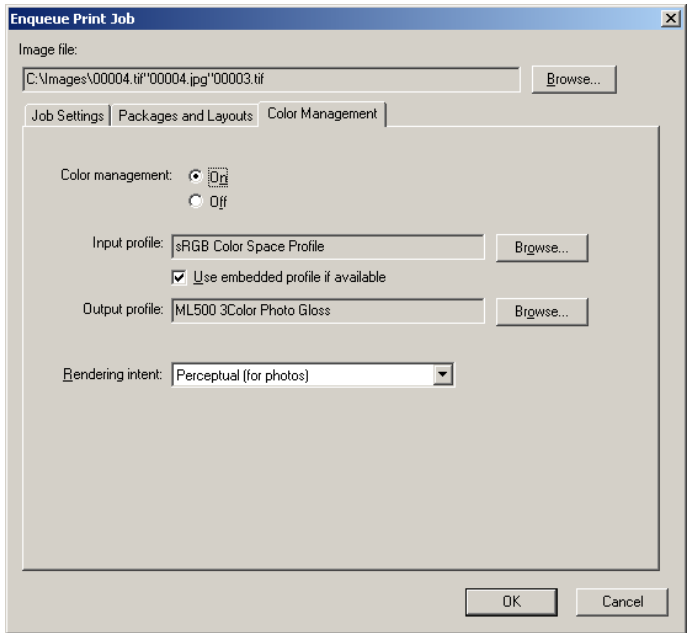
The Print Server contains embedded color management support. This allows optimum color reproduction to be achieved from your image files. Furthermore, if your monitor is properly color managed, it will improve the degree of print-to-monitor match that is obtained.

For color management to function correctly, you must specify an input and output profile. The input profile determines the color values for the corresponding image data. The output profile determines the correct printer values to produce the desired color values.

The **Use embedded profile if available** option allows automatic selection of the correct input profile if one is embedded in the image file.

sRGB is automatically selected as the default input profile since many imaging devices use this as their default. You should select the ML-500 Matte or Glossy profile as your output profile.

1. Display a dialog box for changing print job settings (see page 52).
2. Select the **Color Management** tab.
3. Select the **On** option for Color Management.



4. Next to Input Profile, click **Browse**.
5. Select an input profile and click **Open**.
6. Next to Output Profile, click **Browse**.
7. Select an output profile and click **Open**.
8. Select a **Rendering Intent**.
9. Click **OK**.

Selecting a Print Package or Layout

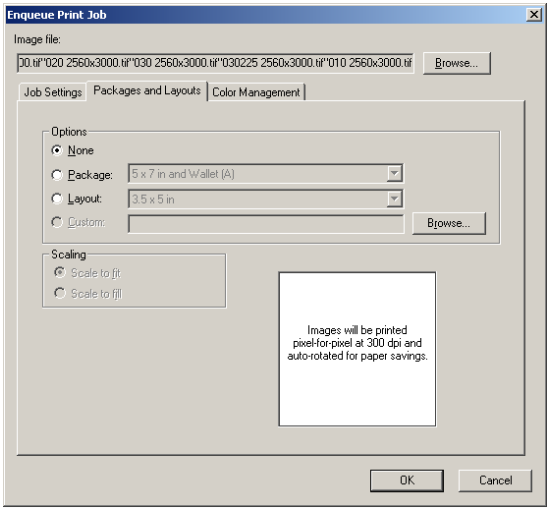
With package printing, you send a single document page to the printer and get multiple document page sizes on your print. For example, if you select the package "5 x 7 in. and 3.5 x 5 in. and Wallets," your print contains one 5 x 7 in. print, one 3.5 x 5 in. print, and a number of wallet size prints (depending upon the paper size selected).

For best results, be sure the image in the document you wish to print is the same size as the largest document page in the package. For example, if you select the package "5 x 7 in. and 3.5. x 5 in. and Wallets," the image on your original document page should be 5 x 7 in. If necessary, resize the image on the document page in an application such as ADOBE PHOTOSHOP before printing.

With layout printing, you send a single document page to the printer and get multiple copies of the same size on your print. For example, if you select the package "4 x 6 in (Borderless)," your print contains two borderless 4 x 6 prints.

The print sizes may not be exact because of the aspect ratio of the images on the document page.

1. Display a dialog box for changing print job settings (see page 52).
2. Select the **Packages and Layouts** tab.



3. Select the **Package** or **Layout** option.
4. Select **Scale to Fit** or **Scale to Fill**.

Scale to Fit	The longest edge of the image file is scaled to match the desired layout size. In some cases, the shorter edge of the image file will be shorter than the layout size when printed.
Scale to Fill	The printed image will be the exact size of the layout selected. In this case, the image file is scaled so that the shortest edge matches the layout size. In some cases, the longer edge will extend beyond the layout size and will not be printed.

In either case, the aspect ratio of the image file is maintained.

NOTE: For best results when using "borderless" packages, use the Scale to Fill option.

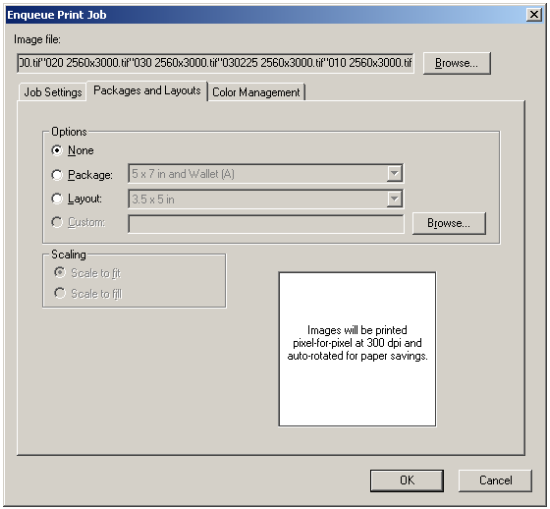
5. Click **OK**.

NOTE: For Rosetta (*.ros) image files, this setting is controlled by the ML-500 Printer Driver and cannot be changed using the ML-500 Print Server.

Using Custom Printing Packages or Layouts

To create a custom printing package or layout, see page 127.

1. Display a dialog box for changing print job settings (see page 52).
2. Select the **Packages and Layouts** tab.



3. Click **Custom**.
4. Click **Browse**.
5. In the file selection box, locate the custom package or layout file you wish to use, or choose the last and most recently used custom package file at the bottom of the drop-down package list.

NOTE: If a custom package has never been created, then a custom package file will not be on the drop-down package list.

6. Click **OK** to save your selection. The preview window changes to represent the actual custom package layout.
7. Check for any page size mismatch messages.

   If only a portion of a custom package fits on the page, the partial image is outlined in red, and a message appears indicating that some images in the custom package file are off the page.

8. Select **Scale to Fit** to shrink the images to fit in the available space or select **Scale to Fill** to enlarge the images to fit in the available space.
9. Click **OK**.

NOTE: For Rosetta (*.ros) image files, this setting is controlled by the ML-500 Printer Driver and cannot be changed using the ML-500 Print Server.

Removing Jobs from the Print Queue

To remove a specific job:

1. In the Print Server window, click the job you wish to remove.
2. From the **Server** menu select **Dequeue**. Alternatively, press the **Delete** key, or press the **Dequeue** Tool Bar button.

To remove multiple jobs:

1. In the Print Server window, press and hold the **Ctrl** key and click the jobs you wish to remove.
2. From the **Server** menu select **Dequeue** or press the **Delete** key.

To remove a range of jobs from the print queue:

1. In the Print Server window, hold the **Shift** key and click the first and last jobs in the range you wish to remove.
2. From the **Server** menu select **Dequeue**.

   Alternatively, press the **Delete** key, or press the **Dequeue** Tool Bar button.

To remove all print jobs:

1. From the **Server** menu select **Flush** or press the **Flush** Tool Bar button.

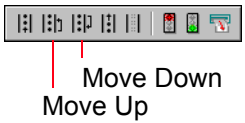
2. Click **OK**.

Rearranging the Print Job Order

You can change the order in which print jobs are processed by moving jobs within the queue.

To move a single job:

1. In the Print Server window, click the job to be moved.
2. Do one of the following:
   - ✔ From the **Server** menu select **Move Up** or **Move Down**.
   - ✔ Press and hold the **Ctrl** key and press the up or down arrow keys.
   - ✔ Drag and drop the highlighted job to the desired position in the print queue.
   - ✔ Press the **Move Up** or **Move Down** Tool Bar buttons.



To move multiple jobs:

1. In the Print Server window, press and hold the **Ctrl** key and click the jobs to be moved.
2. From the **Server** menu select **Move Up** or **Move Down** to move the jobs up or down in the queue. Alternatively, drag and drop the highlighted jobs to the desired position in the print queue.

To move a range of jobs:

1. In the Print Server window, press and hold the **Shift** key and click the first and last jobs in the range you wish to move.
2. From the **Server** menu select **Move Up** or **Move Down** to move the jobs up or down in the queue. Alternatively, drag and drop the highlighted jobs to the desired position in the print queue.

NOTE: You cannot rearrange jobs with Printing or Sending status.

Suspending Printing

Suspending "locks" the print queue by preventing the ML-500 Print Server from sending print jobs to the printer. It also prevents image files in the Source folder being sent to the print queue. Suspend the print queue when you want to change the paper or ribbon, or perform calibration or diagnostic tests.

The print queue remains suspended until printing is resumed or forced (see page 65).

NOTE: Print jobs that are currently being printed or being sent to the printer will be printed before the queue is suspended.

To suspend printing:

✔ From the **Server** menu select **Suspend**,, or press the **Suspend** Tool Bar button.

"Server: Suspended" appears in the Status Bar.

Resuming Printing

Resuming "unlocks" the print queue and sets the ML-500 Print Server to its normal mode of operation.

To resume printing:

✔ From the **Server** menu select **Resume**, or press the **Resume** Tool Bar button.

"Server: Running" appears in the Status Bar.

Forcing Printing

By default, printing starts when one job is in the print queue. You can change print queue limits (see page 68), if desired. Force printing lets you override these limits and begin printing immediately. Existing print jobs in the print queue are processed without delay.

Force printing continues until all the jobs in the print queue have been sent to the printer.

To force printing:

✔ From the **Server** menu select **Force Print Now** or press the **Force Print Now** Tool Bar button.

"Server: Force Printing" appears in the Status Bar.

Attended and Unattended Printing

You can operate the ML-500 Print Server in attended or unattended mode. If a printing error occurs, attended mode requires direct intervention before printing can continue, while unattended mode does not. Unattended mode is useful when printing overnight, or during times when no one is available to respond to error messages.

If you are running in attended mode and an error occurs, printing is suspended until you acknowledge the error message that appears. If you are running in unattended mode and an error occurs, printing continues when possible. In either case, printing stops if intervention is absolutely required (loading paper, changing the ribbon, etc.).

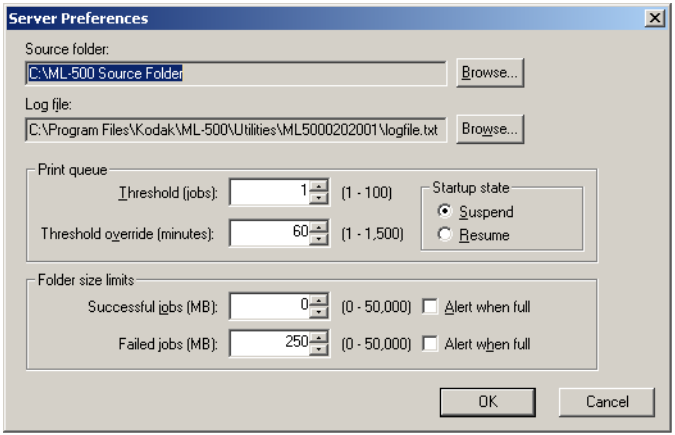
All errors are recorded in the log file (see page 44).

To switch between attended and unattended modes:

- ✔ From the **Server** menu select **Attended**.

Server Preferences

Change server settings using the Server Preferences dialog box.



Refer to the table on the next page for descriptions of the settings and default values.

Print Setting	Description	Default Value	Allowable Range	See
Threshold (jobs)	Specifies the minimum number of print jobs required in the print queue before printing begins	1	1 - 100	Setting print queue limits (see page 68)
Threshold override (minutes)	Specifies the number of minutes after which printing begins, regardless of the threshold value	60	1 - 1500	Setting print queue limits (see page 68)
Startup state	Specifies the startup mode of the print queue for the ML-500 Print Server	Suspend	Suspend - Resume	Selecting a startup state (see page 69)
Successful jobs (MB)	Specifies the amount of memory to allocate to the storage of successfully printed image files	0 Alert when full (unchecked)	0 - 50000	Allocating disk space to print job folders (see page 68)
Failed jobs (MB)	Specifies the amount of memory to allocate to the storage of image files that failed to print	250 Alert when full (unchecked)	0 - 50000	Allocating disk space to print job folders (see page 68)

Setting Print Queue Limits

Unless you specify otherwise, printing starts when one job is in the print queue. You can change the number of jobs or the number of minutes from the time the first print job was created before printing begins.

You can change the print queue limits to better suit your needs:

1. From the **Server** menu select **Server Preferences**.
2. Under Print Queue, next to Threshold, select the minimum number of print jobs, between 1 and 100, required in the print queue before printing begins.
3. Next to Threshold, select the number of minutes, between 1 and 1500, after which printing will begin regardless of the Threshold value.
4. Click **OK**.

Allocating Disk Space to Print Job Folders

After leaving the print queue, image files for failed jobs are moved to a Failed Jobs folder. If you have allocated disk space to the Successful Jobs folder, image files for successful jobs are moved there. The Successful Jobs folder and Failed Jobs folders are automatically generated and are located within the Source Folder.

From time to time, check the Failed Jobs folder for image files that failed to print.

You can allocate the amount of disk space each folder has by specifying the amount of memory available to each:

1. From the **Server** menu select **Server Preferences**.
2. Under Folder size limits, specify the amount of memory, between 0 (default) and 50000 megabytes, to allocate to the storage of successfully printed image files. To receive a notification when the storage is full, select **Alert when full**.
3. Specify the amount of memory, between 0 and 50000 megabytes (250 is the default), to allocate to the storage of image files that failed to print. To receive a notification when the storage is full, select **Alert when full**.
4. Click **OK**.

NOTE: Upon reaching the folder size limit, the oldest image files will be deleted to make room for new image files. If a folder size is set to 0, image files will not be saved in that folder.

Selecting a Startup State

Upon opening the ML-500 Print Server application, the print queue is in Suspended status by default. If you wish, you can choose to have the Print Server in Running (Resume) status each time you open it.

To choose a startup state:

1. From the **Server** menu select **Server Preferences**.
2. Under Startup state, select the status you prefer the print queue to be in each time you open the ML-500 Print Server application.
3. Click **OK**.

Command Files

Creating and Printing Command Files

A command file (*.kmd) specifies an image to be printed and the job settings to apply to that image.

Settings in the command file override settings in the Enqueue Print Job window. For example, the Enqueue Print Job window might specify one copy of queued images to be printed. A command file might override that setting and print three copies of a specified image.

The command file is generally written using MICROSOFT Notepad and saved with the extension .kmd rather than .txt. Command files contain a series of allowable commands that are communicated to the ML-500 Print Server (see Allowable command file commands). To work properly, command files must adhere to a specific convention and set of rules (see Command file rules).

To create a command file:

1. From the **Start** menu select **Programs**, select **Accessories**, then select **Notepad**.
2. Type the command lines you wish to use to print your image.
3. From the **File** menu select **Save As**.
4. Choose a location and file name for your file.
5. Click **Save** when complete.
6. From the desktop or WINDOWS Explorer, change the file extension from .txt to .kmd.

To send a command file to the ML-500 Print Server, copy the file into the Source Folder.

NOTE: You cannot use the Enqueue command to send a command file to the ML-500 Print Server.

Allowable Command File Commands

The following commands are allowed in command files:

FILENAME: (String: full (path and file) name of the image file)

COPIES: (Numeric, 1 to 9999: number of copies to print)

CUT: (NO, BETWEEN, or TRIM: cut type)

SHARPEN: (NONE, NORMAL, or HIGH: image sharpening level)

USE_LABEL: (TRUE or FALSE: whether to add a label)

LABEL_FILENAME: (TRUE or FALSE: whether to include file name on label)

LABEL_DATE_TIME_STAMP: (TRUE or FALSE: whether to include date/time stamp on label)

LABEL_PRINTER_SERIAL_NUMBER: (TRUE or FALSE: whether to include printer serial # on label)

LABEL_JOB_NUMBER: (TRUE or FALSE: whether to include job number in label)

LABEL_CUSTOM_TEXT: (String, 0 to 512 characters: custom text to include in the label)

LABEL_TEXT_COLOR: (CYAN, MAGENTA, or BLACK: label text's color)

LEADING_BORDER: (Numeric, 0 to 3000: leading border in pixels)

TRAILING_BORDER: (Numeric, 0 to 3000: trailing border in pixels)

CENTER: (TRUE or FALSE: whether to center the image horizontally)

IMAGE_OFFSET: (Numeric, 0 to 2560: image left side offset in pixels if CENTER is FALSE)

PACKAGE: (Numeric, 0 to 65535: package to be used, 32767 or higher is a Custom package and 0 is no package)

PACKAGE_SCALING: (Selection, FIT or FILL)

PACKAGE _CUSTOM_FILE: (String, full (path and file) name of package file)

USE_CM: (Selection, TRUE or FALSE: whether to color image)

CM_INPUT_PROFILE: (String, full (path and file) name of the input profile)

CM_USE_EMBEDDED: (Selection, TRUE or FALSE: whether to use embedded profile)

CM_OUTPUT_PROFILE: (String, full (path and file) name of the output profile)

CM_RENDERING_INTENT: (Selection, PERCEPTUAL, SATURATION, or COLORIMETRIC: rendering intent)

Command File Rules

The following rules describe command file functionality and convention:

- ✔ A command file specifies an image to be printed and the job settings to apply to that image. If any settings are missing, the settings specified in the Server Preferences dialog box apply.

NOTE: Rosetta (*.ros) files contain commands that cannot be overridden by the command file.

- ✔ A command file consists of several commands, with one command per line. (Blank lines are also allowed but are ignored.)
- ✔ A command line contains a command (such as FILENAME:) and a value. The colon character is optional, and the command can be uppercase, lowercase, or mixed case. For example, FILENAME:, filename, and FilenamE are all the same command.

- ✔ The set of values allowed depends on the command. For example, the COPIES command accepts a value between 1 and 9999. Values, like commands, can be uppercase, lowercase, or mixed case. All values are of three types: numeric (as in the COPIES command), a selection of choices (such as No, Between, and Trim for the CUT command), or a text string (for the FILENAME and LABEL_CUSTOM_TEXT commands).
- ✔ Spaces or tab characters separate the command from its value. Spaces and tabs may also be placed before the command or after the value. All are ignored.

NOTE: Spaces and tabs are allowed in a text string, but they cannot be the outermost characters, as they are ignored.

- ✔ If the same command appears more than once, the last value is the one that is used.
- ✔ The extension of a command file must be ".kmd". The file must be saved as a text file; rich-text or MICROSOFT Word formats add extra formatting information that is not understood by the ML-500 Print Server and generate errors.
- ✔ If an error occurs, error information is written to the log file. It also appears in a dialog if the ML-500 Print Server is running in Attended mode.

Sample Command File

The following is an example of a typical command file.

```
FILENAME: H:\Images\Jpg\Birthday_1152x864.jpg
COPIES: 1
CUT: NO
CENTER: FALSE
IMAGE_OFFSET:
```

Overview

Using the ML-500 Calibration application you can control the color balance and density of the prints made with the ML-500 printer. You can verify and change the color look-up tables (LUTs) for the printer.

When to Calibrate the Printer

Calibrate the printer:

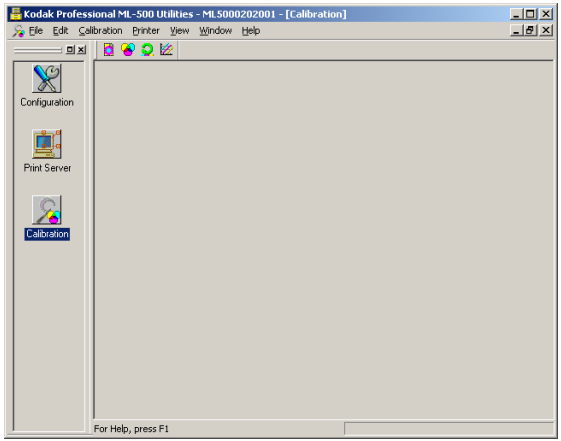
- ✔ Whenever you change a ribbon or a set of ribbons, especially when the ribbons have a new lot number
- ✔ When you have a concern about the quality of the production prints
- ✔ As necessary to maintain settings for multiple media types.

Getting Started

Starting the Calibration Application

- ✔ Click the Calibration icon on the Utility bar.

The Calibration screen appears.



Status Bar

The Status Bar, located at the bottom of the window, shows the following:

- ✔ Name of the media used for the current calibration event (if one has been selected)
- ✔ Message appears under the following conditions:

  Calibration operation taking more than two seconds

  Rasterizing a calibration target

  Printing a calibration target

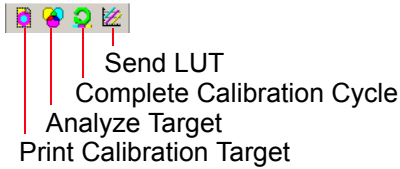
  Sending new LUTs to the printer

Showing or Hiding the Status Bar

- ✔ From the **View** menu select **Status Bar**.

Tool Bar

A Tool Bar appears at the top of the Calibration screen. It provides shortcuts to functions that you can access through the menus.



Using the Tool Bar

- ✔ Click a Tool Bar button to access the associated function.

Showing or Hiding the Tool Bar

- ✔ From the **View** menu select **Tool Bar**.

Closing the Calibration Application

✔ Click the  at the upper right of the Configuration screen.

*IMPORTANT: If you select **Exit** from the **File** menu, all ML-500 applications close.*

Calibration Process

Process Overview

1. Print a calibration target (see page 79).
2. Analyze a calibration target (see page 80).
3. Send the LUT to the printer (see page 83).

You can perform the steps separately, as listed above, or perform all steps at one time by performing a complete calibration analysis (see page 86). If you select the latter option, some of the steps in analyzing the target are skipped.

You may need to run more than one calibration cycle to ensure that the printer's calibration is in tolerance (see page 93).

Selecting a Calibration Starting Point

When printing a calibration target (see page 79), you must select a calibration starting point. Each starting point serves a different purpose. Use the starting point that best suits your needs.

- ✔ **Current settings**: Starts the calibration using the current calibration data. You will use Current settings most often. Use Current settings if the printer is close to optimal and just needs some fine-tuning or if you are running a scheduled calibration task.
- ✔ **Factory defaults**: Starts the calibration using the settings that were shipped with the printer. Use this option if calibrating the printer for the first time or if the current calibration is unacceptable and you would like to make a fresh start.
- ✔ **Redo last calibration**: Starts the calibration from the beginning of the last calibration. Use this option if the calibration was in tolerance or very nearly in tolerance up until the most recent calibration.
- ✔ **Designated event**: Starts the calibration at a specific calibration event. Use this option if you know the date and time when the last good calibration was done and you want to start the calibration from those settings. If you select this option, an extra dialog box in the Print Target Wizard requires you to select the event from which to start the calibration.

Printing a Calibration Target

You print the calibration target using a defined set of printer response curves as the starting point. Most often the starting point is the ending point of the previous calibration event. Options for other starting points exist for special needs.

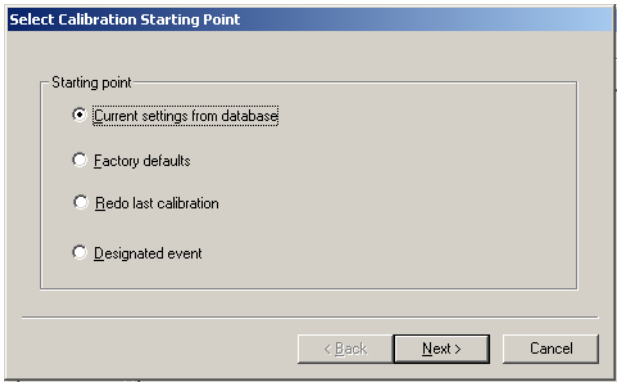
When you print a calibration target, a specific calibration event number is created that is related to the media and printer. Each target is numbered as it is printed so that you can refer to the number when it is requested.

Before you print the calibration target, check the following:

- ✔ Is the correct type of media (glossy or matte) loaded in the printer?
- ✔ In the Configuration application, is the selected XtraLife ribbon type the same as that loaded in the printer (see page 30)?

To print a calibration target:

1. From the **Calibration** menu select **Print Calibration Target**.
2. In the Select Media dialog box, select the media to calibrate, then click **Next**.
3. In the Select Calibration Starting Point dialog box, select a starting point (see page 78), then click **Next**.



NOTE: If you select **Designated event** as a starting point, you must select an event number and date from the drop-down list on the Select Calibration Event dialog box then click **Next**.

4. Click **Finish**.

You need not analyze the target immediately. If necessary, you can exit the calibration application between printing and analyzing the target so that you can resume printing.

Analyzing a Calibration Target

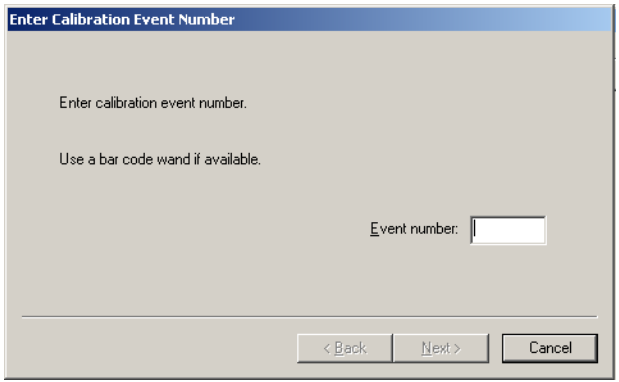
You can analyze the printed target visually or with a suitable densitometer. Then, you determine if the current calibration is acceptable or if the printer response curves from this calibration event should be stored in the database and the new LUTs sent to the printer.

Since each target has a unique event number, you need not analyze a target immediately after you print it. After you analyze the calibration target, the results can be stored in the program and sent to the printer in the form of new LUTs, or you can ignore the results.

The analysis steps differ slightly depending on the measurement source selected in the Edit Configuration dialog box (see page 87).

Calibration

1. From the **Calibration** menu select **Analyze Calibration Target**.



2. Enter the event number from the target or scan the bar code.

NOTE: If the event has been completed (see page 92), a warning message appears.

3. Click **Next** to print the calibration target.

4. Analyze the target. You can only use Status A densitometers (see page 92).

   ✔ **For visual analysis**

   a. Visually examine the calibration print and enter the cluster number that appears most neutral (gray).

   b. Click **Next**.

   ✔ **For analysis on a patch reading densitometer**

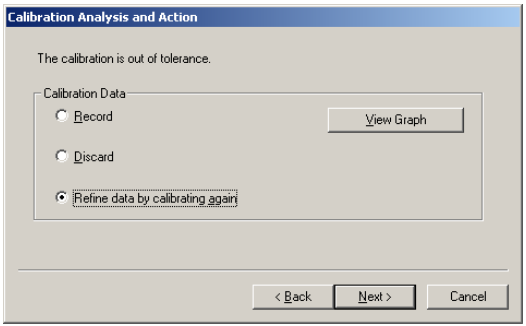
   a. Click **Next**. The Measure Target Densities dialog box appears.

   b. Read the RGB values for each target step. The values appear in the dialog box. If necessary, use the cursor to adjust the sequence of the readings, positioning the highlight row to reread a patch.

   c. Click **Done**.

Calibration

- ✔ **For analysis on a strip reading densitometer**
  - **a.** Prepare the target for reading in the densitometer.
  - **b.** Click **Next**.
- ✔ **For file analysis**
  - **a.** Read the calibration target and save the results to a file.
  - **b.** Click **Next**.
  - **c.** Search for and select the file in which you saved the target readings.
  - **d.** Click **OK**.



5. Based on the analysis, indicate what to do with the calibration data. You must consider whether the calibration is in tolerance, and which setting you used for a starting point to determine the proper action.
   - ✔ **Record:** record the data and consider this calibration complete. This results in the calculation of a new set of LUTs. You may want to use this option if the printer is only slightly out of tolerance and the current production appears normal OR if the starting point was other than Current Settings.
   - ✔ **Discard:** discard the calibration data. The Next button changes to a Finish button. You should only select this option if the printer is clearly in tolerance, when the starting point was Current Settings, and when you do not want to disturb the current printer settings for the media.

- ✔ **Refine data by calibrating again:** allows you to perform another iteration of calibration, using the calibration LUT calculated from the previous calibration as the starting point. Use this option if the current calibration is out of tolerance and you wish to continue calibrating the printer to get it within the selected tolerance limits.

6. Click **View Graph** to view a graph of the most recent calibration data.

NOTE: The **View Graph** button does not appear if you are using visual analysis as there is no densitometer data to graph.

7. Do one of the following:
   - ✔ Click **Finish** to close the wizard and record that the calibration is complete.
   - ✔ Click **Next** to continue.
   - ✔ Click **Cancel** to exit the wizard and wait to send the new calibration data to the printer, for example, if the printer is busy.

Sending a LUT to the Printer

Sending a LUT to the printer makes permanent or temporary changes to the printer's color settings.

You must send the resulting look up table to the printer when the printer is not in use and only when the upcoming workflow matches the LUT being sent to the printer.

If you need to adjust the calibration tolerance level, see Changing Calibration Settings (see page 87).

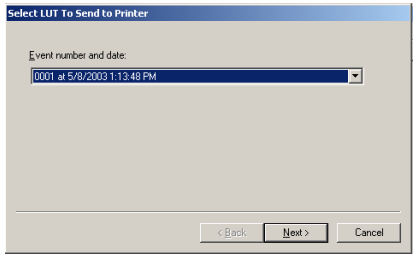
When to Send a LUT to the Printer

If	Then
Production printing colors are off	calibrate and then immediately send a new LUT to the printer.
Calibration is out of tolerance	send a new LUT to the printer immediately after calibration.
The calibration is almost always out of tolerance	the problem might be inherent instability (noise) in the system. Select a less strict tolerance level in the Edit Configuration dialog box.
You want to make temporary color adjustments	send a new LUT to the printer.
You have new media for which the printer has no LUT	calibrate and send the new LUT to the printer.
The calibration is in tolerance	send no LUT and continue printing.

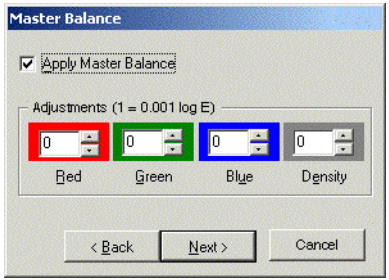
You can view graphs (see page 91) to see how close the calibration target densities are compared to the calibration aims. The graphs can help you to determine if you should send the LUT to the printer.

To Send a LUT to the Printer

1. From the **Calibration** menu select **Send LUT to Printer**.
2. Select a Media name from the list, then click **Next**. NOTE: If there is only one media name in the calibration database, this step is omitted.
3. Select an event number and date, then click **Next**.



4. Select **Apply Master Balance** if you wish to apply a temporary adjustment to the colors for this print job. NOTE: The Master Balance dialog box does not appear for Visual Analysis.



5. Adjust the temporary values for Red, Blue, Green, and Density and click **Next**. NOTE: When sending a temporary color adjustment, the final dialog box is a different color than all of the other dialog boxes in the wizard.

6. Wait until printing stops, then click **Finish**.

After sending a LUT to the printer, you can run test prints before resuming production to ensure that the correct LUT was sent.

Making Temporary Color Adjustments

You can make temporary color adjustments to print jobs using the Send LUT to the Printer wizard.

Temporary color adjustments last until overwritten by a new temporary or permanent adjustment or until turning off the printer.

You might want to make temporary color adjustments:

- ✔ If a customer's images are too yellow (perhaps from outdated film) and the prints must be reprinted.
- ✔ If an ad campaign requires that all the prints be slightly blue for a unique look.

NOTE: You cannot send temporary LUTs to the printer when using Visual Analysis. Achieve the same effect by selecting the patch that matches the adjusted color.

To make temporary color adjustments:

1. From the **Calibration** menu select **Send LUT to Printer**.
2. Select a Media name from the drop-down list, then click **Next**. (If there is only one media type in the calibration database, omit this step.)
3. Select an event number and date, then click **Next**.
4. Select **Apply Master Balance** to apply a temporary adjustment to the colors for this print job.
5. Adjust the temporary values for the Red, Blue, Green, and Density and click **Next**.
6. Ensure that all printing has stopped, then click **Finish** in the Send LUT to Printer dialog box. NOTE: When sending a temporary color adjustment, the final dialog box is a different color than the other dialog boxes in the wizard.

Performing a Complete Calibration Analysis

Performing a complete calibration cycle includes printing and analyzing a calibration target.

If you perform a complete calibration cycle, you cannot print anything else until the cycle is complete.

1. From the **Calibration** menu select **Perform Complete Calibration Cycle**.
2. Select the media to calibrate, then click **Next**.
3. Select a starting point (see page 78).

NOTE: If you select Designated Calibration Event as a staring point, you must select an event number and date from the drop-down list.

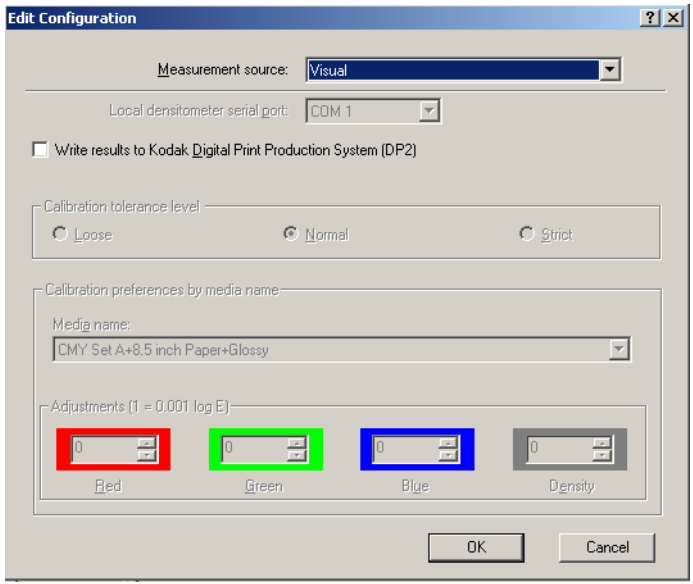
4. Click **Next** to print the calibration target.
5. Analyze the target (see page 80).

6. Do one of the following:
   - ✔ Click **Finish** to close the wizard and record that the calibration is complete.
   - ✔ Click **Next** to continue.
   - ✔ Click **Cancel** to exit the wizard and wait to send the new calibration data to the printer, for example, if the printer is busy.

Changing Calibration Settings

You can change the calibration settings such as the measurement source, the port where the densitometer is connected, and the calibration tolerance level. You can also set permanent color adjustments to the prints.

1. From the **Edit** menu select **Configuration**.



2. Select or change options, as needed. See the table on the next page.

Setting	Meaning
Measurement Source	A measurement source consists of the following: ✔ Visual: the target will be analyzed visually ✔ Text file: a densitometer will record the data and you will import a text file ✔ X-RITE DTP-36 ✔ X-RITE 404 ✔ X-RITE 414 ✔ X-RITE DTP-41 ✔ X-RITE 528 ✔ X-RITE 530
Serial Port	Select the serial port to which the densitometer is connected. This is disabled if Visual, Remote, or Text File is selected in the Measurement Source list.

Setting	Meaning
DP2 (KODAK PROFESSIONAL Digital Print Production Software)	Select the check box to use DP2 with the ML-500. This places a copy of the LUTs as files where DP2 can use them.
Calibration Tolerance Level	Select a tolerance level of Loose, Normal, or Tight. This option is disabled if Visual is selected in the Measurement Source list.
Update calibration preferences by media	Select the Media to which you want to apply additional color adjustments. Select the appropriate color variances for each adjustment of Red, Green, Blue, and Density; valid values are -100 to 100. The measurements are in 0.001 log e increments. These controls are disabled when the measurement source is Visual.

3. Click **OK** to save the changes.

Working with Media and Printers

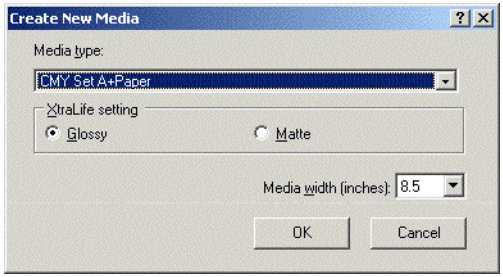
Adding New Media

Add new media:

- ✔ When the media you want to use is not in the database
- ✔ When adding a new media type

To add new media:

1. From the **Calibration** menu select **New**, then select **Media**.



2. Select a Media type.
3. Select an **XtraLife** setting, either Glossy or Matte.
4. Select a Media Width.
5. Click **OK**.

When a new media type is created, the name is added to all media type drop-down lists for the selected printer.

Importing a Media Type Catalog

You can import a new media catalog whenever a new media catalog becomes available from Kodak. The catalog lists all media that can be used by the ML-500 printer. Importing a new media catalog does not change the name of any media or any calibration history.

Typically, the following information is updated when you import a new media catalog:

- ✔ type of surface for each media type
- ✔ printing and calibration aims

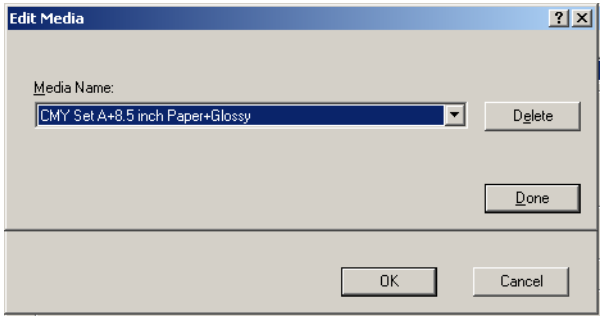
To import a media catalog:

1. Place the media catalog file in the <install path>\Cal2000\MDB\ folder.
2. From the **Calibration** menu select **Import**, then select **Media Catalog**.
3. Click **OK**.

Deleting Media from the Media List

The media name is based on the ribbon set, media type, media width, and XtraLife settings when you add the media. There is nothing to edit on the media name, but you can remove unused media from the list.

1. From the **Edit** menu select **Media**.



2. Select the media you want to delete.
3. Click **Delete**. Click **Yes** or **No** to confirm.
4. Click **Done**.

Importing a Printer Model Catalog

When printer models change or when new printer models are introduced, a new printer model catalog can be imported. The Calibration application obtains the new printer information from the printer model catalog and uses this information for all printers of the same type. Kodak may update the printer model catalog on occasion.

1. Copy the new printer model catalog to the following location: <install path>\Cal2000\MDB\.
2. From the **Calibration** menu select **Import**, then select **Printer Model Catalog**.

Viewing Calibration Data Graphs

The view graphs feature provides access to graphs generated by calibration event data. This feature is available for everything but the Visual measurement source in the Edit Configuration dialog box.

1. From the **View** menu select **Graphs**.
2. Select a media name.
3. Click **Next**.
4. Select an event number and date.
5. Click **Next** to view the plot.

   You can adjust the display based on the Graph Type, Display Data, and Display Colors.

NOTE: Click **Back** to view a different graph, then select an event number and date, or click  to close the dialog box.

Reference

Completed Calibration Event

A completed calibration event is any calibration target that has been printed and analyzed. You can reanalyze a target if the following are true:

- ✔ The calibration target was analyzed visually.
- ✔ There have been no other calibrations completed for the printer and media combination since the one that you want to analyze.

Approved Densitometers

Use densitometers with a Status A spectral response with the ML-500 calibration application. Densitometers with a Status T spectral response are unsuitable for the ML-500 calibration application.

The following densitometers are usable with the calibration application:

- ✔ X-RITE 404 *
- ✔ X-RITE 414 *
- ✔ X-RITE DPT-36
- ✔ X-RITE DPT-41
- ✔ X-RITE 528
- ✔ X-RITE 530

* Only the 404 and 414 densitometers marked with "A-RESP" are usable with the calibration application.

Calibration Tolerance Level

The calibration tolerance level defines the range within which a target must fall to be considered acceptable.

There are three options for tolerance from which you can choose based on the accuracy and repeatability of the densitometer and printer:

- ✔ **Loose:** Use if you may be redoing the calibration needlessly because of inherent statistical noise in the system.
- ✔ **Normal:** Use for all your calibrations, unless you are frequently recalibrating your printer, especially if you are recalibrating and the prints look good.
- ✔ **Strict:** Use only if you can demonstrate that your printing system's inherent variability does not cause needless recalibration, and your output product demands very tight density control.

Printer drivers are used to print to the ML-500 printer from applications on your system.

Printer drivers for the following operating systems are included on the KODAK PROFESSIONAL ML-500 Digital Photo Print System CD:

- ✔ WINDOWS 2000 / WINDOWS XP
- ✔ WINDOWS 98/ME
- ✔ MACINTOSH OS X

The printer driver for your operating system must be installed (see page 7) before you can print from ML-500 Utilities. In addition, you can use the printer driver to access the ML-500 printer from other applications such as ADOBE PHOTOSHOP.

Image Color Management (ICM)

Image Color Management (ICM) is a MICROSOFT WINDOWS color management tool that is part of the WINDOWS operating systems. ICM lets you match the colors on your monitor with the colors on the printed page.

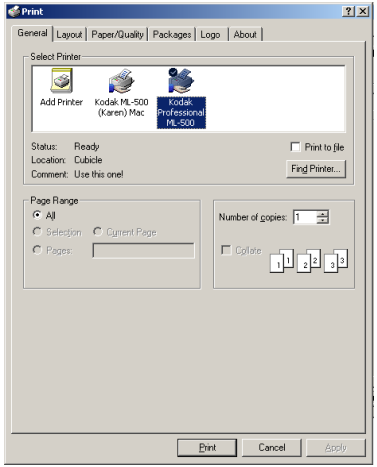
See your WINDOWS documentation for complete instructions on how to use ICM.

WINDOWS XP / WINDOWS 2000 Operating Systems

Removing a Printer Driver

1. From the **Start** menu select **Settings**, then select **Printers**.
2. Select the ML-500 printer.
3. From the **File** menu select **Delete**.
4. Click **Yes** for the prompt.

Displaying the Printing Preferences Screen



When you access the Printing Preferences screen through the **Start** menu, you can change settings for print jobs in all applications.

When you access the Printing Preferences screen while printing a file from an application, you can change settings for that print job only.

To Change Settings for All Print Jobs

1. From the **Start** menu select **Settings**, then select **Printers**.
2. Right-click the ML-500 printer and select **Printing Preferences**.

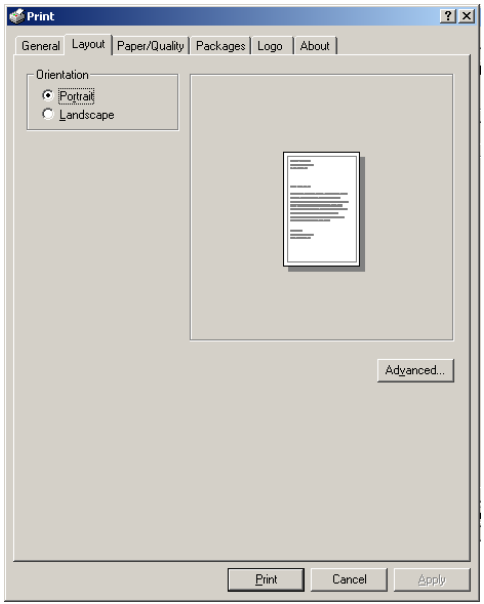
To Change Settings for the Current Print Job

1. From the **File** menu select **Print**.
2. Right-click the ML-500 printer and select **Printing Preferences**.

Laying Out the Page

You can select portrait or landscape orientation for your document page.

1. Display the Printing Preferences screen (see page 95).
2. Click the **Layout** tab.

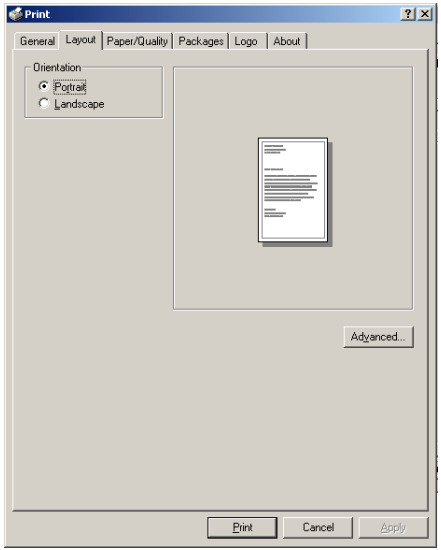


3. Select the orientation.
4. Click **OK**.

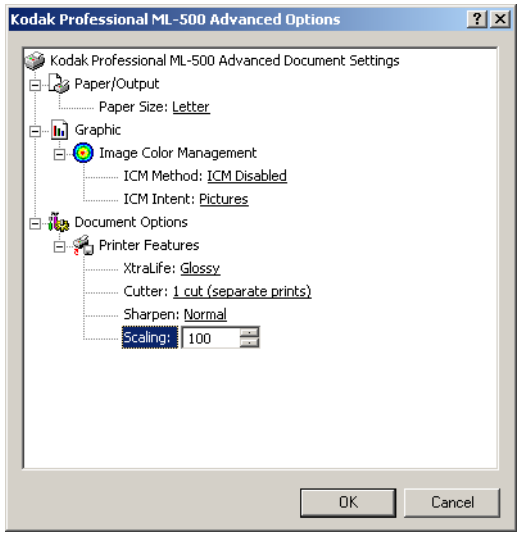
Scaling a Document Page

You can scale a document page by a specified percentage between 10% and 400%.

1. Display the Printing Preferences screen (see page 95).
2. Click the **Layout** or **Paper/Quality** tab.



3. Click **Advanced**.
4. Expand the **Document Options, Printer Features**, if necessary.
5. Select the desired scaling percentage.



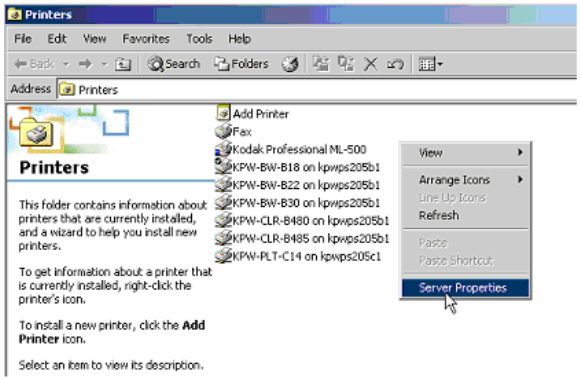
6. Click **OK**.

Creating a Custom Form

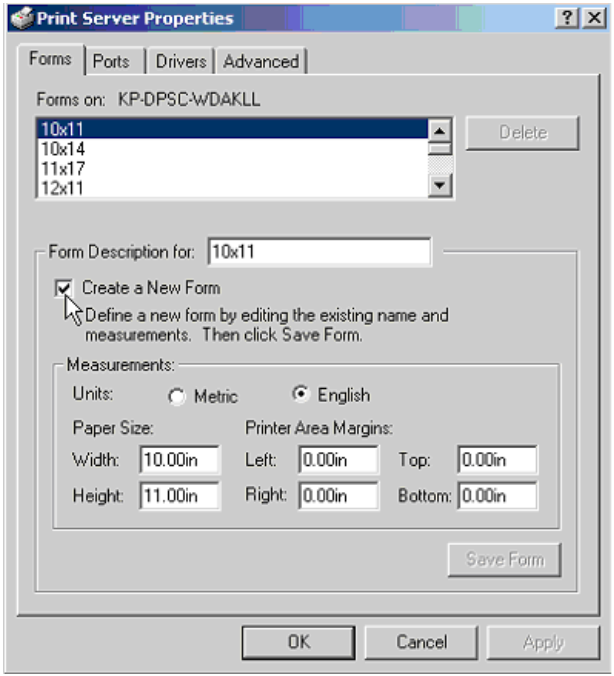
You can create a custom paper size using WINDOWS functionality, then select the paper size when you print using the ML-500 driver.

1. From the **Start** menu select **Settings**, then select **Printers.**
2. From the **File** menu select **Server Properties** or right-click an open area in the window and select **Server Properties.**

.



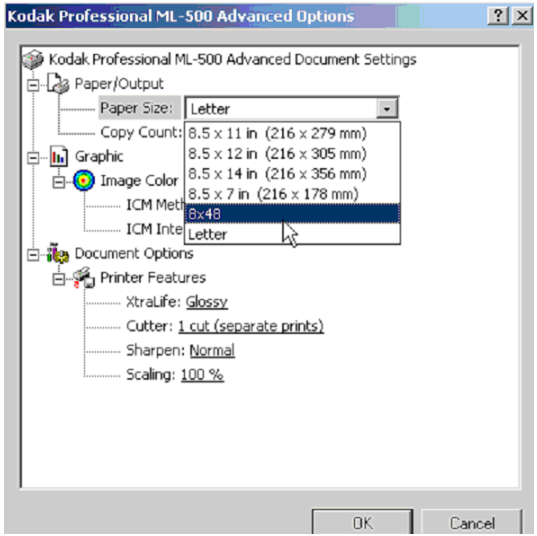
3. Select the **Forms** tab then select the **Create a New Form** check box.



4. Enter the **Form Description** and **Paper Size**.
   One of the dimensions must be 8.53 in. (21.67 cm). The left, right, top, and bottom margins must all be 0.00.
5. Click **OK**.

To Use a custom form from an application:

1. From the **File** menu select **Print**.
2. Right-click the ML-500 printer, select **Properties**, then click **Advanced**.
3. Select the custom paper size from the **Paper Size** drop-down list, then click **OK**.



Using Package Printing

With package printing, you send a single document page to the printer and get multiple document page sizes on your print. For example, if you select the package "5 x 7 in. and 3.5 x 5 in. and Wallets," your print contains one 5 x 7 in. print, one 3.5 x 5 in. print, and a number of wallet size prints (depending upon the paper size selected).

The print sizes may not be exact because of the aspect ratio of the images on the document page. To fill the entire print area, you may need to resize the images on the document page before printing.

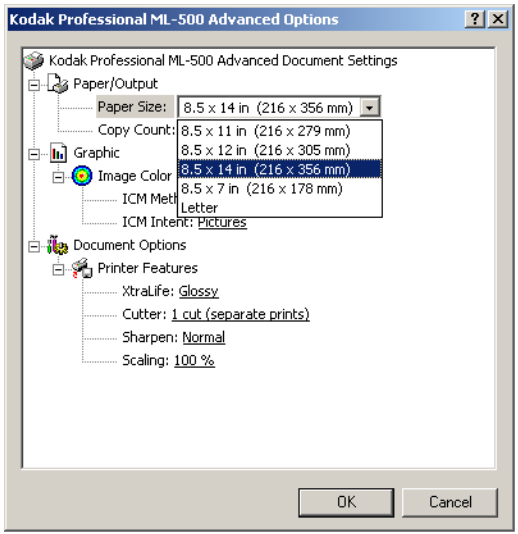
You can:

- ✔ Use standard printing packages
- ✔ Create custom printing packages (see page 127)
- ✔ Use custom printing packages (see page 102)

Using Standard Printing Packages

For best results, make sure that the image in the document you wish to print is the same size as the largest document page in the package. For example, if you select the package "5 x 7 in. and 3.5. x 5 in. and Wallets," the image on your original document page should be 5 x 7 in. If necessary, resize the image on the document page in an application such as ADOBE PHOTOSHOP before printing.

1. Display the Printing Preferences screen (see page 95).
2. Click the **Layout** or **Paper/Quality** tab.
3. Click **Advanced**.



4. Select the 8.5 x 14 in. paper size. You must use this size for all standard packages.

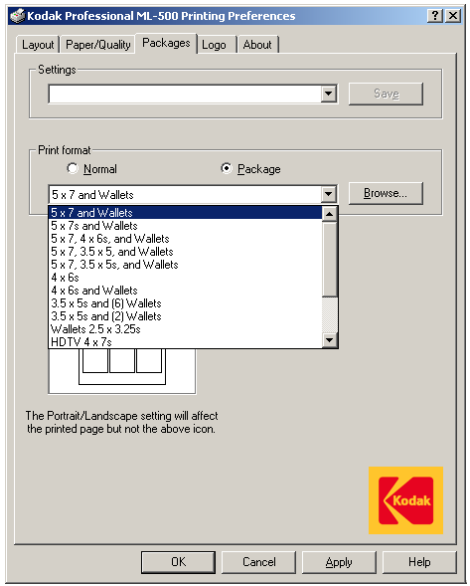
NOTE: Custom packages may require different paper sizes.

5. Click **OK**.

6. Click the **Packages** tab.

7. Select **Package** as the Print format.

8. From the drop-down list, select a standard package.



9. Click **OK**.

Using Custom Printing Packages

To create a custom printing package or layout, see page 127.

1. Display the Printing Preferences screen (see page 95).
2. Click the **Packages** tab.
3. Select **Package** as the Print format.
4. Click **Browse**.
5. In the file selection box, locate the custom package file you wish to use, or select the last and most recently used custom package file at the bottom of the drop-down package list.

NOTE: If a custom package has never been created, then a custom package file will not appear in the list.

6. Click **OK**.

   The preview window changes to represent the actual custom package layout.

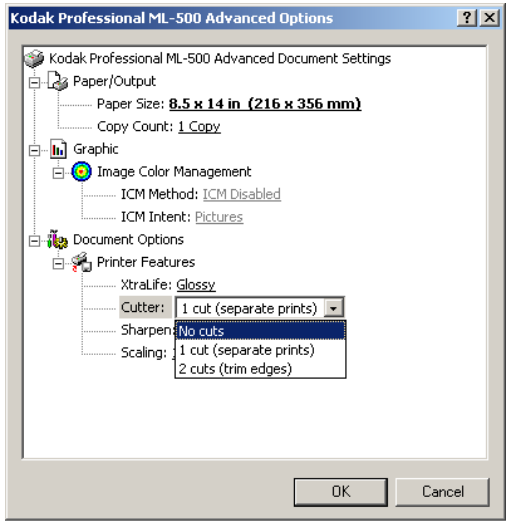
7. Check for any page size mismatch messages. If necessary, select a different page size.

If only a portion of a custom package fits on the page, the partial image is outlined in red, and a message appears indicating that some images in the custom package file are off the page.

Cutting Prints

WARNING:
The cutter is very sharp and can cause injury. Stay away from the cutter when the printer is running.

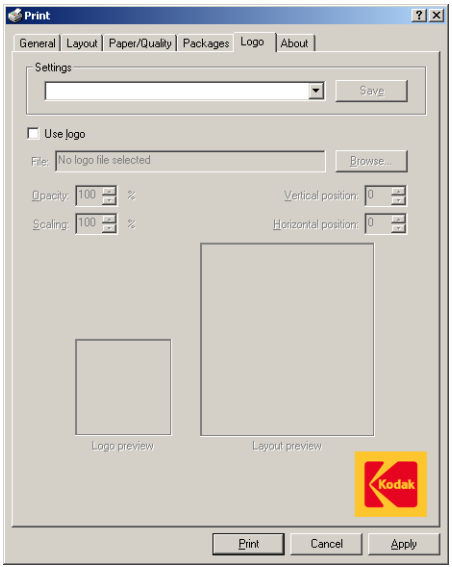
1. Display the Printing Preferences screen (see page 95).
2. Click the **Layout** or **Paper/Quality** tab.
3. Click **Advanced**.
4. Expand **Document Options, Printer Features**, if necessary.
5. Under Cutter, select an option. (See page 31.)



6. Click **OK**.

Adding a Logo to a Page

1. Display the Printing Preferences screen (see page 95).
2. Click the **Logo** tab.



3. Click **Browse**.
4. Locate and select the file for your logo.

NOTE: The logo must be either an uncompressed TIFF (.tif) or a bitmap (.bmp) file.

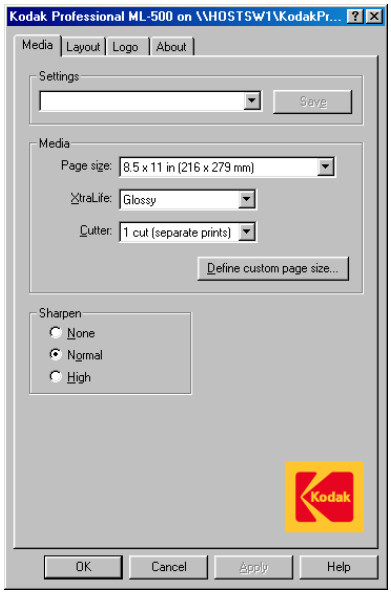
Do not compress the logo file. If you select a compressed file, a message appears indicating that the driver is unable to read the logo file and that the file format is incorrect.

5. Click **OK** to open and read the file.
6. Click **OK**.

   The logo appears in the Logo preview window.
7. Click **Apply**.

WINDOWS 98/ME Operating Systems

Displaying the Properties Screen



When you access the Properties screen through the **Start** menu, you can change settings for print jobs in all applications.

When you access the Properties screen while printing a file from an application, you can change settings for that print job only.

To Change Settings for All Print Jobs

1. From the **Start** menu select **Settings**, then select **Printers.**
2. Right-click the ML-500 printer and select **Properties**.

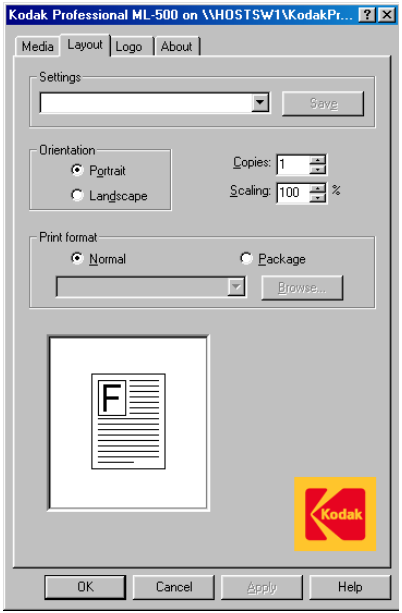
To Change Settings for the Current Print Job

1. From the **File** menu select **Print**.
2. Right-click the ML-500 printer and select **Properties**.

Laying Out the Page

You can select the orientation for your page.

1. Display the Properties screen (see page 95).
2. Click the **Layout** tab.



3. Select the orientation (**Portrait** or **Landscape**).
4. Select the desired scaling percentage (10% - 400%).
5. Click **OK**.

Using Package Printing

With package printing, you send a single document page to the printer and get multiple document page sizes on your print. For example, if you select the package "5 x 7 in. and 3.5 x 5 in. and Wallets," your print contains one 5 x 7 in. print, one 3.5 x 5 in. print, and a number of wallet size prints (depending upon the paper size selected).

The print sizes may not be exact because of the aspect ratio of the images on the document page. To fill the entire print area, you may need to resize the images on the document page before printing.

You can:

Use standard printing packages (see page 100)

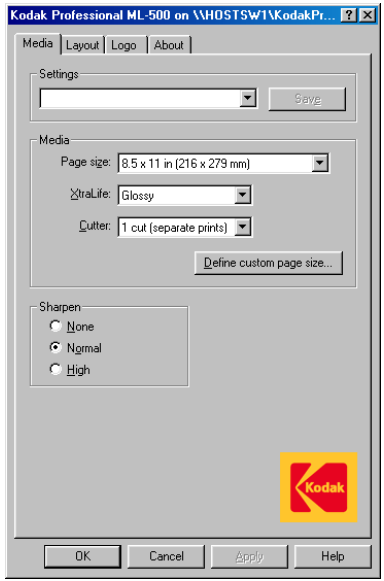
Create custom printing packages (see page 127)

Use custom printing packages (see page 102)

Using Standard Printing Packages

See page 100 for a description of standard printing packages.

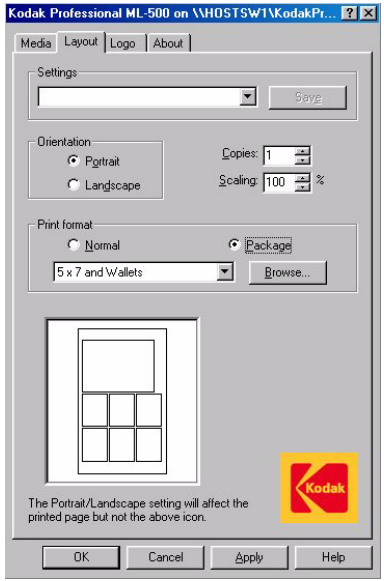
1. Display the Properties screen (see page 95).
2. Click the **Media** tab.



3. Select the 8.5 x 14 in. paper size. You must use this size for all standard packages.

IMPORTANT: You must use this size for all standard packages.

4. Click **Apply**.
5. Click the **Layout** tab.
6. Select **Package** as the Print format.



7. From the drop-down list, select a standard package.
8. Click **OK**.

Using Custom Printing Packages

To create a custom printing package or layout, see page 127.

1. Display the Properties screen (see page 95).
2. Click the **Layout** tab.
3. Select **Package** as the Print format.
4. Click **Browse**.
5. In the file selection box, locate the custom package file (.kpg) or select the last and most recently used custom package file at the bottom of the drop-down package list.

NOTE: If a custom package has never been created, then a custom package file will not appear in the list.

6. Click **OK**.

   The preview window changes to represent the actual custom package layout.
7. Check for any page size mismatch messages. If necessary, select a different page size.

If only a portion of a custom package fits on the page, the partial image is outlined in red, and a message appears indicating that some images in the custom package file are off the page.

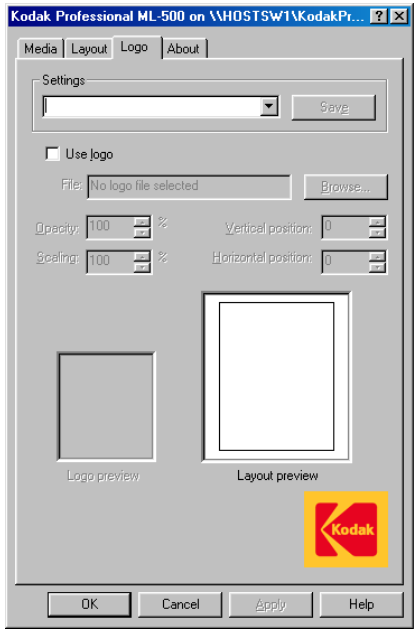
Cutting Prints

WARNING:
The cutter is very sharp and can cause injury. Stay away from the cutter when the printer is running.

1. Display the Properties screen (see page 95).
2. Click the **Media** tab.
3. Next to Cutter, select an option. (See page 31.)
4. Click **OK**.

Adding a Logo to a Page

1. Display the Properties screen (see page 95).
2. Click the **Logo** tab.



3. Click **Browse**.
4. Locate and select the file with your logo.

NOTE: The logo must be either an uncompressed TIFF (.tif) or a bitmap (.bmp) file.

Do not compress the logo file. If you select a compressed file, a message appears indicating that the driver is unable to read the logo file and that the file format is incorrect.

5. Click **OK** to open and read the file.
6. Click **OK**.

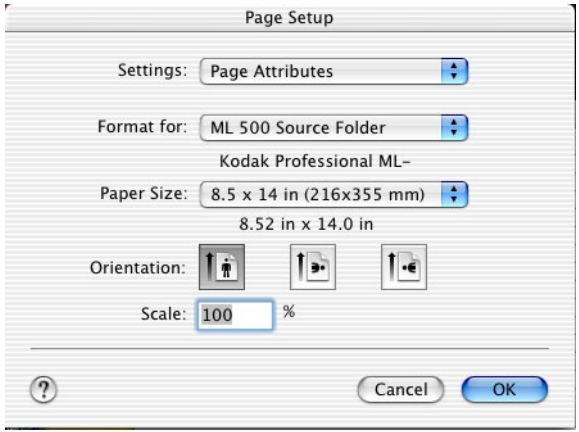
The logo appears in the Logo preview window.

MACINTOSH Operating System

Color management is built into the MACINTOSH printer driver and is always used.

Laying Out the Page

1. Open a document. From the **File** menu select **Page Setup** to display the Page Setup dialog box.



2. From the **Settings** menu select **Page Attributes**.
3. From the **Format for** menu select **ML-500**.
4. From the **Paper Size** menu, select an option:
   - ✔ 8.5 x 7 in. (216 x 178 mm)
   - ✔ 8.5 x 11 in. (216 x 279 mm)
   - ✔ 8.5 x 12 in. (216 x 305 mm)
   - ✔ 8.5 x 14 in. (216 x 355 mm)

   Custom papers are included at the bottom of the list.

   The default setting (as shipped) is 8.5 x 11 in.
5. In the Orientation section, select an option:
   - ✔ Portrait
   - ✔ Landscape
   - ✔ Reversed Landscape
6. In the Scale window, enter a value (1 to 100%).
7. Click **OK**.

Adding a Custom Paper Size

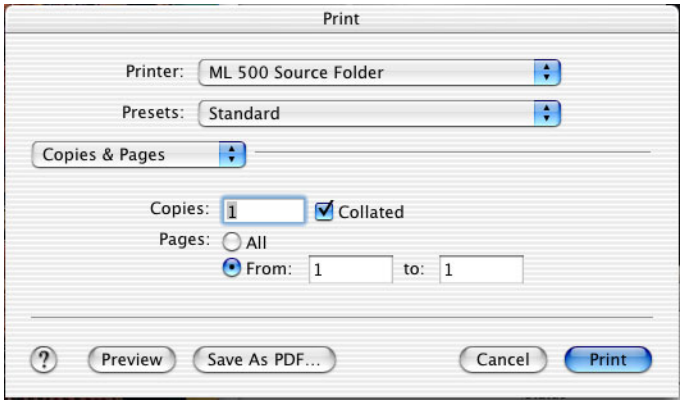
NOTE: This feature is available only in MAC OS 10.2.3 and higher.

1. From the **Settings** menu in the Page Setup dialog box (see page 111), select **Custom Paper Size**.
2. Click **New**.
3. Enter a name for the Custom Paper Size.
4. Enter values for Height, Width, and for the Printer Margins.
5. Click **Save**.

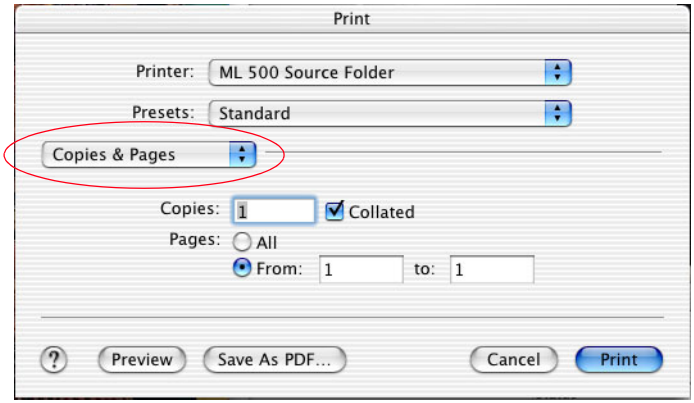
   The custom page size is now accessible from the Paper Size menu.

Using the Print Dialog Box

1. Open a document. From the **File** menu select **Print**.



2. Select the desired panel from the list.



The following panels are available

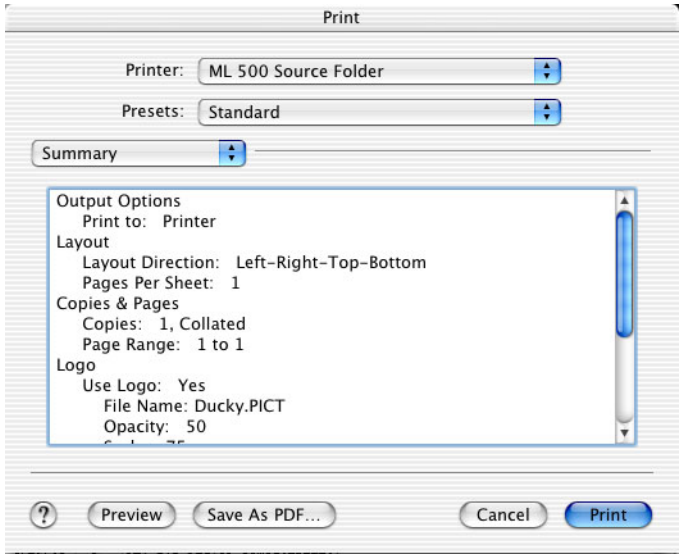
- ✔ Copies & Pages
- ✔ Layout
- ✔ Output Options
- ✔ Logo
- ✔ Printer Options
- ✔ Packages
- ✔ Summary

3. Change settings, as needed.
4. Click **Print**.

Viewing a Summary of Print Settings

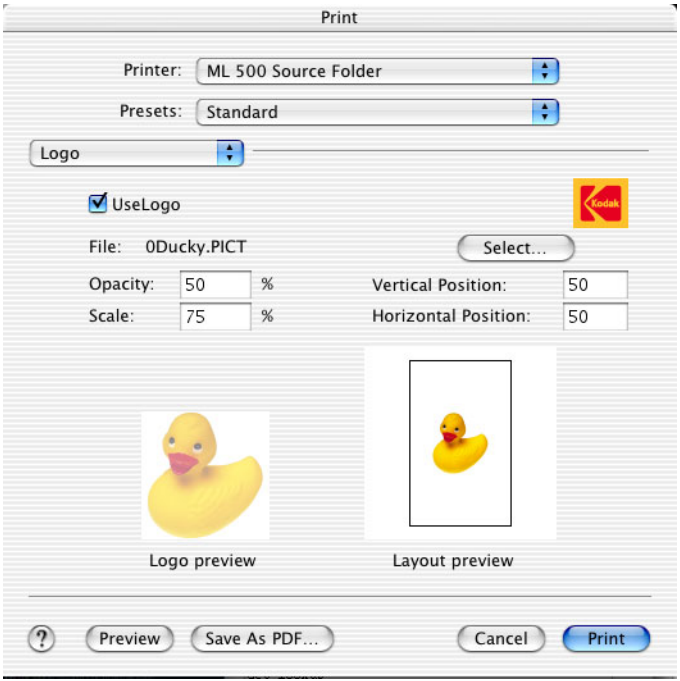
- ✔ On the Print dialog box (see page 113), select the **Summary** panel.

  The current settings are displayed.



Adding a Logo to a Page

1. On the Print dialog box (see page 113) select the **Logo** panel.



2. Check **Use Logo**.
3. Click **Select**.
4. Select the file for your logo

NOTE: The logo must be PICT file.

5. Click **Open**.

   The logo appears in the Logo preview window.

   Placing the Logo

   To change vertical and horizontal position, enter values from 0 to 100.

   - ✔ Vertical Position: 0 = top edge of the imageable area; 100 = bottom edge
   - ✔ Horizontal Position: 0 = left edge of the imageable area; 100 = right edge

Editing Opacity

✔ To edit the opacity of the logo, enter a value from 1 to 100% (the larger the percentage, the greater the opacity).

Editing Scale

✔ To edit the scale of the logo, enter a value from 1 to 400% (or until the image exceeds the imageable area, whichever comes first).

6. Click **Print**.

The position of the logo (relative to the printed page) appears in the Layout preview window.

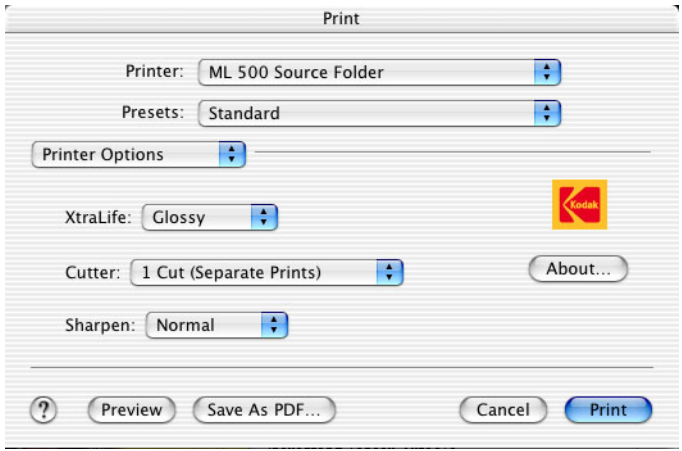
Notes:

✔ Because the logo is applied to the image after ICC color management, the logo is not color managed.

✔ Because the logo is applied to the image after "Pages per Sheet" is applied, the logo is not applied to individual pages on the sheet.

Using Printer Options

On the Printer Options Panel you can select the paper finish, select cutting options for the printer, and sharpen prints.



Choosing Glossy or Matte

1. On the Print dialog box (see page 113) select the **Printer Options** panel (see page 116).
2. Select the **XtraLife** menu.
3. Select an option:
   - ✔ **Glossy** – invokes the "gloss" ICM profile in the print job
   - ✔ **Matte** – invokes the "matte" ICM profile in the print job

Cutting Prints

⚠ **WARNING:**
The cutter is very sharp and can cause injury. Stay away from the cutter when the printer is running.

1. On the Print dialog box (see page 113) select the **Printer Options** panel (see page 116).
2. Click the **Cutter** pull-down menu.
3. Select an option (see page 31).
4. Click **Print**.

NOTE: The default setting (as shipped) is 1 cut (separate prints).

Sharpening Prints

1. On the Print dialog box (see page 113) select the **Printer Options** panel (see page 116).
2. Click the **Sharpen** pull-down menu.
3. Select an option:
   - ✔ **None** – no sharpening in the print job
   - ✔ **Normal** – normal sharpening in the print job
   - ✔ **High** – high sharpening in the print job
4. Click **Print**.

NOTE: The default setting (as shipped) is Normal sharpening.

Using Package Printing

With package printing, you send a single document page to the printer and get multiple document page sizes on your print. For example, if you select the package "5 x 7 in. and 3.5 x 5 in. and Wallets," your print contains one 5 x 7 in. print, one 3.5 x 5 in. print, and a number of wallet size prints.

The print sizes may not be exact because of the aspect ratio of the images on the document page. To fill the entire print area, you may need to resize the images on the document page before printing.

You can:

- ✔ Use standard printing packages (see page 119)
- ✔ Create custom printing packages (see page 127)
- ✔ Use custom printing packages (see page 120)

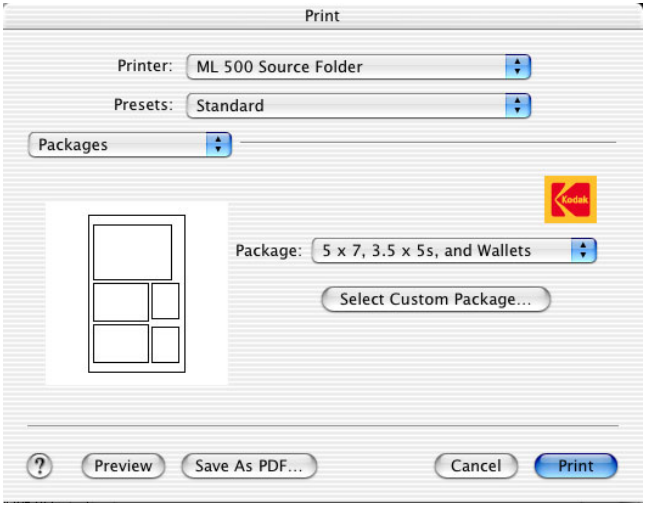
Using Standard Printing Packages

See page 100 for a description of standard printing packages.

1. Verify that 8.5 x 14 paper size is selected (see page 111).

IMPORTANT: You must use this size for all standard packages.

2. On the Print dialog box (see page 113) select the **Packages** panel.



3. From the **Package** drop-down list, select the standard package you wish to use.
4. Click **Print**.

Using Custom Printing Packages

To create a custom printing package, see page 127.

1. On the Print dialog box (see page 113) select the **Package** panel.
2. Click **Select Custom Package**.
3. Select the custom package file you wish to use.

NOTE: If a custom package has previously been selected, it appears at the bottom of the list.

4. Click **Print**.

   The preview window changes to represent the actual custom package layout.

If only a portion of a custom package fits on the page, the partial image is outlined in red, and a message appears indicating that some images in the custom package file are off the page.

In addition to this User's Guide, the following resources provide information about the ML-500 Utilities:

- ✔ Online Help
- ✔ KODAK PROFESSIONAL ML-500 Digital Photo Print System CD contains printable and multimedia documentation
- ✔ KODAK PROFESSIONAL ML-500 Digital Photo Print System Web site:
  http://www.kodak.com/global/en/service/software/ML500/ml500Software.jhtml
- ✔ Frequently asked questions:
  http://www.kodak.com/global/en/service/professional/products/ekn017852.jhtml?id=0.3.26.6.18&lc=en then select Frequently Asked Questions.
- ✔ Technical support (1-800-235-6325)

Using Online Help

Help is available for the following:

- ✔ ML-500 Utilities
- ✔ Print Server
- ✔ Calibration
- ✔ Configuration
- ✔ Most Printer drivers

You can view the Help system for each application or get context-sensitive help for window items.

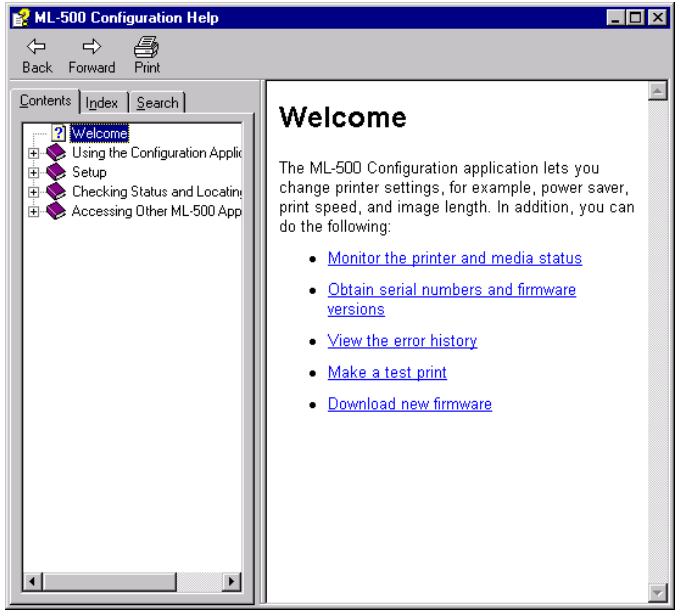
If only the ML-500 Utilities has been opened, then only that Help system is accessible. If the Configuration, Print Server, or Calibration applications have also been opened, then the Help systems for the current window (see page 23) and the ML-500 Utilities are accessible. For example, if the Configuration application is current, its Help system is accessible.

Viewing a Help System

With the exception of the Printer Drivers, view Help as described below:

1. In the current window, select the Help for that application from the Help menu.

   For example, from the **Help** menu select **Configuration Help**, then select **Help Topics**.



2. Use the Contents, Index, or Search tabs to navigate to the desired Help topic.

Viewing Help for Printer Drivers

WINDOWS:

1. In any application, select **Print** from the F**i**le menu.
2. Select the ML-500 printer then click **Properties**.
3. Click the **Help** button.

MACINTOSH:

✔ Launch the **Help Center** and select ML-500 Help.

Using Context Sensitive Help

WINDOWS:

Do one of the following to view a description of a window item:

✔ Right-click a window item (for example, a button or list item) then click the **What's This?** popup.

✔ Press the F1 key for information about a highlighted window item.

MACINTOSH:

✔ On the Print dialog box, click the  button.

Error Message or Problem	Reason for Error
Message indicates that the ML-500 is out of ribbon	Check the following (Refer to the ML-500 Operator's Guide): ✔ Is the platen assembly screwed in completely? ✔ Is the ribbon installed properly? ✔ Is the ribbon wound properly? ✔ Is the paper threaded properly over all of the rollers?
No source folder appears during port monitor installation	You must run the Print Server application before installing the port monitor. Verify that a Source folder has been created (see page 44) **before** installing the port monitor.
Image Too Large	The print job is wider than 8.533 in. / 21.67 cm. and/or longer than 37 ft / 11.2776 m and will not fit on the page even if the offset is set to zero.
Image Too Small	The print job is less than 150 lines (1/2 in. / 1.27 cm.) long.
Offset Too Large	The print job is wider than the paper width but it would fit if the offset was smaller.
Incompatible File Format	Image file must be in one of the following formats: JPEG (*.jpg), TIFF (*.tif), Rosetta (*.ros).
Invalid Color Management Profile	A color management profile is corrupt or otherwise unusable.

Error Message or Problem	Reason for Error
Driver can't read logo file. Format is incorrect.	Logo files must not be compressed. They can be uncompressed TIFF (.tif) or bitmap (.bmp).
Job isn't printing or blank sheet is printed	When you move, delete, or edit a print job, printing is suspended. Complete the task and printing resumes automatically.
Can't print from application using the printer driver	Check the following: ✔ Are all the cables attached correctly? (Refer to the ML-500 Operator's Guide.) ✔ Does the printer appear in the list of available printers in the Print dialog box? ✔ Did you select the driver? ✔ Did you select the appropriate print settings?
Artifact appears in prints (lead edge fold)	This may be caused by a ribbon folding. Try a ribbon with a different lot number If the problem appears with a matte ribbon, try a glossy ribbon to see if the artifact disappears.
Error # 1001, 1005, or 1023 appears or blank white space appears in prints.	Check the following: ✔ WINDOWS XP Home edition installed on the server can cause this problem. See page 1 for system requirements for the server system. ✔ Do you have the latest firmware version? See page 34.

Error Message or Problem	Reason for Error
When printing from ADOBE PHOTOSHOP, 8.5 x 14 images are cropped or blank pages are printed.	To resolve (in PHOTOSHOP), select **Page Setup**. from the **File** menu, select the ML-500 printer, and select a new page size.
Custom form does not appear in the Paper Size drop-down list (see page 99).	One of the dimensions must be 8.53 in. (21.67 cm).

Creating Custom Printing Packages or Layouts

You may create a custom package or layout template file using any word processing application and then save it as a text file. Use pixels as the units for the image size, and specify where you want the images to appear on the printed page. When you print your job, select the custom package template file, and apply it to your print job.

NOTE: Use the sample files on the CD that was shipped with the ML-500 printer as examples for creating your custom package template files.

For each image in the job, use pixels to indicate:

- ✔ distance from the left side of the paper's printable area to the left side of the image
- ✔ distance from the top of the paper's printable area to the top of the image
- ✔ width of the image
- ✔ length of the image

Specifications for creating a template file

Use the following format to define the placeholders for the images in your custom template:

Type: KPKG<EOL>

Version 1.0<EOL>

#<comments><EOL>

x1,y1,xdim1,ydim1<EOL>

x2,y2,xdim2,ydim2<EOL>

xN,yN,xdimN,ydimN<EOL>

- ✔ The Type field requires the 4 characters KPKG.
- ✔ The Version field requires the 2 digits separated by a single decimal (1.0 in the example).
- ✔ Use pixel units for image locations and dimensions.
- ✔ The # sign designates the beginning of a comment. The end of a comment is indicated by <EOL> (End of Line, the Enter or Return key). Comments can appear anywhere.
- ✔ The upper left corner of image N is identified by xN, yN as referenced from the 0,0 datum of the printable area of the page.
- ✔ The dimensions of image N are in integers identified by xdimN, ydimN with no integers at a value less than 6.
- ✔ The x and y values are non-negative integers separated by commas.
- ✔ The end of an image specification is indicated by <EOL> (End of Line, the Enter or Return key).
- ✔ Always include at least one complete image in the file.

Glossary

Aim

The desired response of the printer.

Client systems

Remote computer systems that are networked to the server system that is connected to the ML-500 printer. If you will be using the ML-500 WINDOWS printer driver to print, the driver must be installed on the client systems.

Command file (*.kmd)

Specifies an image to be printed and the job settings to apply to that image.

Glossy

A shiny finish that coats the top surface of the paper.

Hot folder

See Source folder.

Layout

A single print with multiple copies of the same page size, for example two 4 x 6 in. prints.

Log file

A text file (*.txt) where actions performed by the ML-500 Print Server are recorded.

Look-up table

Look-up tables let the printer compensate for changes in media and in the printer to keep your printer consistently operating at the same color response. Look-up tables are created by combining the desired density response for the printer in the form of aims, the current calibration curves, and the calibration image information.

LUT

See Look-up table.

Matte

A flat finish that coats the top surface of the paper.

Media catalog

A file that contains data about the types of media the printer can use. This includes some data about the media that does not affect calibration.

Media name

The media name is a combination of several media properties: ribbon set, paper type, XtraLife type (glossy or matte), and media width.

Package

A single print with multiple document page sizes, for example, one 5 x 7 in. print, one 3.5 x 5 in. print, and a number of wallet size prints.

Printer control panel

The display panel on the front of the ML-500 printer that provides printer status and error information.

Print job

A block of information that is assigned a number in the print queue. It is a combination of an image file and its specific settings, which tells the printer how to print the image. Print jobs are printed in the order they were added to the print queue.

Print queue

The print queue is a list of print jobs awaiting printing. For each job number, the print queue displays the number of copies, the type of image file, the current status, and the file source.

Rosetta file

Files created by the printer drivers.

Server systems

The system connected to the ML-500 printer is considered the server system. The ML-500 Printer Utilities are installed on this system. If you will be using the ML-500 WINDOWS driver to print, the port monitor and the printer driver(s) must be installed on the server before installing the printer drivers on the client systems.

Source folder

The Source folder is a folder that you designate for printing image files. Image files placed within this folder will be automatically sent to the print queue as print jobs.

Template file

Used when creating custom printing packages or layouts, a template defines size and position of placeholders for images.

Index