

The Document Company
XEROX

WorkCentre 480cx
Color All in One

Xerox Corporation

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Preface

Safety Notes

Your WorkCentre 480cx and supplies are designed and tested to meet strict safety requirements. Included are safety agency examination and approval and compliance to established environmental standards. Please read the following instructions carefully before operating the WorkCentre 480cx, and refer to them as needed to ensure the continued safe operation of your WorkCentre.

Follow all warnings and instructions marked on or supplied with the product.

Symbols Used:  Caution  = Warning

Unplug the WorkCentre 480cx from the wall outlet before cleaning. Always use materials specifically designated for this product. Use of other materials may result in poor performance and could create a hazardous situation.

Do not use aerosol cleaners. Follow the instructions in this User Guide for proper cleaning methods. Never spray anything onto or inside of the WorkCentre 480cx.

Use supplies or cleaning materials only as directed. Keep all supplies and materials out of reach of children.

Do not use the WorkCentre 480cx near water, in wet locations, or outdoors.

Do not place the WorkCentre 480cx on an unstable cart, stand, or table. The WorkCentre 480cx may fall, causing personal injury or serious damage to the machine.

This product is equipped with a grounding type plug. The plug will fit only into a grounded power outlet. This is a safety feature. To avoid risk of electric shock, contact your electrician to replace the receptacle if you are unable to insert the plug into the outlet. Never use an adapter to connect the WorkCentre to a power source receptacle that lacks a ground connection terminal.

The WorkCentre 480cx should be operated from the type of power source indicated on the label. If you are not sure of the type of power available, consult your local power company.

Do not allow anything to rest on the power cord. Do not locate the WorkCentre 480cx where people will step on the cord.

The power supply cord is the disconnect device for this equipment. Ensure that the WorkCentre 480cx is installed near an outlet and is easily accessible.

Your machine is equipped with an energy saving device to conserve power when the machine is not in use. The machine may be left on continuously.

Slots and openings in the cabinet and in the back and sides of the WorkCentre are provided for ventilation. To ensure reliable operation of the WorkCentre and to protect it from overheating, these openings must not be blocked or covered. The WorkCentre 480cx should never be located near or over a radiator or heat register. The WorkCentre 480cx should not be placed in a built-in installation unless proper ventilation is provided.

Never push objects of any kind into the slots of the WorkCentre 480cx as they may touch dangerous voltage points or short out parts which could result in a fire or electric shock.

Never spill liquid of any kind on the WorkCentre 480cx.

Never remove covers or guards that require a tool for removal. There are no casual operator serviceable areas within the covers of the WorkCentre 480cx.

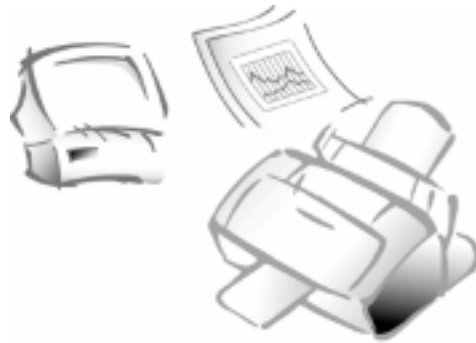
Never defeat interlock switches. This Machine is designed to restrict operator access to unsafe areas. Covers, guards, and interlock switches are provided to ensure that the machine will not operate with covers opened.

Use of an extension cord with this WorkCentre is not recommended or authorized.

Avoid direct viewing of the document lights. The lamps are bright and, while not harmful, they may cause an annoying afterimage. Always keep the document cover closed during operation and storage.

If you need additional safety information concerning the WorkCentre or Xerox supplied materials, you may call the following toll-free number.

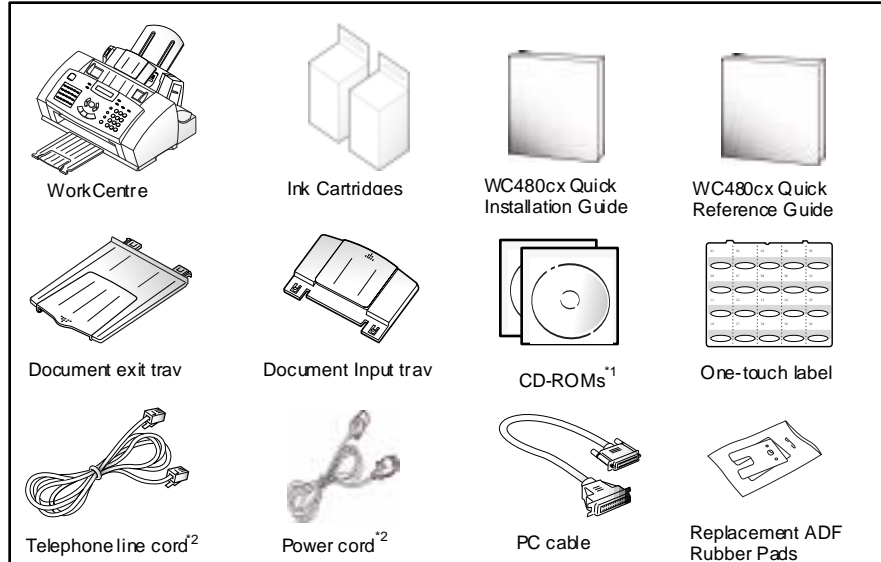
In the United States or Canada: **1 - 800 - 828 - 6571**



Getting Started

Set Up Your Machine

Unpacking

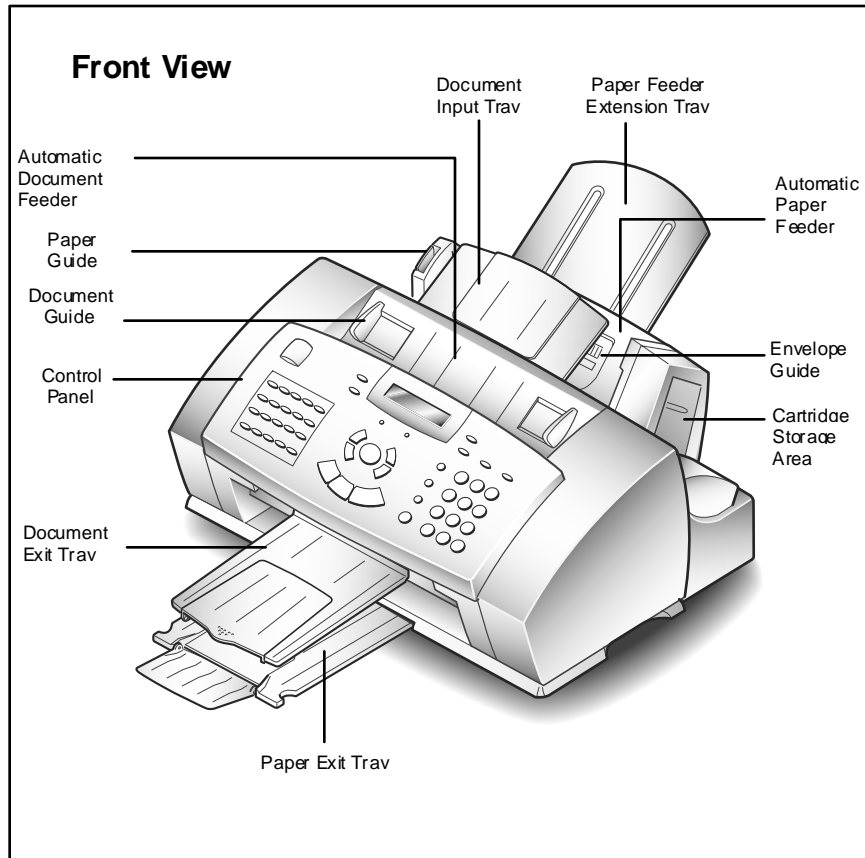


*1 Two CD ROMs containing Installer, Software and Online User Guide.

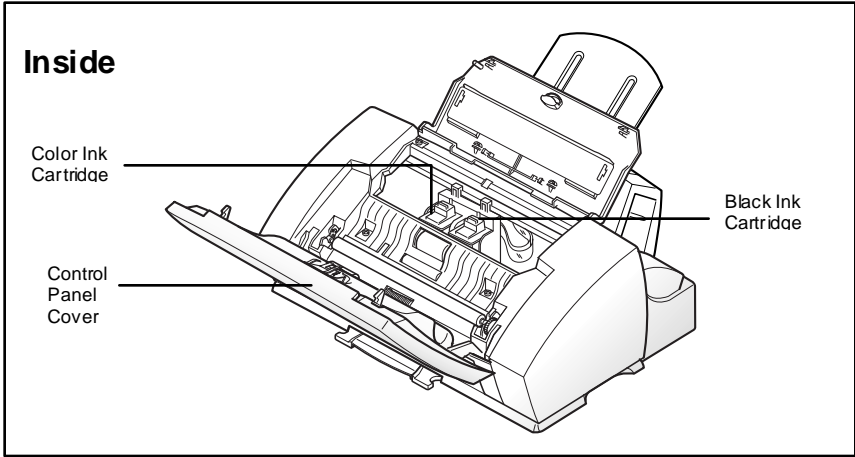
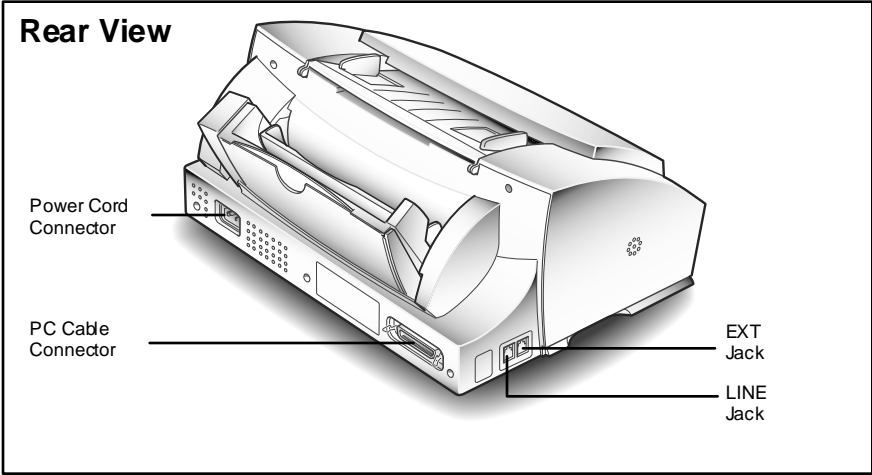
*2 Appearance may vary according to country.

Control Locations and Functions

Take a moment to familiarize yourself with the main components and their locations.



Note: Your machine may look slightly different than the illustration.



Choosing a Location

To help guarantee trouble-free operation of your machine, place it on a flat, stable surface near your workstation. Leave enough space to allow for easy paper loading, paper unloading, and opening of the front cover.

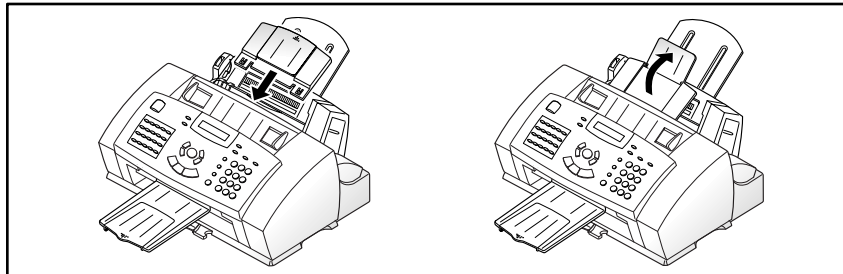
Do not place your machine:

- In direct sunlight.
- Near heat sources or air conditioners.
- In dusty or dirty environments.

Setting Up Your Machine

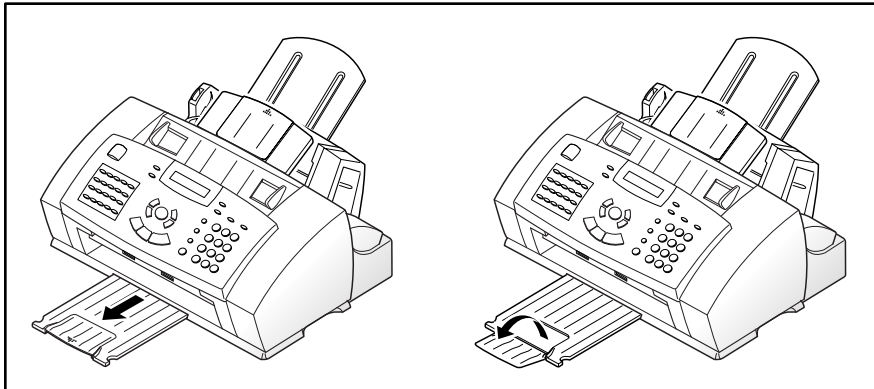
Document Input Tray

Insert the two tabs on the tray into the slots as shown. Fold out the extension tray, if necessary.



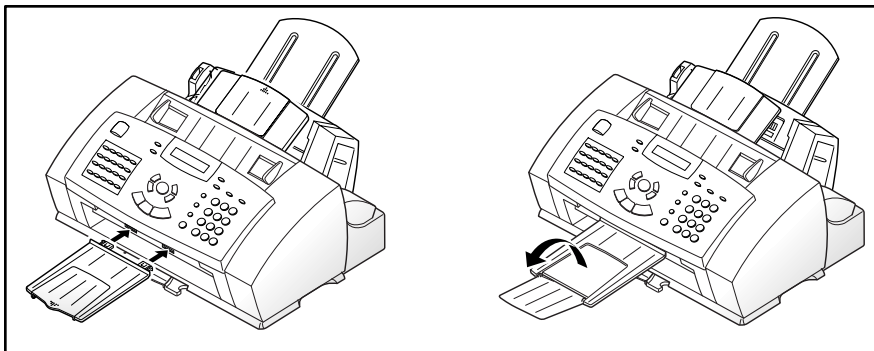
Paper Exit Tray

Slide the Paper Exit Tray out from the base of the machine. If desired, fold out the extension tray.



Document Exit Tray

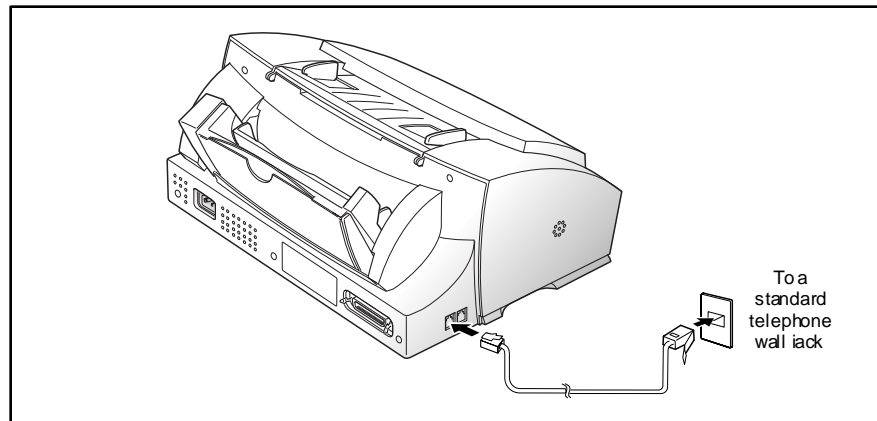
Insert the two tabs on the document exit tray into the slots on the front of your machine. Fold out the extension tray, if necessary.



Telephone Line

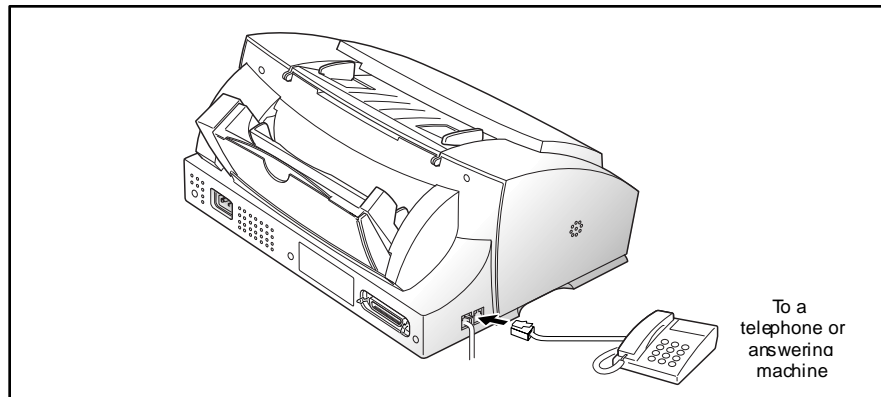
Note: There are many possible ways to connect telephone accessories to the WorkCentre 480cx. Refer to *Telephone Connectivity Guidelines* on page 9-19 for more detailed connection scenarios.

Plug one end of the telephone line cord into the TEL LINE jack and the other end into a standard phone wall jack.



Extension Phone

If you want to use a regular phone or answering machine with your WorkCentre 480cx, connect it to the jack labeled EXT on the side of the machine.



PC Cable

Your Xerox WorkCentre 480cx is equipped with a parallel interface port for use with IBM PCs and compatible computers. Using the supplied Centronics parallel cable, connect your WorkCentre 480cx to a computer that supports bi-directional communications (IEEE standard 1284).



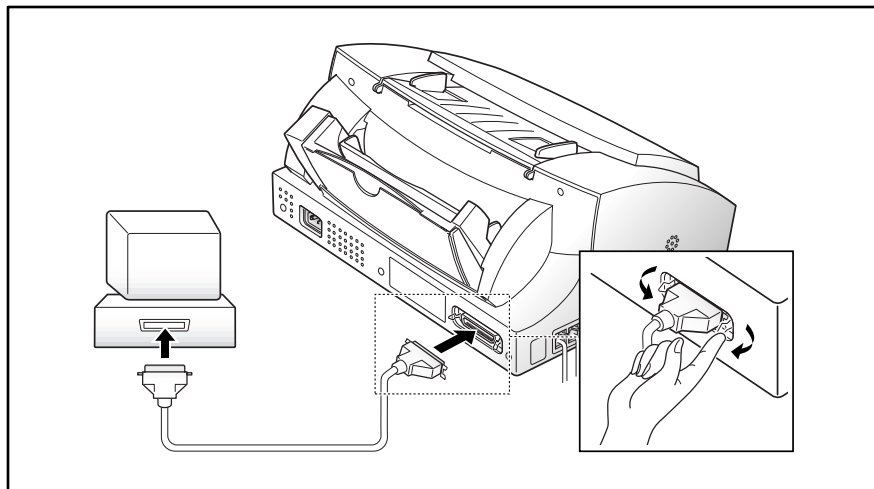
Note: If using another parallel cable, ensure that it meets IEEE standard 1284 specifications and is not longer than twelve feet.

To connect the WorkCentre 480cx to a computer, follow the steps below:



CAUTION: Make sure the computer is turned off, and the WorkCentre 480cx is unplugged from the power outlet.

- 1 Plug the parallel cable into the connector on the back of the WorkCentre 480cx. Swing the metal clips of the connector inward until they lock firmly inside the notches on the parallel cable connector.



- 2 Connect the other end of the cable to the parallel port on your computer. Refer to your computer documentation for assistance with this procedure.

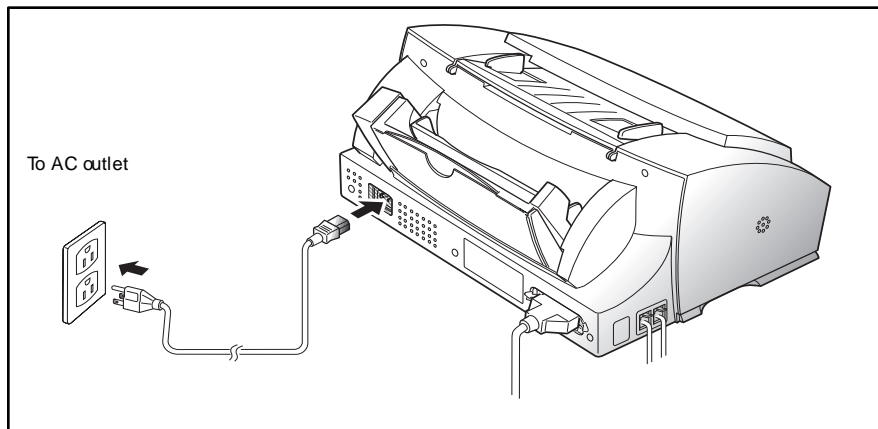
AC Power Cord

1



WARNING: There is NO On/Off switch for the WorkCentre 480cx. When the AC power cord is plugged in, the machine is fully energized.

- 1 Plug one end of the AC power cord into the back of the machine and the other end into a grounded AC power outlet.



- 2 The machine turns on and performs a self diagnostic test. **POWERING UP PLEASE WAIT** appears on the LCD display.

If you are setting up the machine for the first time, or if the machine has not been operated for an extended period of time, it will emit an alarm sound and the Alarm LED will light. **SET DATE AND TIME**, and **PRESS START** will appear on the LCD display.

SET DATE AND TIME
PRESS START

- 3 Press the Start button. A flashing cursor will appear on the first character of the date in the LCD display.
- 4 Enter the date and time using the Number Keypad. If you need assistance entering characters using the Number keypad, refer to *Entering Alphanumeric Characters* on page 3-26.
- 5 Press the **Start/Enter** button to confirm your settings.

The WorkCentre 480cx returns to standby mode. If there are no ink cartridges installed, ALL CART. EMPTY appears in the top line of the display.



Note: If you do not set the date and time, after a short period of time the machine will automatically accept whatever date and time are displayed on power up. It will then go into standby mode.



Note: To power off the machine, unplug the power cord. Power must be applied at all times if the machine is used as an unattended fax machine.

Installing Ink Cartridges

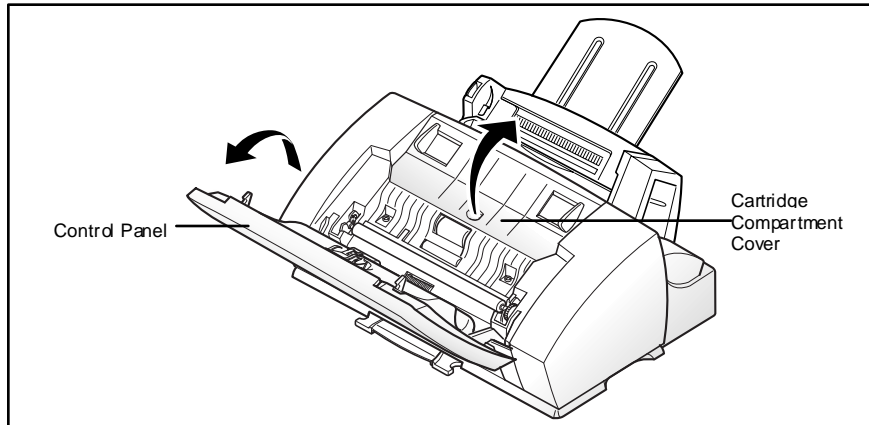
Your machine is a dual cartridge Inkjet printer. You must use a black and a color ink cartridge. When viewed from the front of the machine, the Black Ink Cartridge installs in the right Cartridge Holder while the Color Ink Cartridge installs in the left Cartridge Holder. An optional Photo Ink Cartridge, which can be installed in place of the Black Ink Cartridge, is also available.

When installing ink cartridges, you must provide specific information to the Workcentre 480cx about the cartridges you install. This allows the printer to keep track of which cartridges are installed and to gauge ink cartridge utilization. There are two methods of entering this information. You may enter the required information directly via the WorkCentre 480cx control panel or you can update Ink Cartridge information using the WorkCentre 480cx Control Software and a PC.

The procedures in this section cover Ink Cartridge Installation without using the WorkCentre 480cx Control Program. To install Ink Cartridges using the WorkCentre 480cx Control Program, refer to *The Xerox WorkCentre Control Program* on page 5-21.

Installing Ink Cartridges

- 1 Lift open the Control Panel cover by pulling up on the Control Panel.

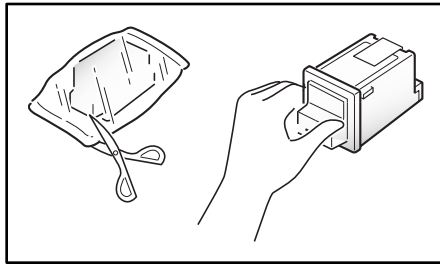


The Cartridge Compartment Cover is now accessible.

- 2 Open the Cartridge Compartment Cover by lifting up on the recessed handle.

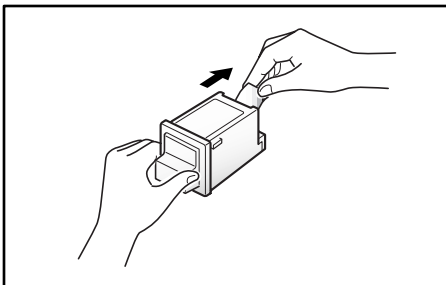
The Cartridge Carrier Assembly moves to the center of the machine.

- 3 Unwrap and remove the Black Ink Cartridge from its packaging. Hold the cartridge by the top only.



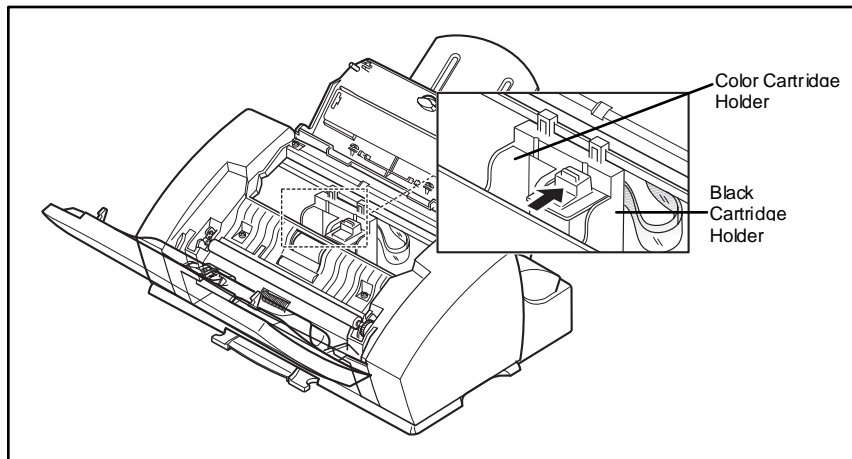
Note: Avoid touching the electrical contacts on the cartridge.

- 4 Carefully remove the sealing tape by pulling straight out on the tab located at the end of the Ink Cartridge.



Note: Ensure that there are no pieces of tape remaining on the cartridge.

- 5 Locate the Black Ink Cartridge holder inside the printer. The Black Ink Cartridge holder is located on the right side of the Cartridge Carrier Assembly and can be identified by a black key tab.

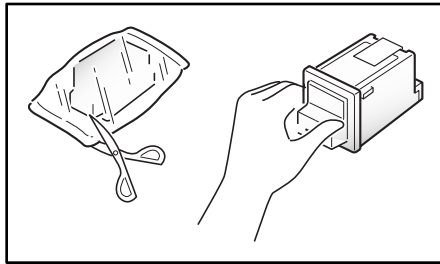


- 6 Slide the Black Ink Cartridge down into the holder and push it in the direction of the arrow until it clicks into place.



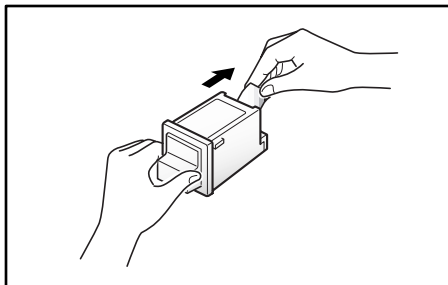
Note: If you want to install the optional Photo Ink Cartridge, you must first remove the Black Ink cartridge. Next, install the Photo Ink cartridge into the cartridge holder in place of the Black Ink Cartridge.

- 7 Unwrap and remove the Color Ink Cartridge from its packaging. Hold the cartridge by the black areas or colored top only.

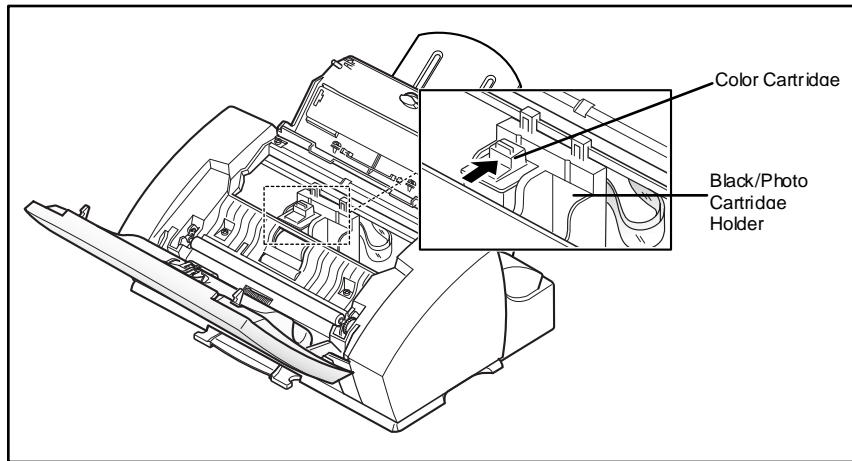


Note: Avoid touching the electrical contacts on the back of the cartridge.

- 8 Carefully remove the sealing tape by pulling straight out on the tab located on the end of the Ink Cartridge.



- 9 Locate the Color Ink Cartridge holder inside the printer. The Color Ink Cartridge holder is located on the left side of the Cartridge Carrier Assembly and can be identified by a light blue key tab.



- 10 Slide the Color Ink Cartridge down into the holder and push it in the direction of the arrow until it clicks into place.
- 11 Close the Cartridge Compartment Cover.
CARTRIDGE CHANGED? appears in the display
- 12 Press the **Down** or **Up** button until BOTH appears in the display.
- 13 Press the **Start/Enter** Button.
LEFT CARTRIDGE? appears in the top line of the LCD display.

- 14 Press the **Up** or **Down** buttons until NEW COLOR CARTRIDGE appears in the lower line of the display.
- 15 Press the **Start/Enter** button to confirm your choice.
RIGHT CARTRIDGE? appears in the top line of the LCD display.
- 16 Press the **Up** or **Down** buttons until NEW BLACK CARTRIDGE appears in the lower line of the display.
- 17 Press the **Start/Enter** button to confirm your choice.
The Cartridge Carrier Assembly moves back to the docking position.
- 18 Run a Cartridge Alignment Test. This will ensure that your WorkCentre 480cx generates the best possible prints. Refer to *Arrange Alignment* on page 1-41.



CAUTION: Do not power off the machine until the Cartridge Carrier Assembly has moved back into the docking position. If no menu choices are made, the Carrier Assembly will automatically return to the docking position after about one minute.

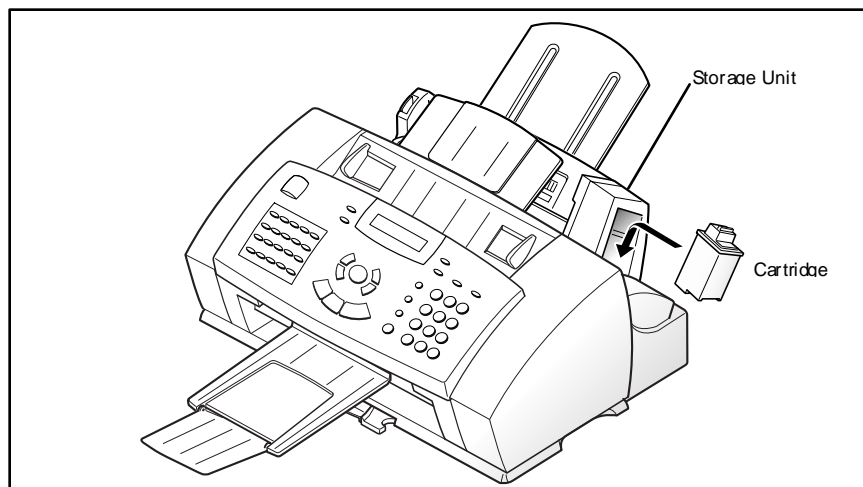
Storing Ink Cartridges

The ink cartridge storage unit provides a convenient place to store an extra black or color print cartridge, and prevents an opened cartridge from drying out.

To store a ink cartridge in the storage unit:

Insert the ink cartridge into the storage unit and push down lightly until it clicks into place.

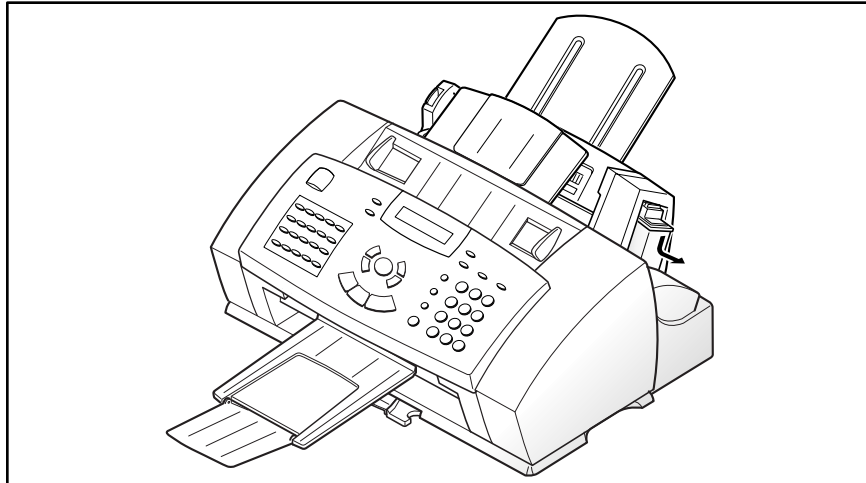
When switching between photo and black ink cartridges, keep the unused one in the ink cartridge storage unit. The storage unit prevents the cartridge from drying out while providing easy access to it.



To remove a print cartridge from the storage unit:

Push the cartridge down slightly and pull it toward you.

1



Loading Paper

For best results, use high quality xerographic copy paper or inkjet paper.

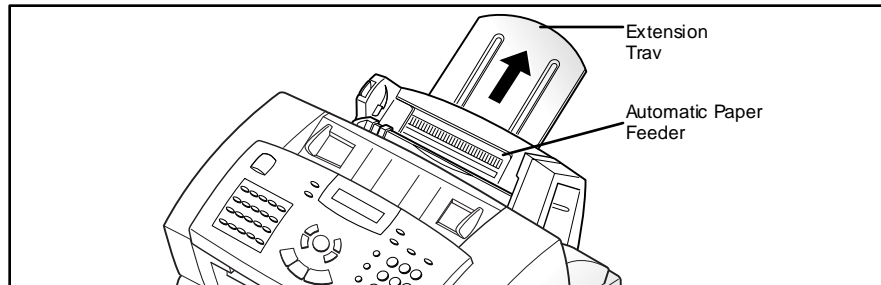
Using the Automatic Paper Feeder

You can stack paper, envelopes, card stocks, labels, or transparencies in the Automatic Paper Feeder to feed automatically. If there is no paper loaded in the Automatic Paper Feeder, NO PAPER will appear in the LCD Display. The WorkCentre 480cx will beep and the Alarm LED will light. The Automatic Paper Feeder can hold a maximum of 100 sheets of 20 lb plain paper, or 10 envelopes or other print media. Depending upon media thickness, maximum capacity may be reduced.



Note: If you experience problems feeding paper, place the media into the Manual Paper Feeder one sheet at a time.

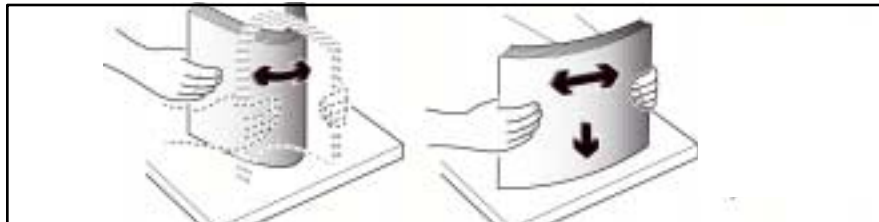
- 1 Pull the Extension Tray on the Automatic Paper Feeder all the way up.



- 2 Prepare the print material for loading.

For paper and envelopes, flex paper or fan envelopes back and forth. Do not fold or crease the paper.

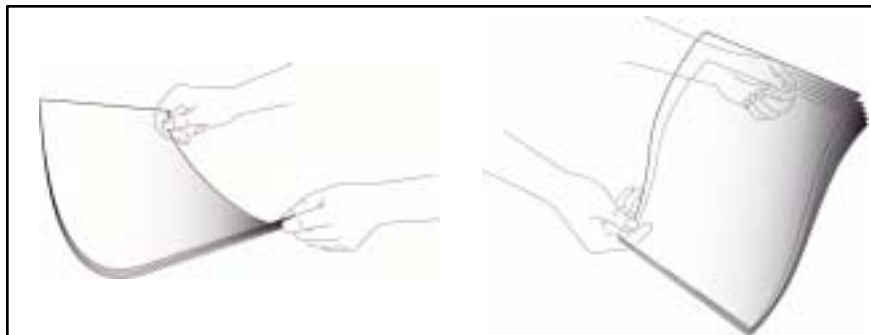
Straighten the edges on a level surface.



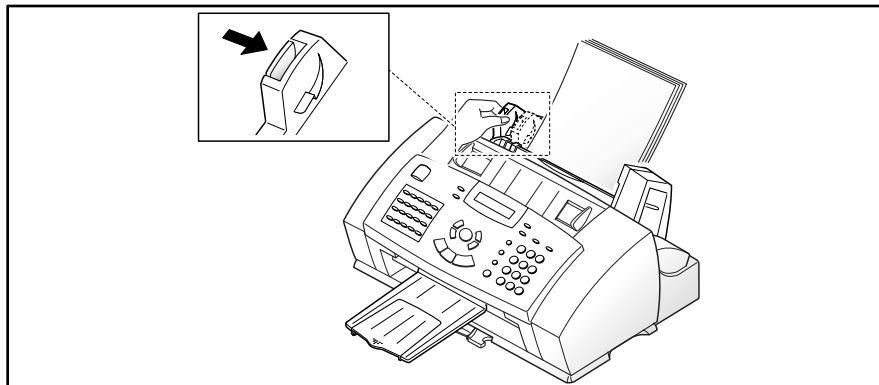
Note: If envelopes jam while printing, try reducing the number of envelopes in the Automatic Paper Feeder.

For transparencies, be sure to use transparency stock approved for use with inkjet printers. Refer to the packaging for the transparency stock to determine the print side. Hold the transparencies by the edges and avoid touching the print side. Be careful not to scratch or leave fingerprints on the print side.

Fan the stack of transparencies to prevent feeding failures.



- 3 Load the print material in the Automatic Paper Feeder. Ensure that the right edge of the media is in contact with the right side of the Automatic Paper Feeder. Do not exceed the rated capacity. Do not mix different types of print media. Refer to the following instructions for loading each type of print material.
 - a) Load paper or transparencies with the print side facing you.
 - b) Load letterhead paper with the design side face-up. The top edge of the sheet with the logo should enter the printer first.
- 4 While squeezing the tab on the paper guide, move the guide to the right. Slide the paper guide until it lightly touches the side of the stack of print media. Do not press the paper guide too tightly to the edge of the print media, the guide may bend the media or provide too much resistance when feeding.



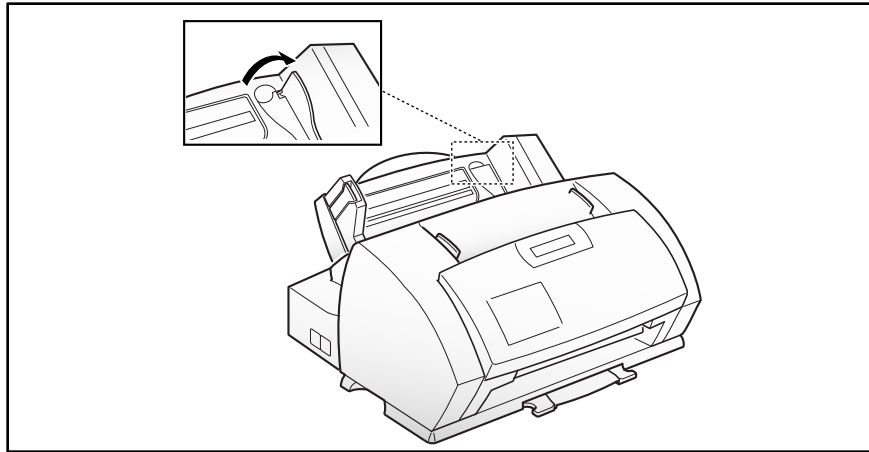
Note: When you print a file from your PC using the Automatic Paper Feeder, make sure that you select the source and the correct paper size from your software application before starting your print job.

Loading Envelopes

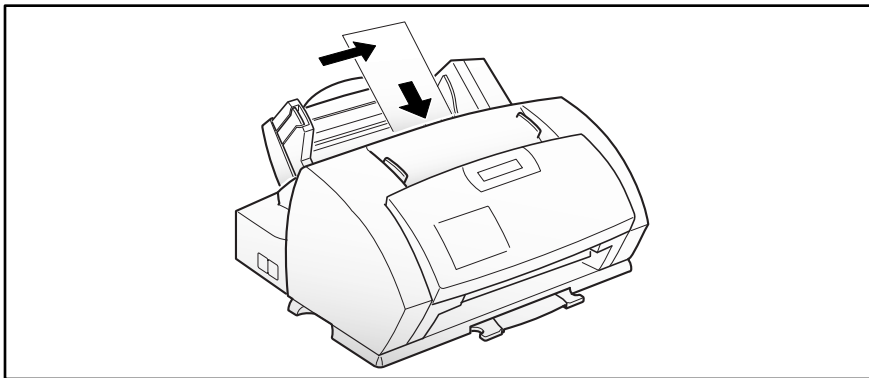
When printing envelopes, remember to use the envelope guide in the Automatic Paper Feeder.

To load envelopes:

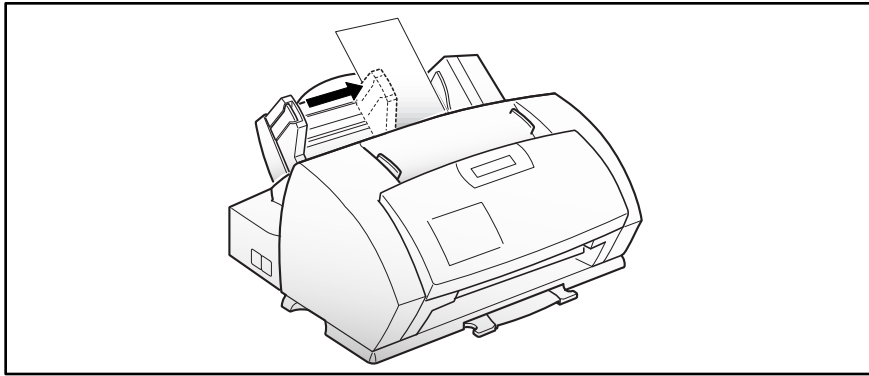
- 1 Turn the envelope guide upright.



- 2 Load envelopes with the address side facing you. The end of the envelope with the stamp area must enter the Automatic Paper Feeder first. The right edge of the envelope must align with the raised edge of the envelope guide.



- 3 Squeeze the Left Paper Guide and move it to the right until it lightly touches the envelope.



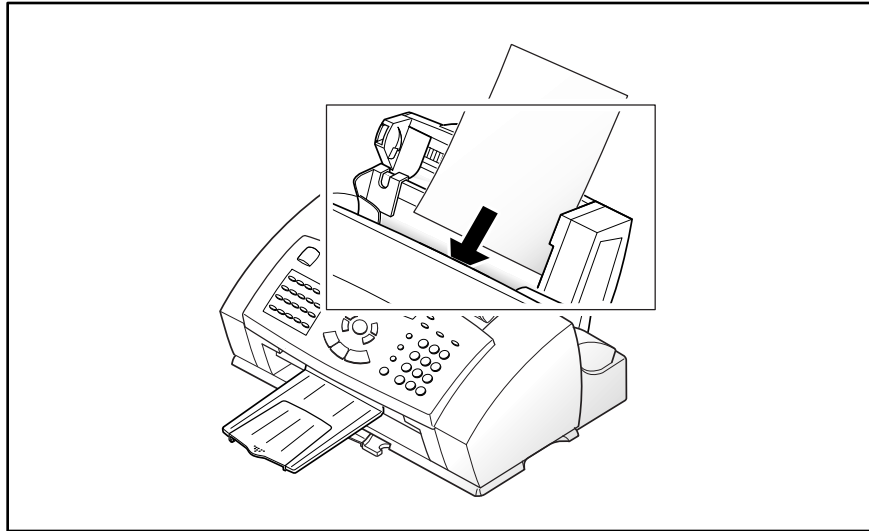
Note: Do not feed *stamped* envelopes.



CAUTION: Never use envelopes with clasps, snaps, windows, coated linings, or self-stick adhesives. These envelopes may severely damage the printer.

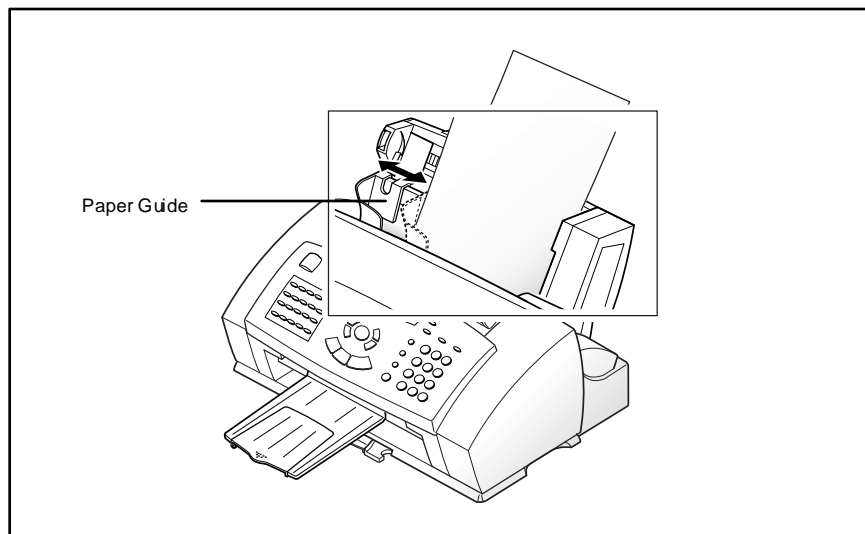
Using the Manual Paper Feeder

Use the Manual Paper Feeder to feed paper **one sheet at a time** into your machine.



Note: When you print a file from your PC using the Manual Paper Feeder, ensure that you select the source and the correct paper size from your software application before starting your print job.

- 1 Place the paper in the Manual Paper Feeder and adjust the paper guide to the width of the print material. Slide the paper guide to the right until it lightly touches the stack of print media. Do not tightly press the paper guide to the edge of the print media, the guide may bend the media or prevent the media from feeding.



Note: Refer to *Loading Paper* on page 1-20 for specific instructions on loading various types of media.

- 2 Ensure that the media is fed into the machine as far as it will go.
- 3 Press the **Start/Enter** button to start manual feeding of the media. If you have more than one page to print, press the **Start/Enter** button for each page.

Paper Guidelines

When selecting or loading paper, envelopes, or other special media, keep these guidelines in mind:

- Attempting to print on damp, curled, wrinkled, or torn paper can cause paper jams and poor print quality.
- Use only high quality, copier grade paper. Avoid paper with embossed lettering, perforations, or texture that is too smooth or too rough.
- Store paper in its ream wrapper until ready to use. Place cartons on pallets or shelves, not on the floor. Do not place heavy objects on top of the paper, whether it is packaged or unpackaged. Keep it away from moisture, or other conditions that can cause it to wrinkle or curl.
- During storage, moisture-proof wrap (any plastic container or bag) should be used to prevent dust and moisture from contaminating your paper.
- Always use paper and other media that conform with those listed under Specifications in the Appendix.
- Use only well-constructed envelopes with sharp, well creased folds.
 - DO NOT use envelopes with clasps and snaps.
 - DO NOT use envelopes with windows, coated linings, self-stick adhesives, or other synthetic materials.
 - DO NOT use damaged or poorly made envelopes.

Paper Selection

One of the most important things you can do to assure the best possible printing performance of your machine is to select the correct paper. Your machine produces letter quality print on most plain bond papers, including cotton bond and photocopying papers; it does not require special ink jet papers. However, the print quality varies with different paper types. Be sure to test a type of paper before you purchase a large quantity.

Paper Types

Plain Paper

The machine supports paper sizes of letter, legal, and A4 in portrait orientation. You can use regular copier paper, cotton bond papers, and typical letterhead. Always use paper without curls, folds, staples, or damaged edges.

Inkjet Paper

This paper has been developed specifically for printing with inkjet printers. It will produce high quality documents which will compare favorably to those produced with a laser printer.

Coated Paper

The coated paper has been developed for high quality printing with minimal or no smearing or running when in contact with water or damp surfaces, making it a good choice for damp or rainy environments.

Glossy Photo Paper

Glossy photo paper is a high gloss, thicker paper that produces the look and feel of a photograph. Use this paper to produce photo-realistic prints from your printer.

Transparencies

Your transparencies will possess excellent contrast, sharpness, and color.

Iron-on Transfers

Use inkjet T-shirt transfers to create and personalize T-shirts, sweatshirts, aprons, tablecloths, napkins, tote bags, and anything else your imagination allows! Use on any cotton or cotton/poly blend fabric. Your image is printed in mirror image so when you iron it onto the T-shirt, the image is viewed correctly.

Greeting Card Stock

Get the most out of card making software with Greeting Cards. These cards give your unique, personalized cards the look and feel of professional cards. You can create cards, invitations, announcements, and more.

Guidelines for Special Paper and other Media

Be sure to read any instructions that come with your special paper. These instructions provide important information regarding how to achieve the highest print quality with these papers.

- It is recommended that you feed special paper types one sheet at a time.
- For transparencies and glossy photo paper, follow these guidelines:

Let the printed sheets dry completely before storing them.

When a printed sheet has dried completely, cover the printed side with a sheet of plain (not coated) paper before storing it; this is recommended even if you place the sheets in a clear file or plastic holder.

Do not leave the film in the paper tray for long periods of time. Dust and dirt may accumulate on the film resulting in spotty printing.

To avoid smudging caused by fingerprints, handle transparency film and coated paper carefully.

To avoid fading, do not expose the printed film to prolonged sunlight.

Store unused media flat. Do not remove papers from their protective packaging until you are ready to use them.

Store unused media at temperatures between 59 and 86 degrees Fahrenheit (15 to 30 degrees Centigrade). The relative humidity should be between 10% and 70%.

- If the print density of your page is very high, light paper stock may curl slightly due to the large amount of ink. If you need to print dense graphics, try printing on heavier stock.
- Do not use thicker paper than meets the specifications for this machine. Printing with a paper that is thick enough to come in contact with the print head nozzles may damage the cartridge.

Installing Software

System Requirements

Proper operation of the WorkCentre 480cx requires that your personal computer meets or exceeds the following system requirements:

- IBM compatible personal computer, with a 486SX 33MHz or faster processor
- Windows operating environment (3.1x, Windows 95, Windows 98, Windows NT 4.0)
- At least 10MB of free hard disk space*
- 8MB or more RAM** (Windows 3.1x), 16MB RAM (Windows 95, 98), and 24MB RAM (NT 4.0)

* 10MB minimum hard disk space required for driver installation only. If installing the additional software packages included on the CD ROM, an additional 100MB free hard disk space is required (70MB Pagis Pro, 20MB MGI PhotoSuite, 10MB LaserFax Lite).

** 8MB RAM required for driver installation only. If installing the additional software packages included on the CD ROM, 16MB RAM is required.

Overview of WorkCentre 480cx Drivers

Before the WorkCentre 480cx can interface with your computer, you must install driver files. These drivers will enable your computer to properly communicate with the WorkCentre 480cx for printing, scanning and PC fax operations. PC fax is the process of faxing a computer file, such as a word processing document or image file, directly from your computer via the built-in fax modem in the WorkCentre 480cx.

All of the necessary drivers are contained on the CD included with your WorkCentre 480cx. In addition to the driver files, several software applications are also included on the CD ROM. The scanning program Pagis Pro, a suite of four scanning applications, is provided for your convenience. LaserFAX Lite, a PC Fax software application which allows you to fax directly to and from your PC, is also included.

Software Included With the WorkCentre 480cx

In addition to the driver files, several software applications are also included on the CD ROM.

- Pagis Pro 2.0 - a suite of four scanning applications.
- LaserFAX Lite 3.5 - a PC Fax software application which allows you to fax directly to and from your PC.
- MGI PhotoSuite - a suite of graphics processing tools.

Software Installation Procedure

In Windows 3.x, Windows 95/98, or Windows NT 4.0

- 1 Make sure the Xerox WorkCentre 480cx is connected to your computer.
- 2 Power off the WorkCentre 480cx by unplugging it from the wall outlet.
- 3 Turn on your PC and start Windows.
- 4 Power on the Workcentre 480cx by plugging it into a grounded wall outlet.
- 5 Insert the supplied CD into your computer's CD ROM drive.

The Xerox WorkCentre 480cx installation program will begin.

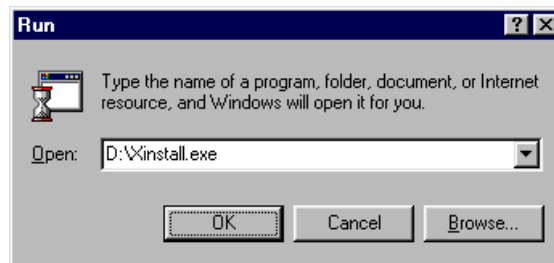
If the program does not start:

- a) From the **Start** menu, select **Run** (Windows 95/98 and NT 4.0).

Or

From the **File** menu of the Windows Program Manager, select **Run** (Windows 3.x).

- b) Type D:\XINSTALL.EXE (where "D" represents the letter designation of the computer's CD ROM drive), and click **OK** to start the installation program.



The Xerox WorkCentre 480cx installation program will begin.

- 6 Follow the on-screen instructions to complete the software installation.

Note: When installing LaserFAX Lite, you must complete the registration form. Follow the on-screen instructions when filling out the form. The information you provide will also be used by LaserFAX Lite to create your fax cover page.



Note: You must shut down and restart your computer to complete the installation process. If your computer does not shut down and restart automatically, you must shut it down manually and restart it before the changes you have made take effect.



Note: The WorkCentre 480cx will be selected as the Default printer in Windows after installing the printer driver.

Uninstalling Software

Uninstallation of software is required only if you are upgrading the software, or if your installation fails.

In Windows 3.x

In Windows 3.x, all WorkCentre 480cx software components are installed into a single program group.

- 1 Start Windows.

- 2 In the Program Manager, double click the WorkCentre 480cx Program Group.

The WorkCentre 480cx Program Group will open.

- 3 Double Click on the Program Group containing the component you wish to uninstall.

The Program Group will open.

- 4 Double Click on the Uninstall icon.

The selected component is uninstalled.

In Windows 95/98, or Windows NT

- 1 Start Windows.

- 2 From the **Start** menu, select **Programs**.

- 3 Locate the Start Menu Program Item for the component you wish to uninstall.

- 4 Click on the Submenu uninstall icon for the component you wish to remove.

A window will open prompting you to confirm that you wish to remove the selected application.

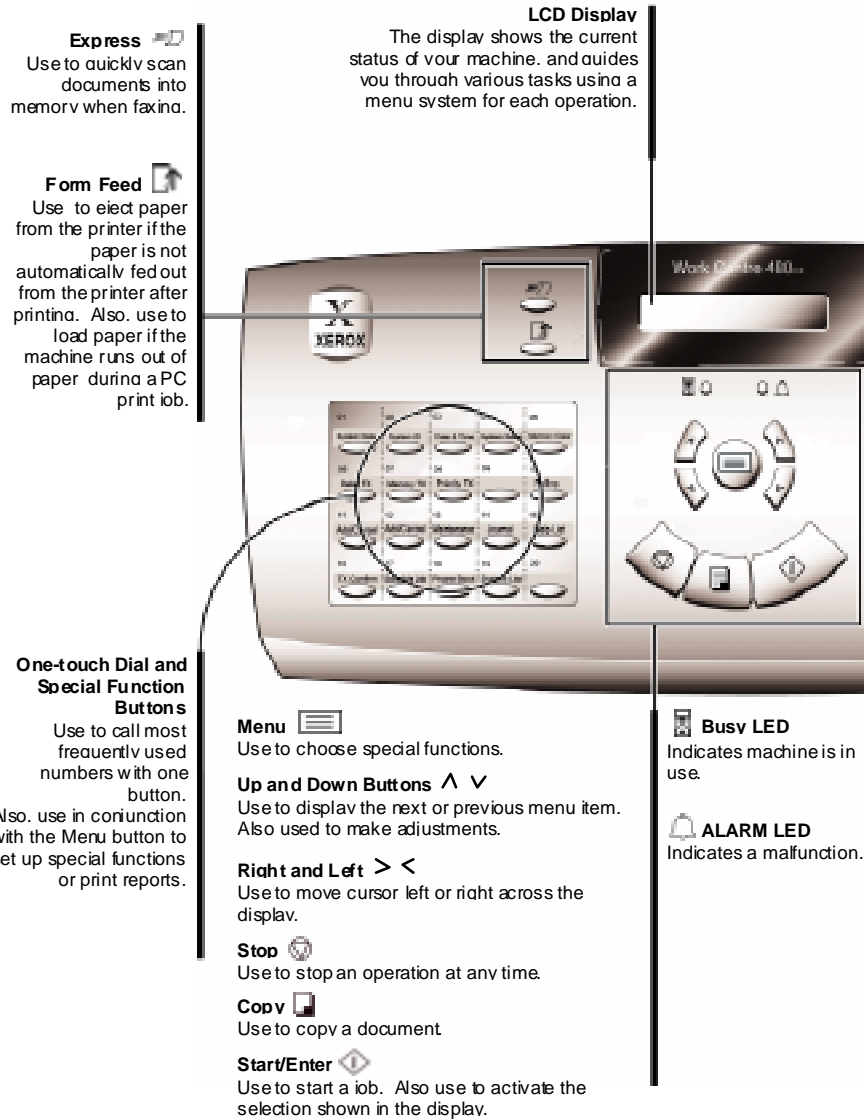
- 5 Click on **Yes**.

- 6 Uninstall Shield launches and the component is uninstalled.



Note: Each software component must be uninstalled one at a time.

Using the Control Panel



**Search/Delete**

Use to search for numbers in memory. Also use to delete digits in the edit mode.

Receive (Receive Mode)

Use to choose the receive mode you want to use. The selected mode is displayed.

Resolution

Use to choose the resolution of copied or transmitted documents.

Contrast

Use to choose the contrast of copied or transmitted documents.

Number Keypad

Use to dial numbers manually or to enter letters and numbers for various programming functions.

Speed/Dual

Use to dial calls and send fax documents by entering a 2-digit number. Also use to switch the LCD display while performing dual jobs.

Redial/Pause

Use to redial the last phone number called. You can also use it to add a pause when storing a number in memory.

Flash

Use to perform a switch-hook operation such as call waiting.

 **Speaker**

Use to adjust the volume of the internal speaker.

System Setup

Ringer Volume

You can adjust the volume of the ringer to the desired loudness.

- 1 Press the **Menu** button, then press the **System Setup** button on the one-touch keypad. The display indicates RINGER VOLUME ?.
- 2 Press **Enter**, then press the **Up** or **Down** button to choose the desired loudness of the ringer. You can choose between OFF, LOW, MED (medium), or HIGH settings.

The selected ringer sounds and the display indicates the loudness level.



Note: The machine will work normally even if the ringer is set to off.

```
RINGER VOLUME  
LEVEL [MED]
```

- 3 Press **Enter** when the desired volume level is selected. The display indicates the next setup menu, DEFAULT SETTING ?. For details on the *Default Settings* menu, see *Default Settings* on page 1-39.
- 4 To return to Standby mode, press the **Stop** button.

Default Settings

The default print resolution and contrast can be set to their most frequently used modes. Whenever a document is sent or copied, the home contrast and resolution mode will be activated unless otherwise changed by using the **Resolution** or **Contrast** button on the control panel.

- 1 Press the **Menu** button, then press the **System Setup** button on the one-touch keypad. The display indicates RINGER VOLUME ?.
- 2 Press the **Up** or **Down** button until DEFAULT SETTING ? appears.
- 3 Press the **Start/Enter** button. The display prompts you to choose Resolution or Contrast.

```
1 . RESOLUTION
2 . CONTRAST
```

- 4 Press **1.** or press the **Start/Enter** button to enter the Default Resolution set up menu. You may also use the Up and Down buttons to select 1. RESOLUTION.

```
DEF . RESOLUTION
[ FINE ]
```

The current Default Resolution is displayed.

5 Press the **Left** or **Right** button repeatedly until you locate the desired mode:

- STANDARD - use with most documents.
- FINE - use for documents with fine detail, such as small print.
- SUPER FINE—use for documents that have extremely fine detail.

6 Press the **Start/Enter** button to select the desired Default Resolution. The display again prompts you to choose Resolution or Contrast .

```
1 . RESOLUTION
2 . CONTRAST
```

7 Press the **Up** and **Down** buttons or **2** on the Number keypad to enter the Default Contrast set up menu.

```
DEF . CONTRAST
[  NORMAL  ]
```

The current Default Resolution is displayed.

8 Press the **Left** or **Right** button repeatedly until you find the desired mode:

- NORMAL—use with documents of average or normal contrast.
- DARKEN—use with documents with low contrast or light images.
- LIGHTEN—use with documents with high contrast or dark images.

9 Press the **Start/Enter** button to select the desired mode. The Resolution or Contrast setup menu selection is displayed.

10 Press the **Stop** button to return to Standby mode.

Arrange Alignment

The Arrange Alignment menu settings provides an easy way to check and adjust Ink Cartridge print head alignment.

To run the Arrange Alignment:

- 1 Press the **Menu** button, then press the **Maintenance** button on the one-touch keypad. The display indicates SELF TEST ?.
- 2 Press the **Down** button. ARRANGE ALIGNMENT ? appears in the display.
- 3 Press the Start/Enter button. PRINTING... appears on the LCD display.

The WorkCentre 480cx will then print out a Cartridge Alignment pattern sheet consisting of a series of four test patterns. The patterns are designated A,B,C, and D. Each pattern is made up of a series of lines which are individually numbered. By selecting the straightest line from each pattern, you can optimize the print head alignment.

After printing out the Cartridge Alignment sheet, the Cartridge Maintenance set up menu appears on the LCD display.

```
CARTRIDGE MAINT .  
<15> [ 0-30 ] A
```

The letter A, located on the right end of the lower line in the display, corresponds to alignment test pattern A. The range of numbers bracketed in the center of the display line indicates the range of valid pattern selection choices. The flashing number on the left side of the display indicates the line from print pattern A that is currently selected as optimal.

- 4 Using the Number Keypad, enter the number of the line which appears the straightest from pattern A.

- 5 Press the **Start/Enter** button to confirm your selection. The LCD panel updates and the set up screen for the Alignment B test pattern is displayed.
- 6 Using the Number Keypad, enter the number of the line which appears the straightest from pattern B.
- 7 Press the **Start/Enter** button to confirm your selection. The LCD panel updates and the set up screen for the Alignment C test pattern is displayed.
- 8 Using the Number Keypad, enter the number of the line which appears the straightest from pattern C.
- 9 Press the **Start/Enter** button to confirm your selection. The LCD panel updates and the set up screen for the Alignment D test pattern is displayed.
- 10 Using the Number Keypad, enter the number of the line which appears the straightest from Alignment pattern D.
- 11 Press the **Start/Enter** button to confirm your selection. The LCD panel updates and the set up screen for the Alignment A test pattern is displayed.
- 12 Press the **Stop** button to return to normal operation.

Clean Head

The Clean Head procedure cleans the print nozzles and removes any deposits that may impair printing functions.

To run the Clean Head Procedure:

- 1 Press the **Menu** button, then press the **Maintenance** button on the one-touch keypad. The display indicates SELF TEST ?.
- 2 Press the **UP** button. CLEAN HEAD ? appears in the LCD display.
- 3 Press the **Start/Enter** button. PRINTING... appears on the LCD display.

The WorkCentre 480cx prints a head cleaning test pattern. Note the series of diagonal lines across the top and bottom of the test pattern. Breaks within a line of the same color indicate a clogged nozzle. Try running the Clean Head procedure again if you see breaks in the diagonal lines.



Select Language

Select Language allows you to configure the default language for the LCD panel display. You may choose between five different languages: English, German, French, Italian, and Spanish.

To select a default language:

- 1 Press the **Menu** button, then press the **System Setup** button on the one-touch keypad. The display indicates RINGER VOLUME ?.
- 2 Press the **Up** or **Down** buttons until SELECT LANGUAGE ? and ITEM 1-5 appear in the LCD display.
- 3 Press the **UP** or **Down** buttons to scroll through the language options. A flashing cursor will indicate the currently selected language.
- 4 Press the **Start/Enter** button to confirm your language selection.

Adjusting Speaker Volume

- 1 Press the  button on the front panel to adjust the speaker volume. If you cannot hear a dial tone, check the phone line connection.
- 2 The display indicates the current volume level. Press the **Up** or **Down** button repeatedly until the desired loudness setting is displayed. Loudness is set in the range from 1 through 7, with 7 representing the loudest setting.
- 3 After choosing the desired volume level, press the  button to return to the Standby mode.

Setting the Clock Mode

You can configure your machine to display time using either a 12 hour or 24 hour format.

- 1 Press the **Menu** button, then press the **System Data (01)** button on the one-touch keypad. PAPER SIZE appears on the display.
- 2 Press the **Up** button two times.
CLOCK MODE appears on the LCD display.
The display prompts you to select either a 12 hour or 24 hour Clock Mode.
- 3 Press **1** to select a 12 hour Clock Mode or, Press **2** to select a 24 hour Clock Mode.

Setting the Date and Time

The current date and time are shown in the display when the machine is on and ready for use (Standby mode). The date and time are printed on all faxes you send.

- 1 Press the **Menu** button, then press the **Date & Time** button on the one-touch keypad. The current date and time are displayed. A flashing cursor in the display prompts you to enter the date.
- 2 Using the number keypad, enter the current date using a MMDDYYYY date format. If you make a mistake, use the right and left buttons to move the cursor to the digit you wish to change.

12-03-1998

04:06 (PM)

After entering the date the flashing cursor will move into the first digit of the time.

- 3 Using the number keypad, enter the current time. Remember to enter the time according to the current Clock Mode setting (12 or 24 hour format). Refer to the previous section, **CLOCK MODE** for details.
- 4 Press **Enter** when the date and time settings displayed are correct.

The display indicates the date and time you have set, then returns to Standby mode.



Note: If an invalid number is entered, the machine beeps and does not proceed to the next step. If this happens, enter the correct number.

Setting the System ID (Your Number and Name)

In some countries you are required by law to indicate your fax number on any fax you send. The System ID, including your telephone number and name, will be printed at the top of each page sent from your machine.

The System ID, including your telephone number and name, will be printed at the top of each page sent from your machine.

- 1 Press the **Menu** button, then press the **System ID** button on the one-touch keypad. SYSTEM NUMBER appears in the LCD display. A flashing cursor in the display prompts you to enter the telephone number.



Note: If there is a number previously registered, it appears in the display.

- 2 Enter the telephone number (up to 20 digits) to which your machine is connected.

You can enter a space by pressing the **RIGHT** button two times.

If an incorrect number is entered, press the **Right** or **Left** button to move the cursor under the incorrect digit, then enter the correct number or press the **Delete** button to delete the number.

- 3 Press **Enter** when the correct number is displayed. The display prompts you to enter your ID name.

- 4 Enter your ID name. This can be any name up to 20 characters in length. You can enter alphanumeric characters using the number keypad. Special symbols such as + and - can be included by pressing 0 repeatedly.



Note: If there is an ID name previously registered, it appears in the display.

If you want to enter the same letter or number in succession (for example, SS, AA, 777), enter one digit, then move the cursor by pressing the Right button, and enter the next digit.

Use the Right button to insert a space in the name, Pressing the Right button two times moves the cursor two positions to the right, creating a space.

For additional details on how to use the number keypad to enter alphanumeric characters, see *Entering Alphanumeric Characters* on page 3-26.

- 5 Press **Enter** when the name in the display is correct.

Reports

Your fax machine can print reports containing useful information like Scheduled Jobs and System Data. The following reports are available:

- Journal (One-Touch button 14)

The journal consists of two reports, a Transmission Report and a Reception Report. Each report contains information concerning transmission or reception activities. They can be printed on command, or automatically if certain conditions are met (see *Selectable Options* on page 1-52). These reports will be automatically printed after every 40 transmissions or receptions.

- Help List (One-Touch button 15)

This quick reference guide consists of a list detailing the machine's basic functions and commands.

- TX Confirm (One-Touch button 16)

The Message Confirmation Report lists important information about faxes sent from your machine including: the remote site fax number, a sample of the transmitted text, the number of pages faxed, the communication mode, and the communication results.

You can set up your machine to print a TX Confirm report:

- Automatically after each transmission (ON).
- Automatically only if an error occurs during transmission (ERR).

The machine can be set to print no report at all (OFF). You can print this report manually at any time you want.

- Schedule Job (One-Touch button 17)

The Schedule Information List provides information about documents currently stored for Delayed Transmission, Priority Transmission, Memory Transmission, Continuous Polling, and TX Polling. The list shows the starting time, type of operation, etc.

- Phone Book (One-Touch button 18)

This Telephone Numbers List indicates all of the numbers currently stored in machine memory as One-Touch Dial numbers, Speed Dial numbers, and Group Dial numbers.

- System List (One-Touch button 19)

This System Data List indicates the status of the user-selectable options. See *User Options (System Data)* on page 1-51. After changing any setting, print this list to confirm your changes.

To Print Reports

- 1 Press the **Menu** button.
- 2 Press the **One-Touch** button corresponding to the desired report on the one-touch keypad. Refer to the table below:

One-Touch Button #	Button Label	Report/List Name
14	Journal	Transmission or Reception Journal
15	Help List	Help List
16	TX Confirm	Message Confirmation Report
17	Schedule Job	Schedule Information List
18	Phone Book	Telephone Numbers List
19	System List	System Data List

The selected list will be printed out.

Other Reports

- **Multi-Communication Report**

This report is printed automatically after sending to or receiving from more than one location and provides detailed information about the operation.



Note: Any report which is configured to print automatically will not print if your machine runs out of ink or paper, has a paper jam, or is printing a file sent from a PC.

User Options (System Data)

Your machine has various user-selectable features. These options are preset at the factory, but you may need to change them. To find out how the options are currently set, print the System List. For more information on printing the list, see *To Print Reports* on page 1-50.

Setting an Option

- 1 Press the **Menu** button.
- 2 Press the **System Data** button on the One-Touch keypad.
The display shows the first option menu.
- 3 Scroll through the options by pressing the **Down** or **Up** buttons repeatedly.
- 4 When the option you want appears in the display, enter the number for the desired setting.
Or
You can use Right or Left buttons to select the desired setting.
- 5 Press the **Enter** button to store your choice in memory.
You can exit from setup mode at any time by pressing the **Stop** button. When you press the Stop button, the machine stores the options you changed and returns to the Standby mode.

Selectable Options

These instructions assume you've followed the steps listed in the previous procedure, *Setting an Option*, and the machine is prompting you to change one of the options listed below.

All of these options are menu settings accessed by the One-Touch button 01, System Data.

- **PAPER SIZE** - Select the paper size you will be printing on.
Press **1** for letter (LTR), **2** for A4 size, or **3** to use legal (LGL) size paper.
- **MESSAGE CONF.** - A message confirmation report showing transmission information; whether the transmission was successful, how many pages were sent, etc.
Press **1** to print a confirmation report automatically each time you send a fax (ON).
Press **2** to turn this feature off (OFF).
Press **3** to print only when an error occurs and the transmission was not successful (ERR).
- **AUTO JOURNAL** - The journal is a report providing detailed information about the previous 40 communication operations including times and dates.
Press **1** to print the journal automatically after every 40 transmissions or receptions (ON).
Press **2** to disable automatic printing of the Journal (OFF). You can still print Journal reports manually at any time. See *To Print Reports* on page 1-50.

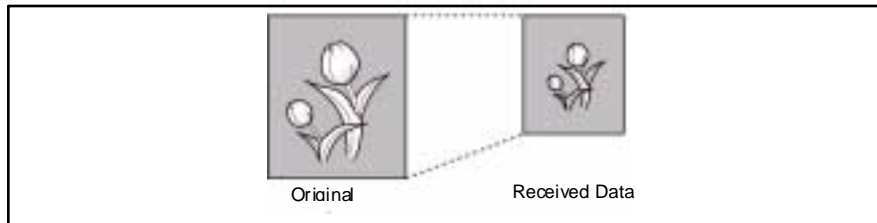
- **REMOTE RCV CODE** - The remote receive start code allows you to initiate fax reception from an extension phone plugged into the EXT jack on the back of the machine. If you pick up the extension phone and hear fax tones, enter the Remote Code and the machine will start receiving. The Remote Code is preset to *9* at factory. You may change the Remote Code by selecting any number from 0 to 9 on the numeric keypad.
- **DIAL MODE** - Select the type of dial system your fax machine is connected to:

Press **1** if the fax machine is connected to a tone (Touch Tone) dial line.
Press **2** if the fax machine is connected to a pulse (Rotary) dial line.
- **ECM MODE (Error Correction Mode)** - This mode compensates for poor line quality and ensures accurate, error-free communication with any other ECM-equipped facsimile machine. If the line quality is poor, transmission time may be increased when ECM is enabled.

Press **1** to turn the Error Correction mode on.
Press **2** to turn the Error Correction mode off.
- **RX REDUCTION** - When receiving a document as long as or longer than the paper installed in your machine, the machine can reduce the data in the document to fit the paper size in the machine. Use this feature if you want to automatically reduce an incoming page (that would otherwise be divided into two pages) to fit on a single page. If the fax machine cannot reduce the data to fit into one page with this feature enabled, the data is divided and printed in actual size on two or more sheets.

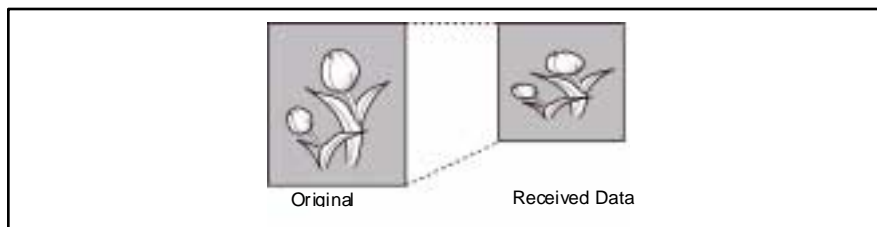
There are two RX Reduction modes available, On and Vertical Only.
Press **1** to turn the RX reduction feature on. Note that this feature does not apply to the copy mode.

This will reduce incoming pages equally along both axes in order to maintain the proportionality of the original image, as shown below.



Press **2** to turn off RX Reduction.

Press **3** to enable vertical only RX Reduction. The machine will reduce an incoming page containing overflow data along the vertical axis only. The net effect will be a vertical compression of the image as shown below:



- **DISCARD SIZE** - When receiving or copying a document as long as or longer than the paper installed in your fax machine, you can set the fax machine to discard any excess image at the bottom of the page, to fit into the recording paper size.

If the received page is outside the margin you set, it will be printed on two sheets of paper at the actual size.

If the data is within the margin, and the Auto Reduction feature is turned ON, it will be reduced to fit into the appropriate size paper (Discard does not take place). If the Auto Reduction feature is turned OFF or fails, the data within the margin will be discarded.

Using the number keypad, enter the desired discard size (0-30 mm), and press the **Enter** button to store your selection.

- **REDIAL INTERVAL** - Your machine can automatically redial a remote fax machine if it was busy or does not answer the first call.

Enter the number of minutes (from 1 to 15) using the number keypad.

- **REDIALS** - Enter the number of redial attempts (from 0 to 9) you wish your machine to make.



Note: If you enter 0, the machine will not redial.

- **ANSWER ON RINGS** - You can select the number of times your machine rings before answering an incoming call. If you are using your machine as both a telephone and a fax machine, it is recommended that you set the ring count to at least 4 to allow you time to answer a call.

Enter the ring count by selecting a number from 1 through 7 on the number keypad.

- **SEND FROM MEMORY** - With this feature enabled, all transmission documents are automatically scanned into memory, and it will not be necessary to wait until documents in the Automatic Document Feeder (ADF) are sent out before you can send or store other fax jobs.

Press **1** to turn this feature on.

Press **2** to turn this feature off.

- **LOCAL ID** - Enabling this feature causes the machine to automatically print the page number, date, and time of the reception at the bottom of each page of a received document.

Press **1** to turn this feature on.

Press **2** to turn this feature off.

- **CONT. POLL REPORT (Continuous Polling Report)** - You can configure your WorkCentre 480cx to automatically poll and retrieve faxes from unattended fax machines. This can be set up to occur daily at regular intervals. By enabling the Continuous Polling Report, every time continuous polling ends a multi-communication report will be printed. The report will contain the results for each registered station.

Press **1** to turn this feature on.

Press **2** to turn this feature off.

FAXPRINT QUALITY - This feature determines the print quality for incoming faxes. The two choices available are Letter Quality (LQ) and Draft. Letter Quality Faxprint will print out faxes at a higher resolution than Draft Faxprint Quality. However, Letter Quality Faxprint will print slower and consume more ink.

Press **1** to choose Letter Quality printing of incoming faxes.

Press **2** to choose Draft Quality printing of incoming faxes.

- **CLOCK MODE** - Use this feature to determine how time is displayed on your machine.

Press **1** to select a 12 hour Clock Mode.

Press **2** to select a 24 hour Clock Mode.

- DRPD (Distinctive Ring Pattern Detection) MODE - Distinctive Ring is a telephone company service which enables a user to use a single telephone line to answer several different telephone numbers. The particular number someone uses to call you is identified by different ringing patterns, which consist of various combinations of long and short ringing sounds. This feature is often used by answering services who answer telephones for many different clients. They need to know which number someone is calling on to properly answer the phone.

Using the Distinctive Ring Pattern Detection feature, your fax machine can "learn" the ring pattern you designate to be answered as a fax. Unless you change it, this ringing pattern will continue to be recognized and answered as a fax call. All other ringing patterns will be forwarded to the extension telephone or answering machine plugged into the EXT jack.



Note: Before using the Distinctive Ring Pattern Detection option, Distinctive Ring service must be installed on your telephone line by the telephone company. To set up Distinctive Ring Pattern Detection, you will need another telephone line at your location, or someone available to dial your FAX number from outside.

You can suspend or change Distinctive Ring Pattern Detection at any time:

Press the **Menu** button.

Press the **System Data** button on the One-Touch keypad.

Press the **Up** button once. The DRPD learn mode menu is displayed.

Press **1** to turn DRPD on.

Press **2** to turn DRPD off.

If you press 1 to setup the Distinctive Ring Pattern Detection, the LCD displays WAITING RING. Call your fax number from another telephone. It is not necessary to place the call from a fax machine. When your machine begins to ring, do not answer the call. The machine requires several rings to learn the pattern.

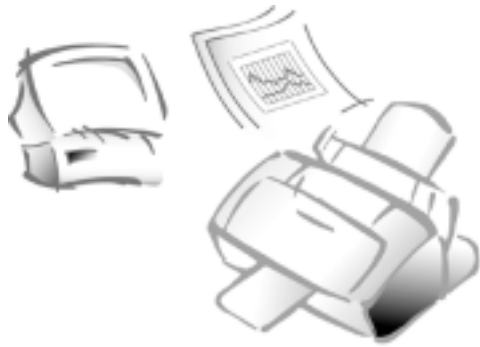
When the machine completes "learning," the LCD displays END DRPD SETUP.

With the DRPD feature active, DRPD appears in the display and the previously set reception mode is ignored. If you turn DRPD off, the machine returns to any previously set reception mode.



Note: DRPD must be set up again if you re-assign your fax number, or connect the machine to another telephone line.

After DRPD has been set up, call your fax number again to verify that the machine answers with a fax tone, then have a call placed to a different number assigned to that same line to be sure the call is forwarded to the extension telephone or answering machine plugged into the EXT. jack.



Chapter 2

Making a Copy

Making a Copy

Your machine is a high quality copier which offers the following features:

- **Adjustable Contrast** - The contrast setting can be changed to obtain the best copy quality for documents containing faint markings, dark images, photographs or other halftone images.
- **Multiple copies** - 1 to 99 copies of the document can be made.
- **Enlarge\Reduce** - Using the COPY RATE menu, you can reduce or enlarge the size of a copied image from 25% to 200% in increments of 1%.
- **Collation** - When the COPY COLLATE menu option is set to ON, the machine sorts the copy job. For example, if you print two copies of a three-page document, the machine prints one complete document (page 1, page 2, page 3) before printing a second copy (page 1, page 2, and page 3).

To make one quick copy:

- 1 Adjust the document guides to match the width of the document.
- 2 Slide the document *face down* into the Automatic Document Feeder until it is grasped and pulled into the machine.
- 3 If necessary, press the **Contrast** button or the **Resolution** button.
You may choose STANDARD, FINE, or SUPER FINE resolution.



Note: Pressing the Express button automatically selects Standard resolution. This will allow the WorkCentre 480cx to scan each page into memory in only three seconds, reducing total copy time.

- 4 Press the **Copy** button twice. The machine will make a copy.

To make copies using the Copy menu features:

- 1 Adjust the document guides to match the width of the document.
- 2 Slide the document *face down* into the Automatic Document Feeder until it is grasped and pulled into the machine.
- 3 If necessary, press the **Contrast** button or the **Resolution** button.
You may choose STANDARD, FINE, or SUPER FINE resolution.



Note: Pressing the Express button automatically selects Standard resolution. This will allow the WorkCentre 480cx to scan each page into memory in only three seconds, reducing total copy time.

- 4 Press the **Copy** button to display the COPY menu. For two or more copies (2 to 99), enter the desired number using the Number keypad, then press the **Down** button or press **Start/Enter**.

```
COPY  
[ 01-99 ] <01>
```

- 5 The display shows the next option: the COPY RATE menu where you can manually adjust the copy image scale size settings.

The number in the right corner of the bottom line shows the current image percentage. To reduce or enlarge the image size, enter the percent value (25 to 200) using the number keypad.

```
COPY RATE  
[ 25-200 ]% <100>
```

Press the **Down** button to confirm your settings.

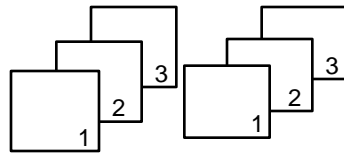
- 6 The display shows the next option: the COPY COLLATE menu.

```
COPY COLLATE  
1 : ON 2 : OFF
```

When making multiple copies, there are two collate options: ON and OFF.

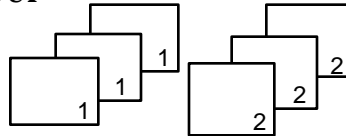
- Selecting **1:ON** will make 1 copy of page 1, 2, and 3 in order, then makes a second copy of 1, 2, and 3 until a total of n copies has been made.

SORT



- Selecting **2:OFF** will make n copies of page one, n copies of page two, and so on. These copy sets will all be stacked on top of each other.

GROUP



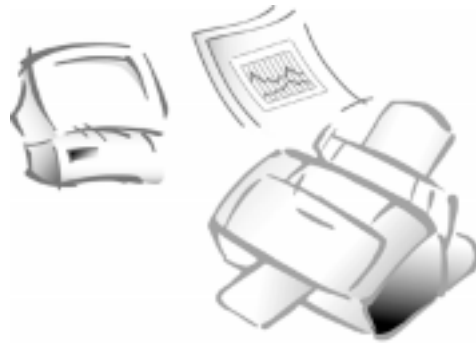
Press **1** or **2** to choose the desired collation method. You can also press the **Down** button to choose the default collation setting: **2.OFF**. The LCD display scrolls back and shows the first option: number of copies.

- 7 Press the **Start/Enter** button or the **Copy** button to begin the copy operation.



Note: When setting the copy options, pressing the **Copy** button will begin the copy operation immediately without displaying any remaining options.

Chapter 3



Sending a Fax

3

Options for Sending a Fax Using the WorkCentre 480cx

You can send faxes with the WorkCentre 480cx in one of two ways:

- By placing the document in the Automatic Document Feeder and entering the information required for faxing at the WorkCentre 480cx Control Panel. This is called Manual Faxing.

For information and instructions for Manual Faxing, refer to *Manual Faxing* on page 3-2.

- By faxing the document directly from your computer workstation using LaserFAX Lite, a software application included with your WorkCentre. This is called PC Faxing.

For information and instructions for PC Faxing, refer to *PC Faxing* on page 3-40.

Manual Faxing

This section provides information and instructions for faxing a document from the WorkCentre 480cx using the features of the Control Panel.

Preparing Documents for Faxing

You can fax documents that are printed on standard letter, legal or A4 size paper. Follow these guidelines to prepare your documents.

- Do not attempt to feed the following types of documents into the machine:
 - carbon-paper or carbon-backed paper
 - coated paper
 - onion skin or thin paper
 - wrinkled or creased paper
 - curled or rolled paper
 - torn paper

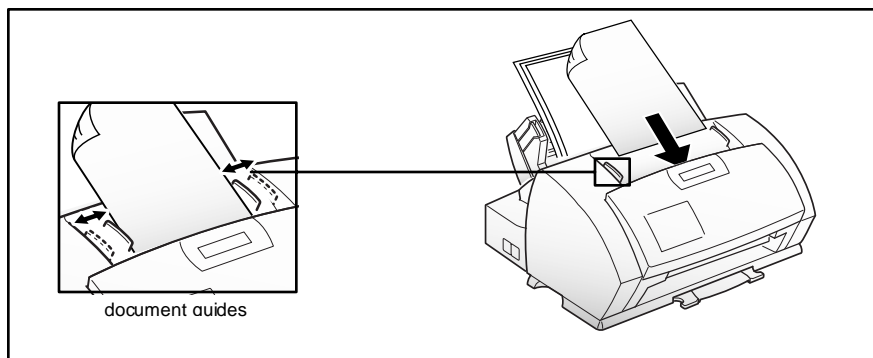


Note: If your document falls into any of the above categories, make a copy of the document first. Use the copy for insertion into the Automatic Document Feeder.

- Remove all staples and paper clips before feeding the document.
- Make sure any glue, ink or correction fluid on the paper is completely dry before loading the document.
- Do not load documents containing different sizes or weights of paper.

Sending a Fax Manually

- 1 Adjust the document guides to match the width of the document.
- 2 Slide the document *face down* into the Automatic Document Feeder until it is grasped and pulled into the machine.



3

The display alternately reads DOCUMENT READY and shows the remaining memory capacity. Up to 30 sheets may be inserted at a time.

To insert more than one sheet, ensure that the bottom sheet enters first. Stagger the leading edge of the sheets slightly and insert them with light pressure to ensure smooth feeding.

To add pages while the fax is sending, insert them *face down* into the Automatic Document Feeder on top of the already loaded sheets.

If you are loading pages that are unusually thick or thin, feed one sheet at a time.

- 3 If necessary, adjust the document resolution and contrast. See *Resolution* on page 3-23 and *Contrast* on page 3-25.



Note: Pressing the Express button automatically selects Standard resolution. This will allow the WorkCentre 480cx to scan each page into memory in three seconds, reducing total fax time.

- 4 Using the Number keypad, enter the number of the fax machine to which you wish to send the document. If you make a mistake while entering a number, move the cursor under the incorrect digit by using the **Right** or **Left** buttons, and correct the number. You may also delete incorrect numbers by pressing the **Delete** button.
- 5 Press the **Start/Enter** button when the number appears correctly in the display. The machine dials the number and begins to transmit the fax.
If you wish to cancel the fax, press the **Stop** button two times.

Sending a Fax Using a One-Touch Number

- 1 Adjust the document guides to match the width of the document.
- 2 Slide the document *face down* into the Automatic Document Feeder until it is grasped and pulled into the machine.



Note: Pressing the Express button automatically selects Standard resolution. This will allow the WorkCentre 480cx to scan each page into memory in three seconds, reducing total fax time.

- 3 Press the **One-Touch** button (01 through 20) to which you assigned the telephone number you wish to call. For information on storing numbers in memory, see *Configuring Automatic Dialing Features* on page 3-16.
The machine will scan the document and dial the number automatically. When the remote fax machine answers, the document will be transmitted automatically.

Sending a Fax Using a Speed Dial Number

- 1 Adjust the document guides to match the width of the document.
- 2 Slide the document *face down* into the Automatic Document Feeder until it is grasped and pulled into the machine.



Note: Pressing the Express button automatically selects Standard resolution. This will allow the WorkCentre 480cx to scan each page into memory in three seconds, reducing total fax time.

- 3 Press the Speed button, then enter a two digit speed dial location number. For information on storing numbers in memory, *Speed Dialing* on page 3-19.
- 4 Press the **Start/Enter** button to dial the number.
The machine will scan the document and dial the number automatically. When the remote fax machine answers, the document will be transmitted automatically.



Note: You can store One-Touch or Speed Dial numbers so you can dial your most frequently used numbers with one touch of a button or a two digit speed dial number. For information on storing numbers in memory, see *Configuring Automatic Dialing Features* on page 3-16.

Sending a Fax Using Group Dialing (Multi-Address Transmission)

Group Dialing can be used in conjunction with Memory Transmission or Delayed Transmission faxing operations. However, before you can access the Group Dialing feature, Group Numbers must be configured. See *Group Dialing (for Multi-Address Transmission)* on page 3-20 for more information.

To send a fax using the Group Dialing feature:

- 1 Adjust the document guides to match the width of the document.
- 2 Slide the document *face down* into the Automatic Document Feeder until it is grasped and pulled into the machine.



Note: Pressing the Express button automatically selects Standard resolution. This will allow the WorkCentre 480cx to scan each page into memory in three seconds, reducing total fax time.

- 3 Follow the procedure for the desired operation (see *Memory Transmission (Broadcasting)* on page 3-10 or *Delayed Transmission* on page 3-12).
- 4 When you come to the step where the display prompts you to enter the remote fax number, enter the Group Number.



Note: You can use only one Group Number in a single operation.

- 5 Continue the procedure to complete the (Memory Transmission or Delayed Transmission) operation. Your machine will automatically scan the document loaded in the Automatic Document Feeder into memory and subsequently dial each of the numbers included in the group.

Sending a Fax After Talking

If you have a regular phone connected to the EXT jack on the back of the machine, you can send a fax after speaking with a person at the remote site.

- 1 Adjust the document guides to match the width of the document.
- 2 Slide the document *face down* into the Automatic Document Feeder until it is grasped and pulled into the machine.
- 3 Pick up the handset of the telephone connected to the EXT jack.
- 4 Call the remote location.

DIAL FAX NUMBER THEN PRESS START appears in the LCD display.



Note: For a successful fax transmission, it is imperative that steps 5 to 7 occur in the proper order.

- 5 When finished talking, instruct the person at the remote location to press the **Start** button on their fax machine. They can then hang up. The remote fax machine will send the initial fax tones.
- 6 **Wait until you hear the fax tone** from the remote fax machine.
- 7 Press the **Start/Enter** button on the WorkCentre 480cx. The machine begins to transmit.
- 8 Replace the handset.

Canceling a Transmission

To cancel a fax:

- 1 Press the **Stop** button at any time during the transmission.
The machine continues to send the fax, and the display shows a message warning you that the machine is in use.
- 2 Press the **Stop** button again to cancel the transmission.

Confirming a Transmission

A Message Confirmation report shows whether the transmission was successful and how many pages were sent.

When the last page of your document has been sent successfully, the machine beeps and returns to Standby mode.

To print a Message Confirmation report:

- 1 Press the **Menu** button.
- 2 Press the **TX Confirm** (16) button on the One-Touch keypad.
- 3 The machine prints out a Message Confirmation report.

You can also configure your machine to print out a confirmation report automatically each time a fax is sent.

To automatically print a confirmation report:

- 1 Press the **Menu** button.
- 2 Press the **System Data** button (01) on the One-Touch keypad.
- 3 Press the **Down** or **Up** buttons repeatedly until MESSAGE CONF. appears in the display.
 - a) Press **1** to print a confirmation report automatically each time you send a fax (ON).
 - Or
 - b) Press **2** to turn this feature off (OFF).
 - Or
 - c) Press **3** to print only when an error occurs and the transmission was not successful (ERR).

If an error occurred during your fax transmission, an error message appears in the display. If you receive an error message, press **Stop** to clear the message and try to send the document again.

For a listing of error messages and their meanings, see *LCD Display Error Messages* on page 7-8.

Memory Transmission (Broadcasting)

With Memory Transmission (Memory TX), documents are stored in memory and automatically sent to one or more remote stations. Use this feature to send your documents to multiple locations.

You can store a maximum of ten fax numbers for a memory transmission. If you need to send your fax to more than ten locations, you can increase the number of fax locations dialed by including a Group Dial number as one of the ten numbers.

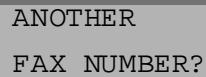
After sending, the documents are automatically erased from memory.

- 1 Adjust the document guides to match the width of the document.
- 2 Slide the document *face down* into the Automatic Document Feeder until it is grasped and pulled into the machine.

If necessary, adjust the resolution and contrast. For details, see *Resolution* on page 3-23 and *Contrast* on page 3-25.
- 3 Press the **Menu** button, then press the **Memory TX** button on the One-Touch keypad.
- 4 Enter the **telephone number** of the remote machine. There are several methods available to do this:
 - Direct entry of the telephone number using the numeric keypad.
 - One-Touch keypad dialing of stored telephone numbers (see *One-Touch Dialing* on page 3-16).
 - Speed Number dialing using the numeric keypad (see *Speed Dialing* on page 3-19).

- 5 Press the **Start/Enter** button.

The display prompts you to enter another fax number.



ANOTHER
FAX NUMBER?

- 6 If you have entered the last fax number, press the **Stop** button.

Or

If you want to send the document to more than one location, press the **Start/Enter** button and enter another fax number using the numeric keypad, One-Touch keypad, or two digit Speed Dial number.

The number appears in the display.

Repeat Step 6 until you have entered the last fax number. Press the **Stop** button after entering the last fax number.

- 7 The document is scanned into memory. The display shows the remaining memory capacity and the number of pages. The machine dials the first telephone number and begins sending the document.



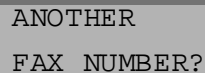
Note: Only a single Group Dial number may be used per Memory Transmission operation.

Delayed Transmission

You can configure your machine to send a fax at a specified time. Up to 10 delayed transmission operations can be reserved in your machine.

- 1 Place the document *face down* in the Automatic Document Feeder. If desired, adjust the resolution and contrast. For details, see *Resolution* on page 3-23 and *Contrast* on page 3-25.
- 2 Press the **Menu** button, then press the **Delay TX** button on the One-Touch keypad.
- 3 Enter the telephone number of the remote machine (up to 46 digits). There are several methods available to do this:
 - Direct entry of the telephone number using the numeric keypad.
 - One-Touch keypad dialing of stored telephone numbers (see *One-Touch Dialing* on page 3-16).
 - Group and Speed number dialing using the numeric keypad (see *Configuring Automatic Dialing Features* on page 3-16).
- 4 Press the **Start/Enter** button.

The display prompts you to enter another fax number.



ANOTHER
FAX NUMBER?

- 5 If you have entered the last fax number setting, press the **Stop** button.

Or

If you want to send the document to more than one location, press the **Start/Enter** button and enter another fax number using the numeric keypad, One-Touch keypad, or two digit Speed Dial number.

The number appears in the display.

Repeat Step 5 until you have entered the last fax number. Press the **Stop** button after entering the last fax number.



Note: Only a single Group dial number may be used in a Delayed Transmission Operation.

- 6 The display prompts you to enter an ID for the transmission. If you want to assign a name to the transmission, enter it using the Number keypad. If not, proceed to Step 7.

For details on how to enter letters using the Number keypad, see *Entering Alphanumeric Characters* on page 3-26.

- 7 Press the **Start/Enter** button. The display shows the current time on the upper line and prompts you to enter the time the fax will be sent.

CURRENT 12:30PM

START 12:30PM

- 8 Using the Number keypad, enter the time the fax will be sent. Use the **Up** or **Down** button to switch between AM and PM. If you set a time earlier than the current time, the document will be sent at that time on the following day.

Note: Remember to enter the time in either twelve or twenty-four hour clock mode format, depending upon which mode you enabled. For more information, see *Selectable Options* on page 1-52.

- 9 After entering the time, press the **Start/Enter** button.
- 10 The machine scans the document into memory, returns to Standby mode and displays a reminder that a Delayed Transmission is set.



Note: If you want to cancel the Delayed Transmission, see *Canceling a Standby Operation* on page 3-15.

Adding Documents To a Standby Operation

You can add documents to a Delayed Transmission previously entered into memory.

- 1 Place the document *face down* in the Automatic Document Feeder. If necessary, adjust the resolution and contrast. For details, see *Resolution* on page 3-23 and *Contrast* on page 3-25.
- 2 Press the **Menu** button.

- 3 Press the **Add/Cancel** button on the One-Touch keypad. The LCD display prompts you to select ADD or CANCEL. Note that **1. ADD** is already selected in the LCD display.

```
OPERATION
1 .ADD    2 .CANCEL
```

- 4 Press the **Start/Enter** button to confirm. The display shows operations currently reserved in memory.

```
09:00AM DELAY TX
FAX1
```

- 5 Press the **Down** or **Up** buttons repeatedly until you find the operation you want to add documents to, then press the **Start/Enter** button.
- 6 The machine automatically adds the new documents to the pages already in memory, displays the number of total pages and added pages, then returns to Standby mode.

3

Canceling a Standby Operation

- 1 Press **Menu**, then press the **Add/Cancel** button on the One-Touch keypad. The display prompts you to select 1.ADD or 2.CANCEL.
- 2 Press **2**. The display shows the operations currently reserved in memory.
- 3 Press the **Down** or **Up** button repeatedly until you find the operation you want to cancel.
- 4 Press the **Start/Enter** button to cancel the job.

Configuring Automatic Dialing Features

One-Touch Dialing

One-Touch dialing lets you use any one of the 20 One-Touch buttons located on the left of the machine's control panel to automatically dial a number.

Storing a Number for One-Touch Dialing

- 1 When assigning a One-Touch number, press and **hold the One-Touch button** (01 through 20) for **2 seconds**. The display shows TXX:, where "T" signifies you are assigning a One-Touch number and "XX" designates the selected One-Touch button.

If a number is already stored in the location, the display shows the number in the upper line and 1:RENEW 2:OTHER in the bottom line. Press 1 to delete the existing number or 2 to select another One-Touch button.

- 2 Enter the number you want to store (up to 46 digits) using the Number keypad, then press **Start/Enter**.

To insert a pause between numbers when dialing, press the Redial/Pause button.

If you make a mistake while entering a number, use the Right or Left buttons to move the cursor under the wrong digit, then enter the correct digit, or press the Delete button.

- 3 The display asks you to enter a name. Using the Number keypad, enter the desired name (up to 20 alphanumeric characters). For information on how to enter names, see *Entering Alphanumeric Characters* on page 3-26.

Or

If you don't want to assign a name, skip this step.



Note: If you assign a name to the number, the name will appear in the display whenever you press the One-Touch button.

- 4 Press the **Start/Enter** button when the name appears correctly or without entering a name.

The display prompts you to press another One-Touch button.

- 5 To assign another One-Touch number, press the desired One-Touch button and repeat steps 2 through this step.

Or

To return to Standby mode, press the **Stop** button.

Dialing a One-Touch Number

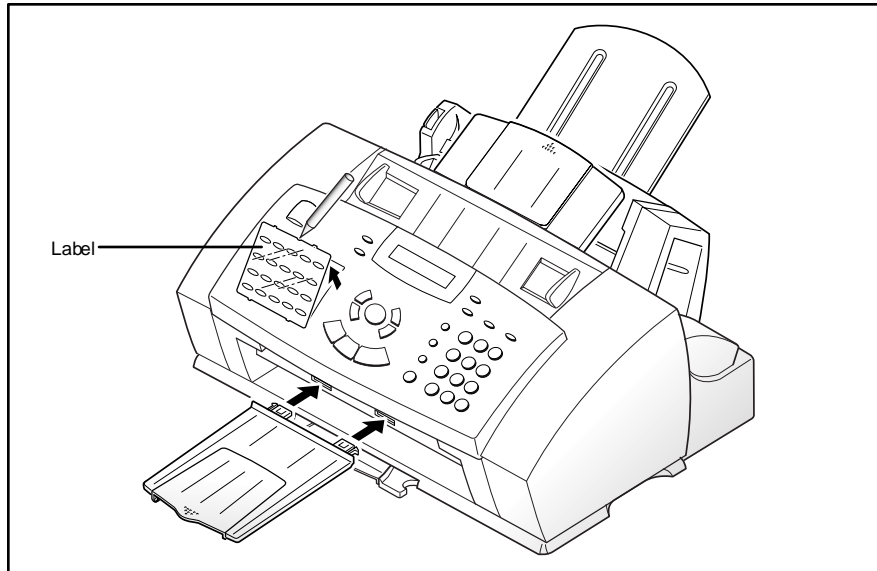
- 1 Press the One-Touch button (0-20) to which you assigned the number you wish to dial.

The number is automatically dialed. If a document is loaded into the Automatic Document Feeder, the WorkCentre 480cx will begin transmission of the document after the remote machine answers.

Using the One-Touch Address Label Sheet

A One-Touch label sheet is included with your machine. As you store numbers in One-Touch dial buttons, make a note of the numbers on the label to remind you which number is stored in each position.

- 1 Remove the clear cover and label using a pointed instrument, as shown below.



Note: You may want to write on the label using a pencil in case you wish to change these numbers later.

- 2 Write information on the label and re-install the label and cover.



Speed Dialing

You can store up to 50 numbers in two digit Speed Dial locations (01-50).

Storing a Number for Speed Dialing

You can assign up to 50 fax or telephone speed dial numbers using the two digit numbers 01-50 on the Number keypad.

- 1 Press and hold the **Speed/Dual** button for 2 seconds.
- 2 Enter a two digit location number (01 through 50) to which you want to store a number, then press the **Start/Enter** button.

If a number is already stored in the location, the display shows the number in the upper line and 1:RENEW 2:OTHER in the bottom line. Press 1 to delete the existing number or 2 to select another speed dial number.

- 3 Enter the telephone number you want to store, then press the **Start/Enter** button.
- 4 To assign a name to the number, enter the desired name. For information on how to enter names, see *Entering Alphanumeric Characters* on page 3-26.

Or

If you don't want to assign a name, skip this step.

- 5 Press the **Start/Enter** button when the name appears correctly or without entering a name.
- 6 To store more telephone numbers, repeat steps 2 through 5.

Or

To return to Standby mode, press the **Stop** button.

Dialing a Speed-Dial Number

- 1 Press the **Speed** button, then enter the two digit number assigned to the number you wish to call.
- 2 Press the **Start/Enter** button to dial the number.

The number is automatically dialed. If a document is loaded into the Automatic Document Feeder, the WorkCentre 480cx will begin transmission of the document after the remote machine answers.

Group Dialing (for Multi-Address Transmission)

Multiple One-Touch and speed dial numbers can be registered as a Group. By using the Group number, you can send a document to multiple parties in a single operation. Up to ten numbers may be stored as a Group. Your machine will dial the remote numbers in a stored sequence. If the number is busy, your machine will dial the next stored number and after dialing all of the stored numbers, will automatically redial any number previously busy. Before you can use this feature, you must coordinate and store Group numbers.

Storing One-Touch or Speed Dial Numbers for Group Dialing

- 1 Press the **Menu** button, then press the **Group Dial** button on the One-Touch keypad.

The LCD display prompts you to select a One-Touch Number.

- 2 Press the **One-Touch button** (01 through 20) you want to use for Group Dial, then press the **Start/Enter** button.

The LCD display prompts you to confirm your choice.

```
GROUP NO.:T02
1.YES 2.NO
```

- 3 Press **1** to confirm your selection or **2** to cancel it and choose a different One-Touch button.

The display prompts you to press a One-Touch button or enter a Speed Dial number which you wish to include in the group.

```
ENTER ONE-TOUCH
/ SPEED DIAL> ##
```

- 4 Press the **One-Touch button** assigned to the fax number you wish to include in the group.

Or

Enter the **two digit Speed Dial location** to which the fax number you wish to include in the group is stored.

- 5 Press the **Start/Enter** button. Repeat steps 4 and this step to include more destination numbers in the group.
- 6 Press the **Stop** button when you have entered all the telephone numbers you want to include in the group. The display asks you to enter a name.

7 To assign a name to the Group, enter the desired name.

Or

If you don't want to assign a name, skip this step.

8 Press the **Start/Enter** button. The display prompts you to assign another group dial number. If you want to store another group dial number, repeat steps 2 through 8.

Or

To return to Standby mode, press the **Stop** button.

Using Group Dialing

Group Dial numbers can be used for Memory Transmission, Delayed Transmission, or Continuous Polling operations. See *Memory Transmission (Broadcasting)* on page 3-10, *Delayed Transmission* on page 3-12, and *Polling Remote Machines (CONT. POLL)* on page 4-9.

Setting Document Resolution and Contrast

It is recommended that you fax documents that were printed with a typewriter, felt tip pen, black ink or laser printer. The paper should be white or very light. The document should be of normal weight; do not use cardboard. Blue lines on a ruled pad will not fax well.

When sending typical text based documents, you should not need to adjust the resolution and the contrast. However, if you send documents with unusual contrast characteristics, including photographs, you can adjust the resolution and contrast to ensure a high quality transmission.

Resolution

Press the **Resolution** button to increase sharpness and clarity. By pressing the **Resolution** button repeatedly after loading a document, you can choose between STANDARD, FINE, or SUPER FINE modes.

The document types recommended for these settings are described in the table on the next page.

Mode	Recommended for...
Standard	Documents with <i>normal sized</i> characters.
Fine	Documents containing <i>small characters or thin lines</i> , or for sending documents printed with a dot-matrix printer.
Super Fine	Documents containing <i>extremely fine detail</i> . SUPER FINE mode works only if the remote machine also supports SUPER FINE resolution.



Note: Super Fine Resolution mode is not available if the Send From Memory feature is set to ON. If Send From Memory is set to ON, all documents will be stored to memory in Fine Resolution mode.

If the WorkCentre 480cx is set to Super Fine Resolution mode and the remote fax machine does not support Super Fine Resolution, the WorkCentre 480cx will transmit using the highest resolution mode supported by the remote fax machine.

Contrast

Press the **Contrast** button to compensate for the brightness or darkness of your faxed document. By pressing the **Contrast** button repeatedly after loading a document, you can choose between NORMAL, DARKEN, LIGHTEN, or PHOTO.

Mode	Recommended for...
Normal	Faxing most documents.
Darken	Documents containing <i>light print or faint pencil markings</i> .
Lighten	Documents containing <i>dark print</i> .
Photo	Photographs or documents containing <i>color or shades of gray</i> . Your machine will not transmit color, but it will scan and send up to 256 shades of gray.

3



Note: You can set the default resolution and contrast. The default mode will be in effect when a document is sent or copied unless you change the setting for an individual operation. The machine will automatically revert to default settings after the operation is completed. For details on how to set the default resolution and contrast, see *Default Settings* on page 1-39.

Using the Number Keypad

As you perform various tasks, you will need to enter names and numbers using the Number keypad. For example, when you set up your machine, you enter your name (or your company's name) and telephone number. When setting up One-Touch or Speed Dial numbers, you will also need to enter telephone numbers and names.

When prompting you to enter a name, the LCD display will appear as shown below :



You can then use the procedures described below to enter up to 20 letters and special characters, numbers or spaces.

Entering Alphanumeric Characters

- 1 Locate the button labeled with the character you want. Press the button repeatedly until the correct letter appears in the display.



For example, to enter the letter O, press the 6 key (labeled MNO). Each time you press the 6 key, the display shows a different letter, first M, the N, and O, and finally 6.

You can enter special characters (space, plus sign, etc.) in the name by using the 0 key. See *Keypad Character Assignments* on page 3-28.



Note: Only upper case letters are available.

The letter appears in the display.



- 2 To enter another letter, locate the Number keypad button labeled with the letter you want. Press the button repeatedly until the letter appears in the display.

If the next letter is printed on the same Number keypad button, move the cursor by pressing the **Right** button, then press the Number keypad button labeled with the letter you want.

The blinking cursor moves right and the next letter appears in the display.



If the letter that appears is not the one you wish to enter, press the Number keypad button repeatedly until the letter you wish to enter appears in the display. Select additional letters in the same way.

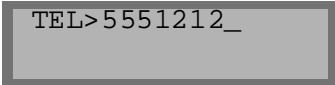
- 3 When you finish entering letters, press the **Start/Enter** button.

Keypad Character Assignments

Key	Assigned numbers, letters or characters
1	1
2	A → B → C → 2
3	D → E → F → 3
4	G → H → I → 4
5	J → K → L → 5
6	M → N → O → 6
7	P → Q → R → S → 7
8	T → U → V → 8
9	W → X → Y → Z → 9
0	Space → , → . → / → + → * → & → 0

Entering Numbers

You can enter the telephone number of a remote fax machine manually by using the Number keypad. The number you press appears in the LCD display.



TEL>5551212_

You can also use One-Touch buttons (including a Group Dial number) or a two digit Speed Dial number for entering telephone numbers.

Your machine will send the same document to more than one location. After you enter a fax number, the display prompts you to enter ANOTHER FAX NUMBER?. To enter another fax number, you can enter the number manually, use a One-Touch button, or a two digit Speed Dial number.



Note: You cannot use a Group Number Dialing button to enter another fax number.

Editing Numbers or Names

If you make a mistake while entering a number or name, move the cursor under the wrong digit by pressing the **Right** or **Left** button. Press the correct number to change or press the **Delete** button to delete the number.

Inserting a Pause

With some private telephone systems, you must dial an access code (9 for example) and listen for a second dial tone before dialing an outside number. In such cases, you must insert a pause in the telephone number. You can insert a pause in the telephone number when you are setting up a One-Touch or Speed Dial number, or when you dial a number without lifting the handset.

To insert a pause, press the **Pause** button at the appropriate place while entering the telephone number. A "P" will appear in the display at the corresponding location.

When you dial a number, the dialing process pauses for about 3 seconds at the point where you inserted the pause. If you require a longer pause time, press the **Pause** button twice.

Other Functions

Redial

To redial the last number called:

- 1 Press the **Redial** button. If a document is loaded in the document tray, the machine automatically begins to send.

Redial Memory

To search through Redial memory:

- 1 Press and hold the **Redial** button for 2 seconds.
The Redial memory in your machine retains the last 10 numbers called. If you have dialed the same number multiple times, the machine does not count the duplicates.
- 2 Press the **Down** or **Up** buttons to search through memory until you find the number you want.
- 3 When the number you want appears in the display, press the **Start/Enter** button to commence dialing. If a document is loaded in the Automatic Document Feeder, transmission begins when the remote machine answers.

Searching for a Number in Memory

There are two ways to search for a number in memory. You can either scan from A to Z sequentially, or you can enter the first letter of the name associated with the number.

Searching Sequentially through Memory

- 1 Press the **Search** button, then press the **Up** or **Down** buttons to move through the memory until you find the number you want.

Pressing the Down button allows you to search downward through the entire memory in alphabetical order (from A to Z), and pressing the Up button allows you to search upward in reverse alphabetical order (from Z to A).

Each time you press the Down or Up buttons, the display shows the next number stored in memory.

While searching through the machine's memory, you'll see that each entry is preceded by one of three letters: 'T' for One-Touch dial, 'S' for speed, or 'G' for group dial number. These letters indicate how the number is stored.

- 2 When the desired number appears in the display, press the **Start/Enter** button to commence dialing.

If a document is loaded, transmission will begin when the remote fax machine answers.

Searching by the First Letter

- 1 Press **Search**, then press the button labeled with the letter you want to search for. A name beginning with the letter appears in the display.

For example, if you want to find the name MOBILE, press the "6" button, which is labeled with the letters MNO.

- 2 Press the **Up** or **Down** buttons to move through the memory until you find the name you want.
- 3 When the name and number you want appear, press the **Start/Enter** button to initiate dialing.

Tone

If your telephone service is configured for pulse dialing, you may still need to use Touch Tone signals to perform special operations by phone. Bank-by-phone and voice mail are two examples of systems that require Touch Tone signals. You can send Touch Tone signals by following these steps:

- 1 Dial the number using pulse dialing.
- 2 When the remote phone answers, **press ***.
Any numbers you now press will be sent as Touch tones for the remainder of the call.
- 3 Enter the remaining numbers required by the service. The machine returns to the pulse mode after you complete the call.

Flash

Some special phone services require a switch-hook signal for proper operation. For example, if you have call waiting, you can put a call on hold and take a second call on the same line by pressing the switch-hook button. Pressing the Flash button performs the equivalent of a switch-hook operation.

- 1 When you are on the telephone and hear the call waiting signal, press the **Flash** button once. The first caller is placed on hold; you are connected to the second caller.
- 2 Press the **Flash** button again to return to the first caller.



CAUTION: If your telephone service does not use the switch-hook signal, do not press the Flash button during a call. Doing so could disconnect the call.

Automatic Redial

If the number you dial to send a fax is busy or there is no answer, the machine beeps, hangs up, and waits for the specified retry period. It then redials the number. If, after the specified number of retry attempts (retry count) the machine fails to connect, it returns to Standby mode.

- 1 While the machine is waiting to redial, the LCD display shows RETRY REDIAL ?.
- 2 If you want to redial the number immediately, press the **Start/Enter** button. To stop redialing, press the **Stop** button.

You can select the number of retries and the retry interval between each redial attempt. See *User Options (System Data)* on page 1-51.

Priority Transmission

When priority transmission is enabled, a high priority document can be transmitted ahead of previously scheduled operations. A priority transmission interrupts a broadcast operation between stations, for example, when transmission to station A ends but before transmission to station B begins. The priority transmission also occurs between redial attempts.

In this operation, the document is scanned into memory. It is immediately transmitted at the conclusion of any operation already in progress.

- 1 Place the document *face down* in the Automatic Document Feeder. If necessary, adjust the resolution or contrast. For details, see *Resolution* on page 3-23 and *Contrast* on page 3-25.
- 2 Press the **Menu** button, then press the **Priority TX** button on the One-Touch keypad.
- 3 Enter the telephone number of the remote machine. There are several methods available to do this:
 - Direct entry of the telephone number using the numeric keypad.
 - One-Touch Keypad dialing of stored telephone numbers (see *One-Touch Dialing* on page 3-16).
 - Speed Number dialing using the numeric keypad (see *One-Touch Dialing* on page 3-16).



Note: Group Number Dialing functions are not available in a Priority Transmission.

- 4 The display prompts you to enter a name for the transmission.
To assign a name to the transmission, enter it using the Number keypad and press the **Start/Enter** button.
Or
If you do not want to assign the transmission a name, press the **Start/Enter** button to skip over this step.
For details on how to enter letters using the Number keypad, see *Entering Alphanumeric Characters* on page 3-26.
- 5 The document is scanned into memory. The display shows the remaining memory capacity and the number of pages. The machine dials the first telephone number and begins sending the document.

Polling

What is Polling?

Polling is used when one fax machine requests another to send a document. This is useful for sending unattended faxes. The person who wants to receive the document calls the machine holding the original and requests that the document be sent. In other words, it "polls" the machine holding the original.



Note: The remote machine must also support Polling to use this feature.

Being Polled By a Remote Machine (TX POLL)

You can program your fax machine to send documents when polled by a remote fax machine. It is possible to assign a Poll Code to prevent unauthorized polling of your fax machine.

When you secure your machine using a Poll Code, only those who know the code can poll your machine.

- 1 Place the document *face down* in the Automatic Document Feeder. If desired, adjust the resolution and contrast. For details, see page *Resolution* on page 3-23 and *Contrast* on page 3-25.
- 2 Press the **Menu** button.
- 3 Press the **Polling** button on the One-Touch keypad. The display prompts you to choose one of the two polling options: TX (Transmission Polling) and CONT. (Continuous Polling).

- 4 Press the **Start/Enter** button to confirm TX POLL. The display prompts you to enter a 4-digit poll code.



Note: The poll code is preset to 0000 at the factory. This setting represents no poll code.

- 5 If you want to use a poll code, enter a 4-digit code (except 0000).
- 6 Press the **Start/Enter** button.

Or

If you do not want to secure the transmission with a Poll code, press the **Start/Enter** button when the display shows 0000 for TX-POLL CODE. If you previously entered a poll code, and do not want one, you may enter 0000 and then press the **Start/Enter** button.

The machine stores the document in memory. The display shows a count of the number of pages being stored in memory and the remaining memory capacity.

- 7 The machine returns to Standby mode and displays a reminder that a Polling Transmission is set. The machine automatically switches to FAX mode (automatic receiving) when configured to be polled.

Adding Documents To the Job to be Polled

If you want to add documents to the original documents waiting in memory to be polled, follow the procedure below.

- 1 Place the additional documents *face down* into the Automatic Document Feeder.
- 2 Press the **Menu** button.
- 3 Press the **Add/Cancel** button on the One-Touch keypad. The LCD display prompts you to select 1.ADD or 2.CANCEL.
- 4 Press **1**.
The set up information for the last job stored into memory is displayed. If you have more than one job waiting in memory, press the UP button until the set up information for the job you wish to add documents to is displayed.
- 5 Press the **Start/Enter** button.
The machine scans the new documents into memory and returns to Standby mode.

Cancelling a Job Already in Memory Which is Waiting to be Polled

If you want to cancel a job already in memory waiting to be polled, follow the procedure below.

- 1 Press the **Menu** button.
- 2 Press the **Add/Cancel** button on the One-Touch keypad. The LCD display prompts you to select 1.ADD or 2.CANCEL.

3 Press **2**.

The set up information for the last entered polling job is displayed. If you have more than one polling job waiting in memory, press the **UP** button until the set up information for the job you wish to cancel is displayed.

4 Press the **Start/Enter** button.

The job is erased from memory and the machine returns to Standby mode.

PC Faxing

This section provides information and instructions for PC Faxing from a computer workstation connected to the WorkCentre 480cx. Using this method, a fax is sent *without* first printing it and placing the printed document in the Automatic Document Feeder. This process is controlled by a PC Faxing application called *LaserFAX Lite*.

What is LaserFAX Lite?

LaserFAX Lite software is an application that is used to enable PC Faxing using the WorkCentre 480cx. If selected during the installation of the other software components for the WorkCentre 480cx, the LaserFAX Lite application is installed automatically.

After it is installed, LaserFAX becomes a selection among the printing devices for your computer workstation. When you send a fax directly from your PC, you simply select LaserFAX as the destination for a print job. A LaserFAX dialog is then displayed that prompts you to enter the phone number and other information for the fax job.

LaserFAX Installation

To install LaserFAX Lite, no additional special hardware is required. Simply ensure that the WorkCentre 480cx is connected to the computer workstation using the supplied IEEE 1284 parallel cable, and a phone line has also been connected to the Tel Line input on the back of the WorkCentre 480cx.

The system requirements and procedures for installing LaserFAX Lite software are contained in *Installing Software* on page 1-31. Refer to this section if LaserFAX Lite is not already installed on your computer workstation.

Sending Faxes with LaserFAX Lite

The steps performed to fax using LaserFAX Lite are very similar to the steps performed to print a document from a word processing application. However, when selecting the printer that will receive the document, you will select LaserFAX. When you "print" the document, LaserFAX dialog boxes will appear and prompt you to enter fax information.

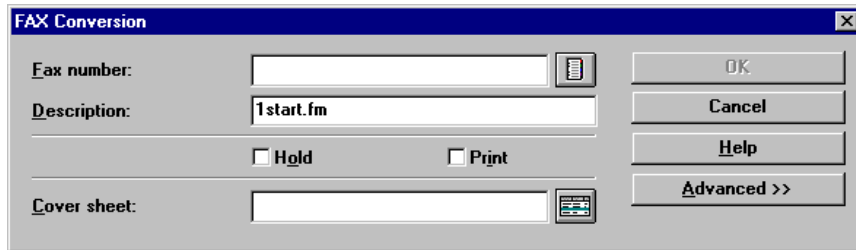
To fax a document, perform the following steps:



Note: The following steps are generally the same for all versions of Windows. The actual steps you perform may be slightly different depending on the Windows version and application you are faxing from. Additional detail for some of the dialogs is available later in this section of the User Guide. You are also encouraged to refer to the on-line help for the LaserFAX application and to visit the WordCraft web site at <http://www.wordcraft.co.uk>.

- 1 Open a word processing application on the computer workstation.
- 2 Create or open the document to be faxed.
- 3 Select Print from the word processing application.
- 4 When the application print dialog is displayed, select LaserFAX on LFPT.PRN as the printer.
- 5 Select OK or Print to send the document to LaserFAX. Even if LaserFAX is not open, it will load automatically when you send the document to it as a printer.

- 6 After the document has been converted to a fax image, the Fax Conversion dialog will be displayed. This dialog prompts you for details of the transmission.



- 7 Enter the fax number manually or click the Phonebook button to select from your LaserFAX Phonebook. If you have already defined entries in the Phonebook you can type a key name assigned to a Phonebook entry and LaserFAX Lite will look up the associated fax number.

Note: For information on the LaserFAX phonebook refer to *The LaserFAX Phonebook* on page 3-55. You can also select the Help button and review the on-line help topics for this feature.

- 8 (Optional) Enter a description of the fax job. While this is an optional step, it can be very useful when searching All Jobs Pending or Jobs Completed for your fax job.

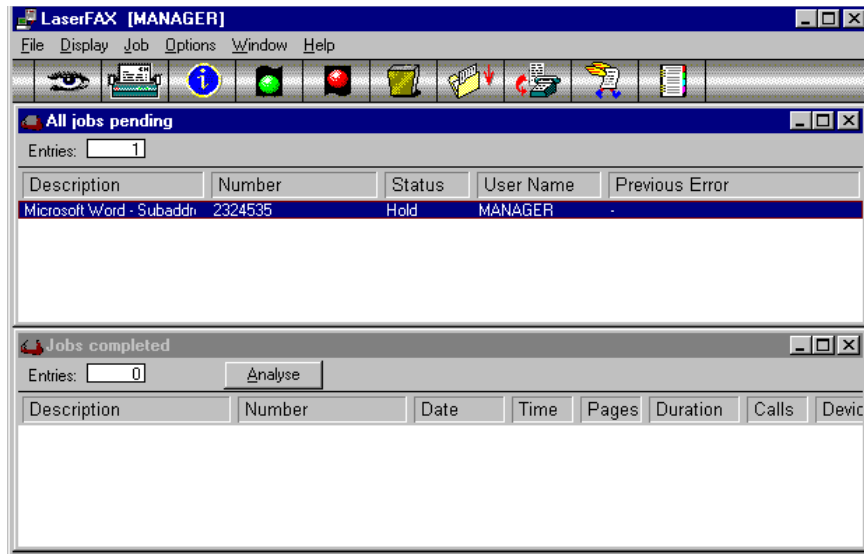
- 9 (Optional) You may add a Cover Sheet as the first page of your fax by either typing the file name for the cover sheet in the **Cover sheet:** field, or by clicking the cover sheet button and selecting from the list of cover sheet files displayed. The first time you use this feature you may be asked to enter other information required to complete the cover sheet - for example the **From** field. Perform the following steps to enter information on the Cover sheet:



Note: If a new cover sheet is selected, the dialog will expand to include areas for you to enter the name of the recipient, the subject of the fax, and a short message.

- a) If prompted select **Yes** to define the cover sheet fields.
 - b) Double click each user defined field name and type the desired information in the field.
 - c) Click **OK**. If the “Save settings on exit” option is selected, LaserFAX Lite will remember these settings and not ask you for them next time the cover sheet is used. To change the settings use the **Options, Cover sheets...** menu.
- 10 (Optional) To hold the fax to be sent at a later time, select the **Hold** checkbox.
 - 11 (Optional) If a printed copy of the fax is desired when the document is faxed, select the **Print** checkbox.
 - 12 (Optional) Select other features available under the **Advanced>>** button selection. For more information on this features see *Fax Conversion Dialog Advanced Features* on page 3-45.

- 13 To fax the document, click the **OK** button. This will result in the job being displayed in the **All jobs pending** list in the LaserFAX application.



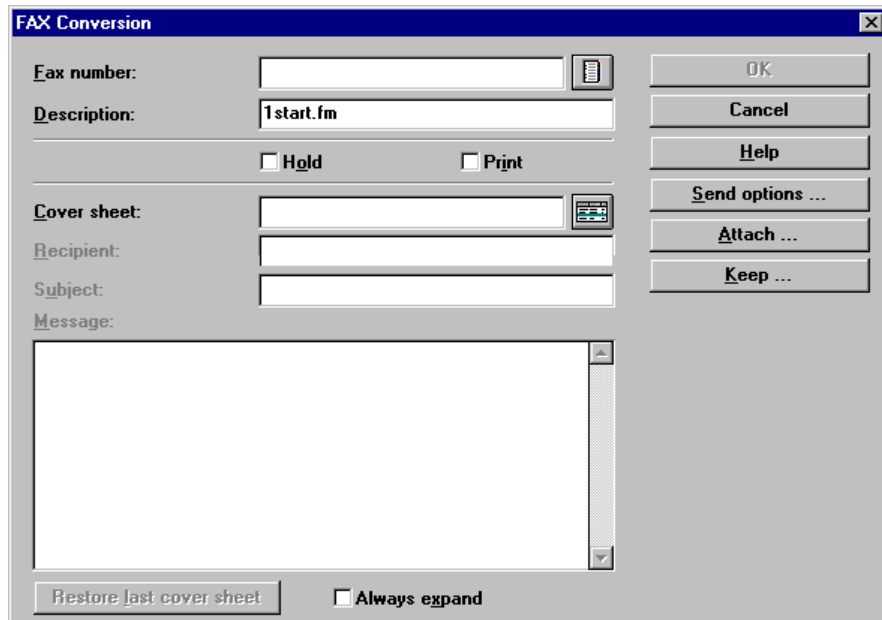
- 14 The fax job will appear in this list until it is transmitted using the features of the LaserFAX application. At that time, it will be displayed in the **Jobs completed** list.



Note: The features of the LaserFAX application are briefly described under *LaserFAX Application Features* on page 3-51. For more detailed information on the features of the LaserFAX application, refer to the on-line help system in the LaserFAX application.

Fax Conversion Dialog Advanced Features

When the Fax Conversion dialog is displayed, there is an **Advanced>>** button that can be selected which makes available several other features for the fax job. When the **Advanced>>** button is selected the dialog below is displayed.



The screenshot shows a window titled "FAX Conversion" with a close button (X) in the top right corner. The window contains the following fields and controls:

- Fax number:** A text input field with a small icon to its right.
- Description:** A text input field containing "1start.fm".
- Hold:** A checkbox.
- Print:** A checkbox.
- Cover sheet:** A text input field with a small icon to its right.
- Recipient:** A text input field.
- Subject:** A text input field.
- Message:** A large text area with a vertical scrollbar.
- Buttons:** A vertical stack of buttons on the right side: "OK", "Cancel", "Help", "Send options ...", "Attach ...", and "Keep ...".
- Bottom controls:** A button labeled "Restore last cover sheet" and a checkbox labeled "Always expand".

3

Note that the Fax Conversion screen now contains additional fields for the **Cover sheet**, and three new buttons; **Send options**, **Attach...** and **Kee...**

Cover Sheet Options

The cover sheet options on this page can be used to select an existing cover sheet, or create a new sheet.

Cover Sheet

In this location, you can select a previously created and saved cover sheet.

Recipient

In this field the recipient of the fax is entered.

Subject

The subject of the fax is entered here.

Message

The message to be conveyed on the cover sheet is entered here.

Restore last cover sheet

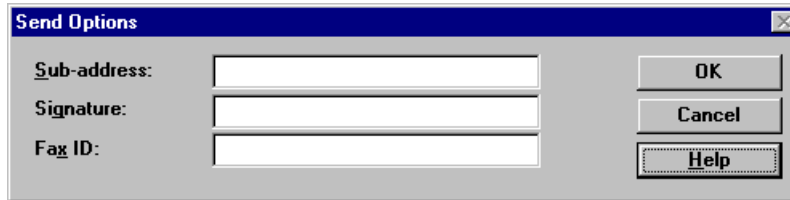
When selected, this feature will restore the last cover sheet for the fax job.

Always Expand

When this feature is selected, the expanded cover sheet dialog seen in the diagram above is displayed by default when the Fax Conversion dialog is displayed.

The Send Options Button

Selecting the **Send options** button will cause the following dialog to be displayed:

A screenshot of a Windows-style dialog box titled "Send Options". The dialog has a blue title bar with a close button (X) in the top right corner. Inside the dialog, there are three text input fields stacked vertically, labeled "Sub-address:", "Signature:", and "Fax ID:". To the right of these fields are three buttons: "OK", "Cancel", and "Help". The "Help" button is enclosed in a dashed border.

Sub Address

A subaddress may be up to 20 digits long and is sometimes used to automatically route the outgoing fax to a specific fax machine.

Signature

A signature may be up to 20 digits long and may be sent and received with the fax. Note that it is not possible to transmit a signature if you also wish to perform a turnaround poll in the same transmission.

Fax ID

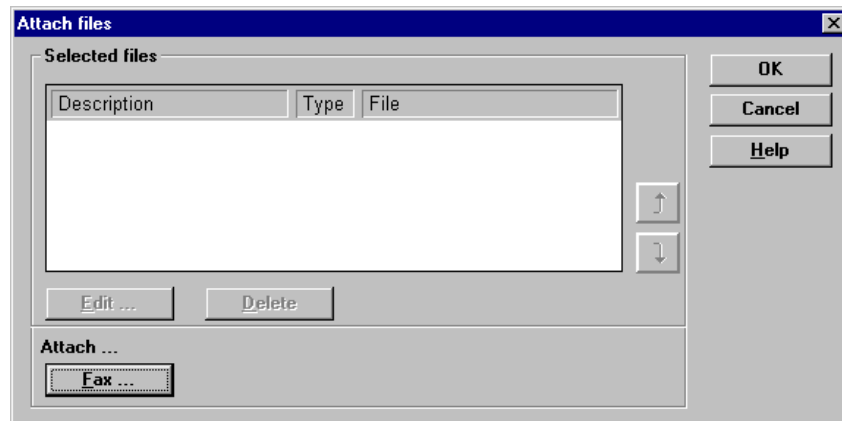
This is the identification you send to the remote fax system. If you do not enter a value here, the default ID will be the fax number you entered when installing LaserFAX. For additional information, see *Registration Details* in the LaserFAX Configuration program.

The Attach Button

The Attach button is used to attach documents to the current fax job by referencing the file name of the fax document.

Using the features available under the **Attach...** button, documents that are already prepared as faxes can be attached to the current job.

When the **Attach...** button is selected the following dialog is displayed:



The features of this dialog are as follows:

- The **Fax** button displays the list of fax files to choose from.
- The arrow keys are used to change the order of the attachments.
- The **Edit** button is used to change the displayed path to the attached file.
- The **Delete** button is used to delete the attachment. This does not delete the file from the workstation.

To use the **Attach...** feature:

- 1 Click on the **Fax** button.
- 2 Select the file you want to attach and click on **OK**. You can select several faxes at once by holding down the **CTRL** key and clicking on the faxes that you wish to attach.
- 3 When all files are attached to the fax job, select **OK** to fax the job and its attachments.

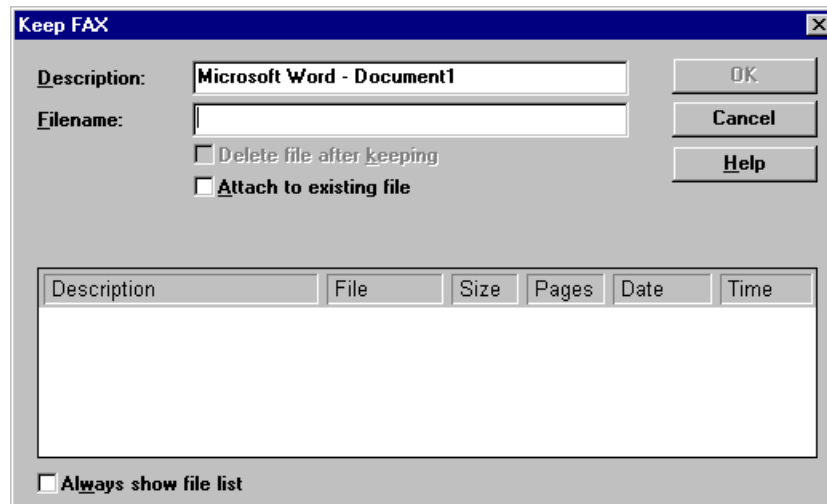


Note: For more information on the **Attach...** feature, refer to on-line help within the LaserFAX Lite 3.5 application.

The Keep Button

The **Keep...** button will allow you to keep a copy of the fax on the workstation hard disk.

When the **Keep...** button is pressed, the following dialog is displayed:



To use the features of this dialog, perform the following steps:

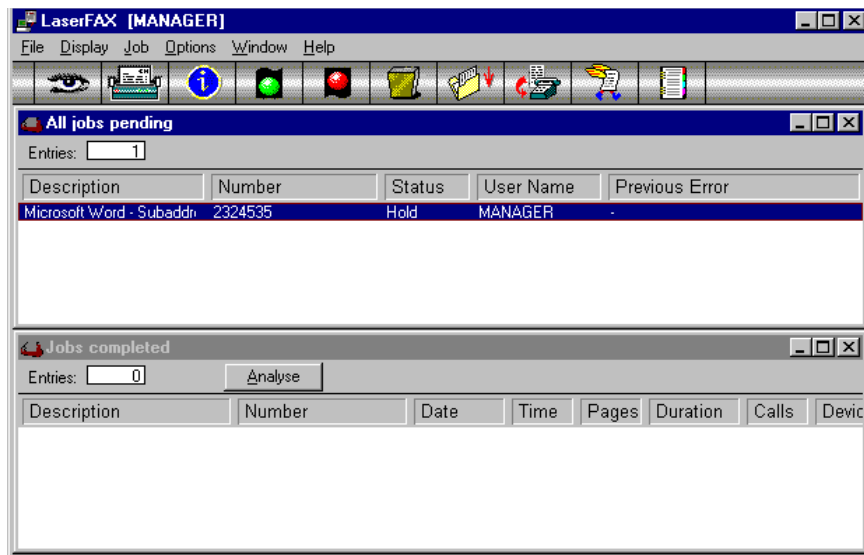
- 1 The name of the file and the application in which it was generated are displayed in the **Description:** field. Edit the description and enter a filename. The default file type will be .FAX.

- 2 (Optional) Select **Attach to existing file** to attach the fax to the end of an existing fax document.
- 3 (Optional) Click on the **Always show file list** if you would like this list displayed whenever you use the **Files** button in the LaserFAX application.
- 4 After making settings on this dialog, select **OK** to return to the **Advanced>>** dialog.

LaserFAX Application Features

In this section, the features of the LaserFAX application are briefly described. For additional information on the functions and features of the LaserFAX application, refer to the on-line help system for LaserFAX.

The LaserFAX application is displayed when a fax is sent from the WorkCentre 480cx. The following window is displayed:



LaserFAX Application Toolbar Features

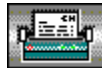
The features of the LaserFAX Toolbar are as follows:

The Viewer Button



This will load the LaserFAX Viewer to display the fax file currently selected in the All Jobs pending, Received faxes or Fax files list.

The Print Button



This will print the current fax or list. Use Printer setup from the File menu to select the default printer (or fax machine) to be used.

The Information Button



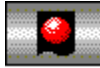
This will show more details of a job in the All Jobs pending, Jobs completed, Fax files, etc lists. You can also use this button to see information about users or devices. From the details screen displayed on your screen, you will be able to edit information about the entry you have selected.

The Go Button



This will release the selected fax from hold or failed status. If a job is shown as pending, a retry may be scheduled. Clicking on the green traffic light will cause the LaserFAX application to try sending again without waiting for the retry interval.

The Stop/Hold Button



This will stop the current job in progress or place a pending job into Hold status. A held job can be released with the Go button.

The Waste Button



This will delete an entry from a list. For lists of completed transmissions or receptions, it will provide the option to archive the lists to a file before deleting them.

The Keep Button



This will keep a permanent copy of a fax file. The kept file may then be sent on its own, included as an image within another fax, or appended to another fax.

The SendFax Button



This button is used to transmit the selected fax document or the document associated with the fax job.

The Scan Button



If you are using an external fax machine with LaserFAX you can use this to scan documents into your PC.

The QuickFax Button



This allows you to send a fax without using any other program. See the QuickFAX screen and on-line Help for more details.

The Phonebook Button



This will display the phonebook. After opening the phonebook, you may add a new entry or select an existing number from it.

The LaserFAX Phonebook

The LaserFax application has a phonebook that can be used to enter up to 20 entries. These entries can then be selected from the phonebook, or can be specified by using a key name. For frequently used numbers, this feature saves time and effort.

In the LaserFAX application, select the **Display, Phonebook** menu item or click on the Phonebook icon in the toolbar to view your entries.

Adding Entries to the Phonebook

Display the phonebook and click on the **Add** button or press the INS (Insert) key on your keyboard to add a new entry. You must specify a unique key name which can then be typed for LaserFAX to look up the fax number in your phonebook. The phonebook provides the ability to add a description and a fax number for each entry as well as a telephone number and comments.

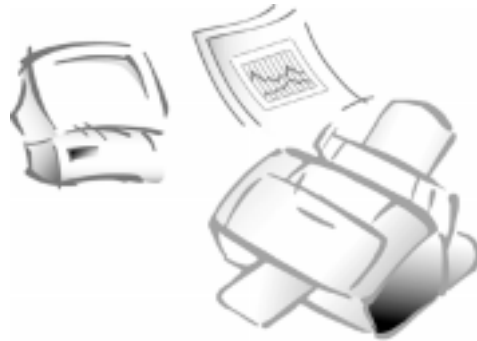
Any entry in the phonebook can be edited by double clicking it.

Troubleshooting LaserFAX

When LaserFAX does not activate, ensure that:

- The WorkCentre 480cx is connected and plugged in.
- The parallel interface cable is properly connected and is not longer than 6 feet.
- No error message is displayed on the WorkCentre 480cx. If an error message is displayed, check the Troubleshooting section of this manual to diagnose the problem.

Chapter 4



Receiving a Fax

Options for Receiving a Fax Using the WorkCentre 480cx

Using the WorkCentre 480cx, you can receive a fax in one of two ways:

- By allowing the WorkCentre 480cx to answer, receive, and print all incoming faxes. This process normally involves printing of the incoming fax. When incoming faxes are received in this manner, there is no electronic storage of the fax in memory. When used in this manner, the WorkCentre 480cx is receiving faxes as a Stand Alone fax machine. There are four distinct ways to configure the WorkCentre 480cx as a Stand Alone fax machine.

For information and instructions for operation as a Stand Alone fax machine, refer to *Reception Modes* on page 4-2.

- By receiving faxes directly to your computer workstation using LaserFAX Lite software. This is called PC Fax Reception.

For information and instructions for PC Fax Reception, refer to *PC Fax Reception* on page 4-13.

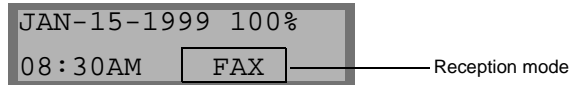
Reception Modes

When used as a Stand Alone fax machine, your multi-function machine has four reception modes as described below:

- **FAX** The machine answers an incoming call and immediately goes into fax receive mode.
- **TEL/FAX** The machine answers the incoming call. If a fax signal is not detected, the WorkCentre 480cx sounds a ringing tone to indicate a voice phone call. If the external phone is not lifted while the ringing tone is sounding, the machine will switch to automatic fax reception mode.
- **TEL** In TEL mode, automatic fax reception is turned off. You can receive a fax only by manually picking up the external phone to accept the call and then pressing the **Start/Enter** button to receive the fax.
- **ANS/FAX** To use the ANS/FAX mode, you have to attach an answering machine to the EXT jack on your fax machine. If the WorkCentre 480cx senses a fax tone, it automatically switches to fax reception mode. However, if a fax is not sensed, the WorkCentre 480cx routes the call to the answering machine, and the caller can leave a message.

Determining the Reception Mode

The current reception mode is displayed in the bottom line of the LCD display window.



If you seldom use the fax line for phone conversations, set the WorkCentre 480cx to either FAX mode or TEL/FAX mode. In these modes, the WorkCentre 480cx answers incoming calls and receives faxes automatically.



Note: During PC file printing, an incoming fax will be received and stored in memory. The memory is also used for PC file printing. If you are printing a large PC file, it is recommended that you stop PC file printing while receiving a fax. This will maximize memory space for the incoming fax.

Receiving Automatically in FAX Mode

- 1 Press the **Receive** button until the display indicates FAX.
- 2 When a fax call comes in, the machine answers on the second ring and receives the fax automatically.



Note: To change the number of rings before the machine answers an incoming call, see *Selectable Options* on page 1-52.

To adjust ringer volume, press the **Menu** button and the **System Setup** (04) button on the One-Touch keypad. Ringer volume is the first item displayed. Press the **Start/Enter** button. Use the **Up** or **Down** button to set the desired loudness. Press the **Stop** button twice to accept and exit.

Receiving Automatically in TEL/FAX Mode

If you have an external phone connected to the EXT jack on the left side of the machine, you can select TEL/FAX mode to receive fax transmissions and answer voice calls.

- 1 Press the **Receive** button until the display indicates TEL/FAX.
- 2 When a call comes in, the machine answers on the second ring. If a fax tone is sensed, the machine receives the fax automatically.



Note: To change the number of rings before the machine answers an incoming call, see *Selectable Options* on page 1-52.

To adjust ringer volume, press the **Menu** button and the **System Setup** (04) button on the One-Touch keypad. Ringer volume is the first item displayed. Press the **Start/Enter** button. Use the **Up** or **Down** button to set the desired loudness. Press the **Stop** button twice to accept and exit.

- 3 If a fax signal is not sensed when the machine answers the call, you will hear a second ringing tone indicating a voice phone call.
- 4 Lift the external phone to answer the call. If the voice call is not answered within a specified time, the machine will switch to automatic fax reception mode.

Receiving Manually in TEL Mode

If you have an external phone connected to the EXT jack on the left side of the machine, you can answer voice phone calls and receive faxes manually.

- 1 Press the **Receive** button until the display indicates TEL.
- 2 Answer an incoming call by picking up the external phone.
- 3 If you hear a fax tone, or if the person calling asks you to receive a fax, press the **Start** button on the machine.

If the machine is equipped with an external phone, you may also press the characters * 9 * (star-nine-star) on the external phone to initiate reception.



Note: The characters * 9 * (star-nine-star) are preset at the factory as the default remote receive start code for machines operated with a telephone connected to the EXT jack on the side of the WorkCentre. The asterisks in the code are fixed characters, but the number can be changed. For more information, see *Selectable Options* on page 1-52.

- 4 Replace the external phone. The machine begins receiving and returns to Standby mode when reception is complete.

Receiving Automatically in ANS/FAX Mode

To use this mode, you must attach an answering machine to the EXT jack on the left side of your machine.

- 1 Press the **Receive** button until the display indicates ANS/FAX. Any incoming voice calls will be answered by the answering machine. The caller can then leave a message on the answering machine.
- 2 If a fax tone is detected on the line, the fax receive mode is automatically activated.



Note: If you set your machine to ANS/FAX mode and your answering machine is switched off, or no answering machine is connected to the Xerox WorkCentre 480cx, the machine will automatically go into fax receive mode after six rings.

If your answering machine has a user-selectable ring counter, set it to answer incoming calls after one ring.

If the machine is in TEL mode, and an answering machine is connected to the machine, turn off the answering machine. This will prevent the answering machine's outgoing message from interrupting your phone conversation.

Receiving a Fax When the Machine is Out of Paper

Incoming fax transmissions are automatically stored in memory under the following conditions:

- The WorkCentre 480cx is out of paper
- A paper jam occurs
- A document is copying
- A document is printing

After receiving documents, the machine displays MEMORY RECEIVED and the cause. For example, NO PAPER.

When the condition is cleared, for example by loading new paper or clearing a jam, the machine will automatically print the fax stored in memory.

If you clear the problem while the machine is receiving documents into memory, it will print the stored document immediately upon clearing the problem.

Distinctive Ring Pattern Detection (DRPD)

Distinctive Ring is a telephone company service which enables the use of a single telephone line to answer several different telephone numbers. The number used to call a phone with this feature is identified by a distinctive ringing pattern consisting of various combinations of long and short ringing tones.

This feature is often used by answering services that answer telephones for many different clients and need to know which number is being called by the ringing pattern of the phone.

Using the *Distinctive Ring Pattern Detection* feature (DRPD), this machine "learns" the ring pattern you designate to answer the fax.

Unless changed, this ringing pattern will continue to be recognized and answered as a fax call, and all other ringing patterns will be forwarded to the telephone or answering machine plugged into the EXT jack. You can easily suspend or change *Distinctive Ring Pattern Detection* at any time. See *Selectable Options* on page 1-52.

With the DRPD feature active, DRPD appears in the display and the previously set reception mode is ignored. If you turn DRPD off, the machine returns to any previously set reception mode.

Polling

What is Polling?

Polling means that one fax machine requests another to send a document. This is useful for sending unattended faxes. The person, who wants to receive the document, calls the machine holding the original and requests the document. In other words, it "polls" the machine holding the original document.

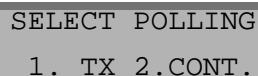
Polling Remote Machines (CONT. POLL)

You can set up the machine to automatically receive documents from unattended remote fax machines. The machine can be set up to receive the fax now, or at a later time. This feature permits unattended polling in off-peak hours when telephone rates are lower.



Note: The remote machine must also support polling to use this feature.

- 1 Press the **Menu** button.
- 2 Press the **Polling** button on the One-Touch keypad. The display shows the polling options:



```
SELECT POLLING
1 . TX 2 .CONT .
```

- 3 Press **2. CONT.** (Continuous Polling). The display asks you to enter the number of the remote fax machine.

- 4 Enter the telephone number of the remote machine. There are several methods available to do this:
 - Direct entry of the telephone number using the numeric keypad
 - One-Touch keypad dialing of stored telephone numbers (see *One-Touch Dialing* on page 3-16)
 - Speed Number dialing using the numeric keypad (see *Speed Dialing* on page 3-19)
- 5 Press the **Start/Enter** button.

ANOTHER FAX NO?

1 . YES 2 . NO

- 6 The display asks if you want to enter another fax number to receive documents from another location.
 - If you do want to receive documents from more than one location:
 - a) Press the **1** button and enter another fax number using the numeric keypad, a One-Touch button, or two digit Speed Dial number.

The number appears in the display.
 - b) Press the **Start/Enter** button.

Repeat Step 6 to receive documents from other locations.
 - Or
 - c) If you have entered the last fax number that you want to receive from, press the **2** button.

- 7 The display asks you to enter a 4-digit poll code.

```
POLL CODE  
[ 0000 ]
```

- 8 If the remote machine is secured with a poll code, you must enter the correct code, and press the **Start/Enter** button.

Or

If the remote machine is not secured with a poll code, press the **Start/Enter** button to accept [0000] which represents no code.

- 9 The display prompts for the time range, during which the machine will call and poll the remote machine(s).

```
START -> END  
HH : MM -> HH : MM
```

Type the time range for polling. If you have configured your machine to use a 12-hour format, remember to specify A.M. or P.M.

- 10 Press the **Start/Enter** button.



Note: If you set a time earlier than the current time, your machine calls the number at that time on the following day.

- 11 The display prompts for the Interval Time of the continuous polling. For example, to set your machine to poll the remote machine at 30-minute intervals, enter 0030.

```
INTERVAL TIME
HH:MM
```

- 12 Type the interval time for polling.
- 13 Press **Enter**.
- 14 The machine display returns to the standby mode. The machine display will alternate every four seconds between time/reception display and continuous poll/scheduled time display.

```
JAN-15-1999 100%
08:30AM FAX
```

Reception mode

```
JAN-15-1999 100%
CONT. POLL 04:20P
```

Poll Schedule Time

- 15 After Continuous Polling ends, a multi-communication report will be printed to show the result (if the report is enabled). This report feature is enabled through the User Options.

PC Fax Reception

This section provides information and instructions for receiving faxes directly to a computer workstation connected to the WorkCentre 480cx. Using this method, a fax is received to the PC *without* printing it. This process is controlled by a PC Faxing application called *LaserFAX Lite Version 3.5*.

What is LaserFAX Lite?

LaserFAX Lite software is an application that is used to enable PC Faxing using the WorkCentre 480cx. If selected during the installation of the other software components for the WorkCentre 480cx, the LaserFAX Lite application is installed automatically.

LaserFAX Lite Installation

To install LaserFAX Lite, no additional special hardware is required. Simply ensure that the WorkCentre 480cx is connected to the computer workstation using the supplied IEEE 1284 parallel cable, and a phone line has also been connected to the Tel Line input on the left side of the WorkCentre 480cx.

The system requirements and procedures for installing LaserFAX Lite software are contained in *Chapter 1 - Getting Started*. Refer to this chapter if LaserFAX Lite is not already installed on your computer workstation.

Receiving Faxes With the WorkCentre 480cx

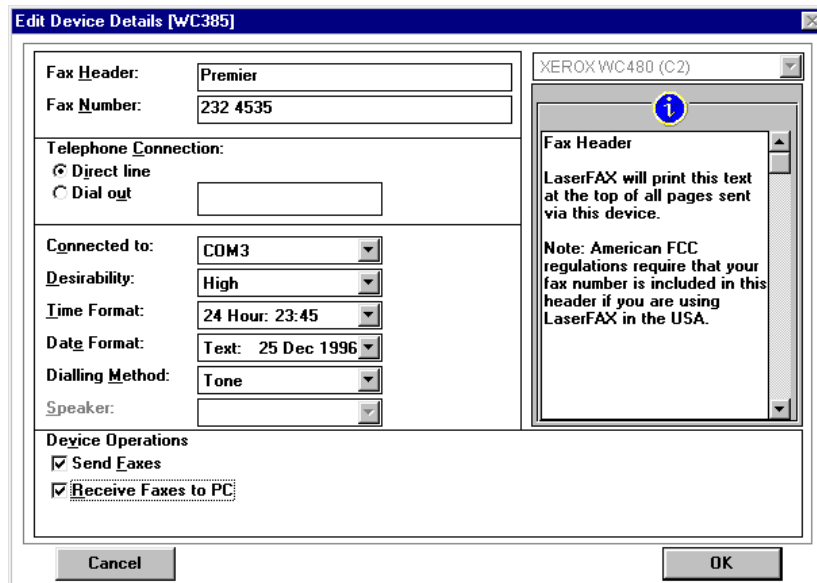
LaserFAX Lite can be configured to receive faxes directly to a computer workstation, rather than having them print on the WorkCentre 480cx.

To do this, perform the following steps:

- 1 In the Xerox WorkCentre 480cxFAX program group, select LaserFAX Lite Config. The dialog shown below will be displayed:



- 2 On this dialog, select the **Edit Device** button. This will cause the **Edit Device Details** dialog to be displayed. An example of this dialog is shown on the next page.



- 3 On this dialog, select the **Receive Faxes to PC** checkbox.
- 4 Select **OK**.

When a fax is received, an entry for the received fax will be displayed in the **Received faxes** list. Double click on the entry to view it. You can then decide whether to keep it, delete it, print it, or send it to another recipient.

For a brief overview of LaserFAX Lite application features, refer to *LaserFAX Application Features* on page 3-51.



Note: If the WorkCentre 480cx is not connected to the PC, or LaserFAX Lite is not running, or the **Receive to PC** option is not selected, faxes will be printed on the WorkCentre 480cx.



Note: When LaserFAX Lite is running it is not possible to print or scan using the WorkCentre 480cx if **Receive faxes to PC** is selected.

If **Receive Fax to PC** is selected, to allow printing or scanning on the WorkCentre 480cx you must shutdown LaserFAX Lite, or temporarily disable **Receive Faxes to the PC** by performing the following steps:

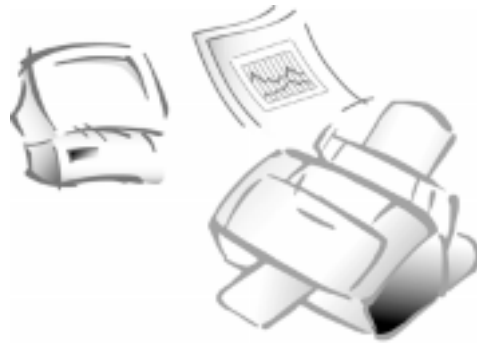
- 1 Select the **Display, Device information** menu.
- 2 Double click WorkCentre 480cx and de-select the **Receive faxes to PC** option.
- 3 Click **OK**.
- 4 Repeat this process to re-enable **Receive Faxes to the PC** later.

Troubleshooting LaserFAX Lite

When LaserFAX Lite does not activate, ensure that:

- The WorkCentre 480cx is connected and plugged in.
- The parallel interface cable is properly connected and is not longer than 6 feet.
- No error message is displayed on the WorkCentre 480cx. If an error message is displayed, check the Troubleshooting section of this manual to diagnose the problem.

Chapter 5



Printing

Printing a Document

This procedure describes the general steps required for printing from various Windows applications. The exact steps for printing a document may vary depending on the application program you are using. Refer to your software application's documentation for the exact printing procedure.

The following steps describe the typical process to print from a Windows environment:

- 1 Make sure that your machine is properly connected to the computer.
- 2 Verify that you have installed the print driver software for your machine. See *Installing Software* on page 1-31.
- 3 Start the program you are using to create the document, and create or open the document you want to print.

- 4 Choose **Print** or **Print Setup** from the **File** menu. Make sure the Xerox WorkCentre 480cx is selected as your default printer. Click on the **Properties** or **Setup** button if you want to make any adjustments that are appropriate for printing your document. (See *Printer Settings* on page 5-2.)
- 5 Click on **OK** to close the **Properties** dialog box.
- 6 After making any necessary changes to the printing parameters, click on **OK** to start the print job.

Printer Settings

You can use your machine with all your Windows 3.x, Windows 95/98, or Windows NT 4.0 applications. Be sure to set the Xerox WorkCentre 480cx as the default printer for all your Windows operations.

Most Windows software applications allow you to make changes to the printer settings. This includes settings that determine how a print job looks such as page size, paper orientation, and margins. Settings made in the application to create the document will usually override settings made in the printer driver.

The Xerox WorkCentre 480cx printer driver features are described in the following sections and arranged according to operating system. For Windows 95/98 and 3.x, refer to *Windows 95/98 and 3.x Printer Settings* on page 5-3. For Windows NT 4.0, refer to *Windows NT 4.0 Printer Settings* on page 5-15.



Note: All screen captures for the following section were taken from within the Windows 98 environment.

Windows 95/98 and 3.x Printer Settings

You can access printer settings by using any of these methods:

- Select the **Print** or **Print Setup** command from within any Windows application. This method will provide access to the Paper, Document/Quality, and Advanced tabs.

Or

- Select the Xerox WorkCentre 480cx printer from the **Printers** folder, then select **Properties** from the **File** menu. This method will provide access to the General and Details tabs, as well as the Page, Main, and Advanced tabs.



Note: Windows 98 also shows the Color Management tab.

Or

- Select the Xerox WorkCentre 480cx printer from the **Printers** folder, click the right mouse button, then select **Properties** from the drop-down list. This method will provide access to the General, Details, and Color Management tabs, as well as the Paper, Document/Quality, and Advanced tabs.



Note:

In Windows 3.x: Go into Print Manager and select the Xerox WorkCentre 480cx printer; pull down the **Options** menu and select **Printer Setup**. Click the **Setup** button to view the Page, Main, and Advanced tabs.

When you see the Printer properties displayed, you can then review and change whatever settings are needed for your print job. If accessed through the **Printers** folder, the Printer properties consists of six tabs:

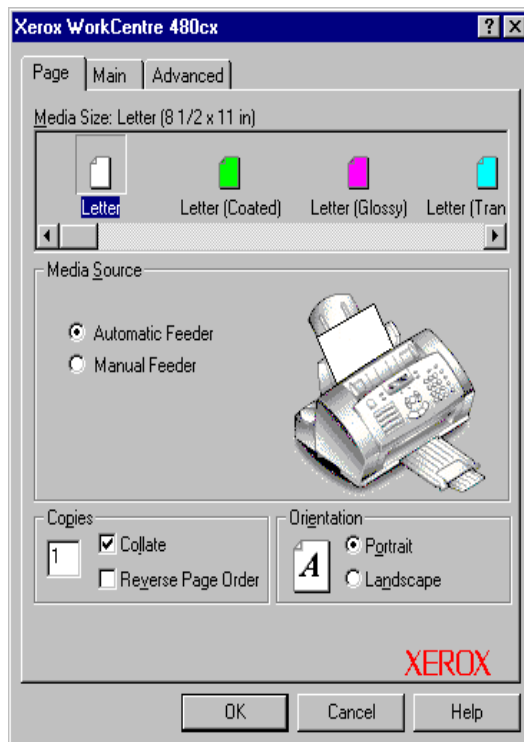
- General tab - for viewing and changing general Windows 95 printer information. See your Windows 95/98 User Guide for details.
- Details tab - for viewing and changing port and timeout parameters. See your Windows 95/98 User Guide for details.
- Color Management tab - for adding and removing color profiles associated with your printer. This tab is not shown in Windows 95; only in Windows 98.
- Page tab - for paper sources and sizes, number of copies, and orientation.
- Main tab - for document and paper types and for print quality.
- Advanced tab - this tab provides access to controls for print image quality.

Page Tab



Note: If this tab is accessed through the **Printers** folder, any changes made to settings will become the default settings for the printer. Settings made when the printer properties are accessed through an application **File** menu and **Print** or **Print Setup** will remain active until the application you are printing from is closed.

The Page tab allows you to specify media size, media source, number of copies, page collation, sequence of pages, and page orientation.



Media Source

Click on one of the two radio buttons to select either **Automatic Feeder** or **Manual Feeder** for your paper source. You can also select a paper source by placing the cursor over the required paper bin on the printer image.

Copies

Click in the **Copies** box to enter a value (1 to 99) for the number of copies you wish to print.

Collate/Reverse Page Order

Select the checkbox for **Collate** and/or **Reverse Page Order**. Use **Collate** when you are printing multiple copies so all pages of one copy are printed before the next copy begins printing. Click **Reverse Page Order** to begin printing with the last page of the document. The first page of your document will be on top of the stack in the output tray when your print job is complete.

Orientation

Portrait and **Landscape** orientations define the way an image is printed on paper. For most paper types, **Portrait** is tall, and **Landscape** is wide. Portrait orientation is generally used for correspondence and reports. Landscape orientation is often used for spreadsheets, transparencies, and envelopes. Click on one of the two radio buttons to select either **Portrait** or **Landscape** as the orientation for your document.

Media Size

Move the horizontal bar or click on the right or left arrow to locate the desired **Media Size** option, then select.

The media size options are:

Letter 8.5 x 11 in. (also Coated, Glossy, Letter Transparency/Film, Iron On, Greeting card)	Envelope No. 9 (3 7/8 x 8 7/8 in.)
A4 210 x 297 mm. (also Coated, Glossy, Transparency/Film, Iron On, Greeting card)	Envelope No. 10 (4 1/8 x 9 1/2 in.)
Legal 8.5 x 14 in.	Envelope DL 110 x 220 mm.)
B5 JIS-182 x 257 mm.	Envelope C5 162 x 229 mm.)
Executive 7.25 x 10.5 in.	Envelope C6 114 x 162 mm.)
A5 148 x 210 mm.	Envelope B5 176 x 250 mm.)
A6 Card Stock 105 x 148 mm. (also Coated, Glossy, Iron On, Greeting card)	Envelope 7 3/4 (3.88 x 7.5 in.)
Index Card 3 x 5 in.	Baronial 4.38 x 5.63 in.
Postcard 4 x 6 in. (also Glossy)	Hagaki 100 x 148 mm.
Envelope 6 3/4 (3 5/8 x 6 1/2 in.)	Custom (User defines paper width and height)

Main Tab



Note: If this tab is accessed through the **Printers** folder, any changes made to settings will become the default settings for the printer. Settings made when the printer properties are accessed through an application **File** menu and **Print** or **Print Setup** will remain active until the application you are printing from is closed.

The Main tab allows you to specify the document type, media type, and print quality.



Print Document As

When you select a document type, other settings in the printer driver automatically change to accommodate that document type.

Use the horizontal bar or the right or left arrow to locate the appropriate document type, then select:

- **Intelligent** - lets the driver select the best settings for the document you are printing.
- **Vivid Color** - produces enhanced color printing, used for print art, drawings, business graphics, etc.
- **Natural Color** - produces realistic natural color printing, used for photographs.
- **GreyScale** - optimizes black and white printing and is used to print text.



Note: Only **Natural Color** and **Intelligent** modes are available when the Photo cartridge is installed.

Media Type

When you choose a media type, the **Print Quality** selection changes automatically to provide the best print quality.

Click on the appropriate radio button to select the paper type for your document:

Media Type	Use for
Plain Paper	typical xerographic paper
Coated Paper	printing on High Resolution Ink Jet paper
Glossy/Photo Paper	printing on glossy paper or film
Transparency	printing on transparencies
Iron-on Transfer	printing a T-shirt Transfer
Greeting Card Stock	printing on greeting card stock

Dry Time Delay

Check this box to activate a delay between the printing of pages to allow inks to dry.

Print Quality

Click on the radio button to select the desired Print Quality for your document:

Mode	Speed/quality of print	Direction
Draft	Faster print speed and reduced print quality	Unidirectional printing
Normal	Average print speed and good print quality	Unidirectional printing
High 1200 dpi	Reduced printing speed and highest print quality	Bidirectional printing

Defaults

Click this button to restore default settings on all available tabs.

About

Click the **About** button for the printer software version number and copyright information.

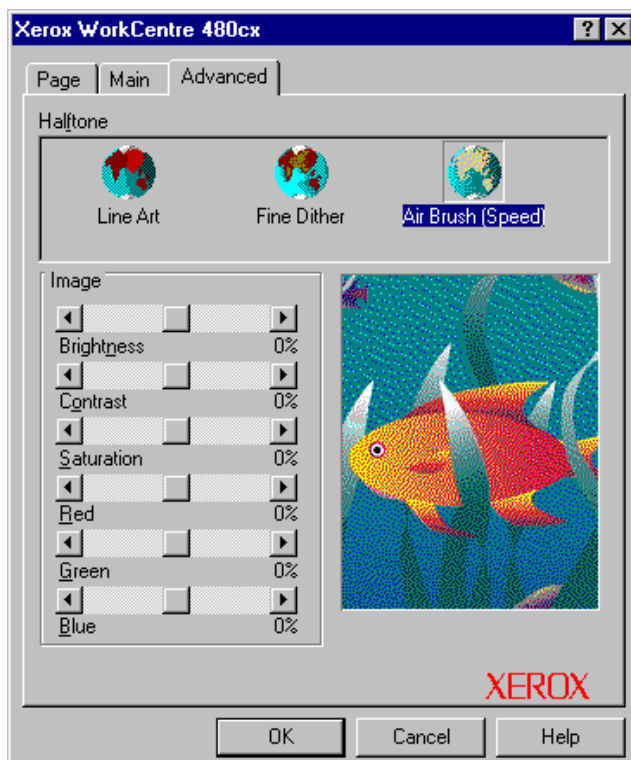
If you need help with the printer driver, please note the version number before calling Xerox Technical Support.

Advanced Tab



Note: If this tab is accessed through the **Printers** folder, any changes made to settings will become the default settings for the printer. Settings made when the printer properties are accessed through an application **File** menu and **Print** or **Print Setup** will remain active until the application you are printing from is closed.

The Advanced tab allows you to specify the halftone type and adjust the image brightness, contrast, saturation, and color strength.



Halftone

Halftone is an array in which dots are placed to simulate colors and shades of gray. Use the Halftone settings to improve the appearance of pictures and graphics. A Halftone is chosen automatically when you choose a document type from the Main tab. However, you can change the Halftone setting to customize your print job.

You may need to experiment with different Halftone options to determine which setting is best for a particular picture or graphic.

Click on the appropriate icon to select the type of Halftone desired:

Halftone method	Use for
Line Art	simple line art and computer graphics
Fine Dither	graphic images with significant detail but limited shading
Air Brush Speed	graphic images
Air Brush Quality	photographic or highly detailed images



Note: Air Brush Quality is only available with these Paper Types and Print Quality combinations: Coated paper with High print quality, and Glossy/Photo paper with High print quality.

Image

Generally, default settings at 0% produce the best image quality. However, you can change these settings to produce special effects. To increase an Image setting, move the slider control to the right; to decrease a setting, move the slider control to the left.

The image to the right of these controls gives an impression of the final result of your changes to the settings. The image may not appear exactly as you would expect if your color monitor does not support enough colors.

Brightness

Move the slider control to the right or left to increase or lessen the brightness of your document's image.

Contrast

Move the slider control to the right or left to increase or lessen the amount of contrast in your image.

Saturation

Move the slider control to the right or left to increase or lessen the amount of color saturation in your image.

Color Strength

Move the slider control to the right or left to increase or lessen the amounts of red, green, or blue in your image.

Windows NT 4.0 Printer Settings

The Windows NT 4.0 printer drivers contain many of the same features as the printer drivers for Windows 3.1 and Windows 95/98. However, the names of the tabs and some of the features are different.

You can access the various printer settings by using either of these methods:

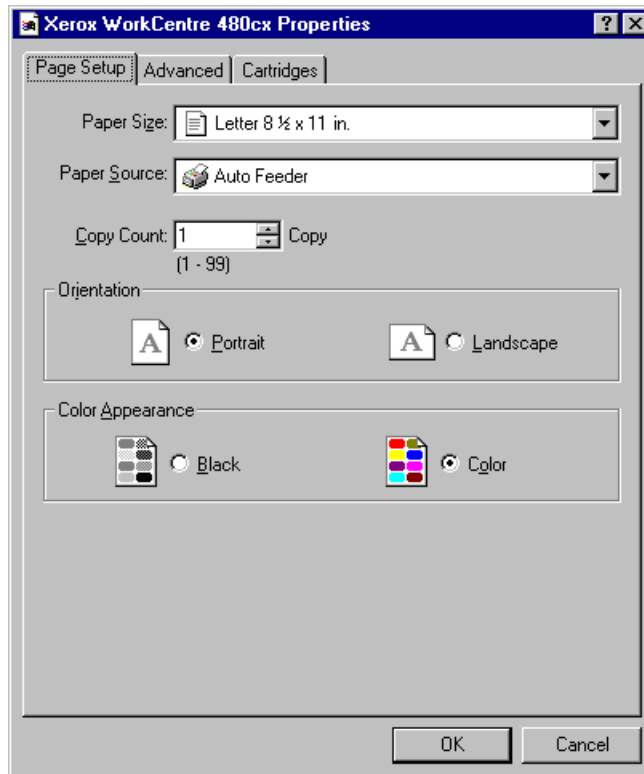
- Select the **Print** or **Print Setup** command from within any Windows application. This provides access to the Page Setup, Advanced, and Cartridges tabs.

Or

- Select the Xerox WorkCentre 480cx printer from the **Printers** folder, click the right mouse button, then select **Document Defaults** from the drop-down list. This provides access to the Page Setup, Advanced, and Cartridges tabs.

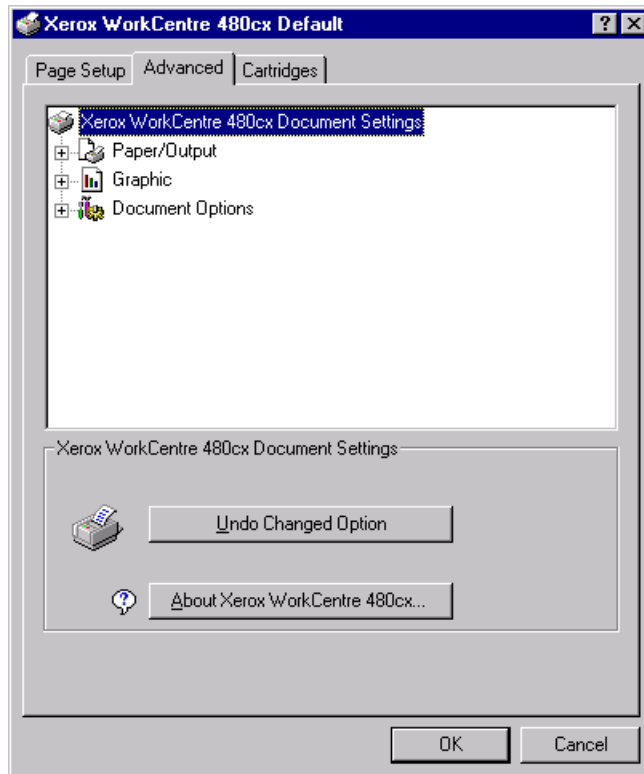
Page Setup Tab

The Page Setup tab allows you to specify paper size, paper source, number of copies, page orientation, and color appearance.



Advanced Tab

The Advanced tab is a main control center for choosing most of the settings which govern the appearance and printing of your document.

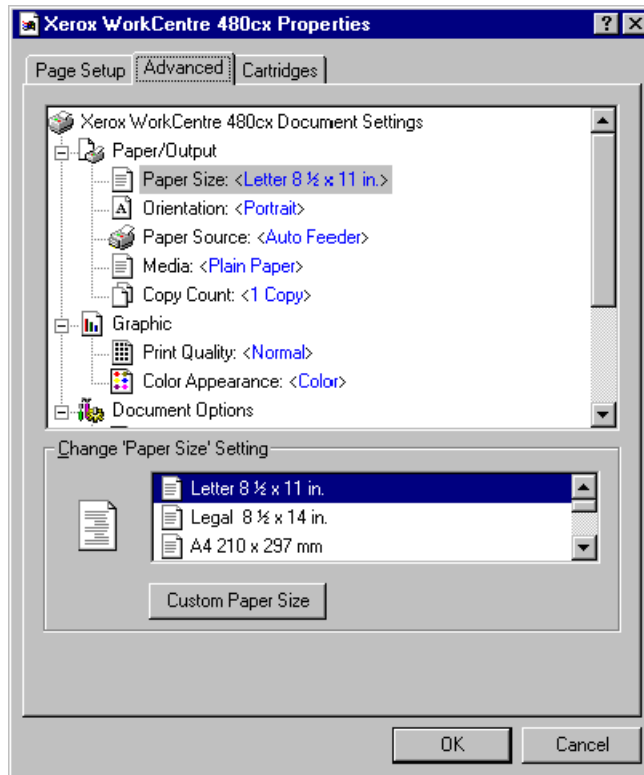


The main window shows a tree of options with an icon to the left of each main category. The categories include:

- Paper/Output
- Graphic
- Document Options

Each item, when clicked on, expands to reveal more options.

When clicked on, each option opens a second window below the first one, offering additional options.



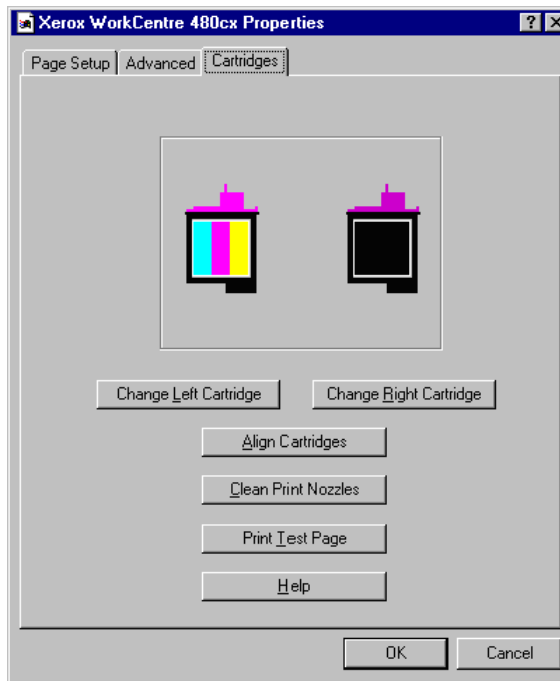
Note: When Paper Size is selected, the second window which opens includes the **Custom Paper Size** button.

The default settings appear in blue text, enclosed in brackets. When you change a setting, the text turns to red.

Click on the title Xerox WorkCentre 480cx Document Settings to access the **Undo Changed Option**, and **About Xerox WorkCentre 480cx**, which provides copyright and version information.

Cartridges Tab

The Cartridges tab provides you with options for changing, cleaning, and aligning print cartridges and for printing test pages.



Change Left Cartridge

This feature enables you to install a Color print cartridge in the left position of the print cartridge carrier.

Change Right Cartridge

This feature enables you to install a Black or Photo cartridge in the right position of the print cartridge carrier.

Align Cartridges

Use the Align Cartridge feature to begin the vertical, horizontal, and bidirectional alignment of the printheads.

Clean Print Nozzles

This feature initiates the cleaning of the print nozzles of the cartridges.

Print Test Page

Print a test page to verify that the printer is functioning properly.

Help

Click on this button to access Xerox WorkCentre 480cx driver help.

The Xerox WorkCentre Control Program

In addition to the printer driver, the printer software also includes the Xerox Control Program. The WorkCentre Control Program contains setup options that define the operation of your machine. The WorkCentre Control Program is included with all operating systems.

The Control Program includes five tabs:

- Status - Displays the printer status, ink levels, and print job status
- Options - Includes setup options
- Cartridges - Installs, cleans, or aligns the cartridge
- DOS Printing - Includes settings for printing directly from DOS
- About - Displays the Control Program version

Starting the Xerox WorkCentre 480cx Control Program

In Windows 95/98 and Windows NT 4.0

- 1 Click the **Start** button and choose **Programs**.
- 2 Choose the **Xerox WorkCentre 480cx** from the list.
- 3 Select the **Xerox WorkCentre 480cx Control Program** on LPT1.
- 4 The Xerox WorkCentre 480cx Control Program on LPT1 window opens.

In Windows 3.x

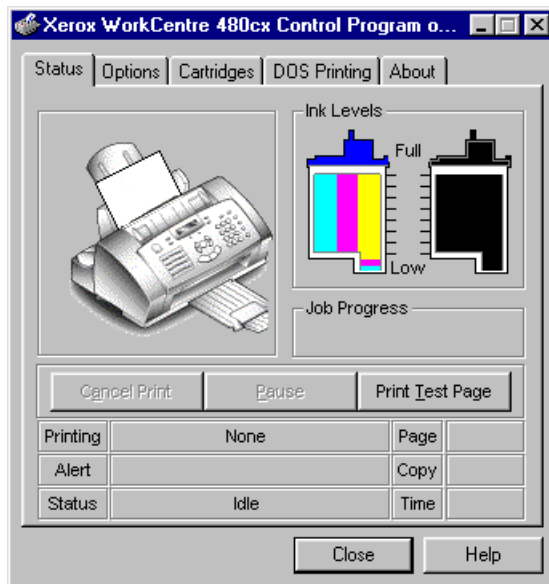
- 1 From the **Program Manager** at system startup, open the Xerox **WorkCentre 480cx** group.
- 2 Double-click on the **Xerox WorkCentre 480cx Control Program** icon.
- 3 The Xerox WorkCentre 480cx Control Program on LPT1 window opens.

Xerox WorkCentre 480cx Control Program Window

When the Xerox WorkCentre 480cx Control Program on LPT1 window opens, click the appropriate tab for the options you want to display. On the appropriate tab, specify your changes.

Using the Status tab

This tab shows the printer status, ink levels, and print job status.



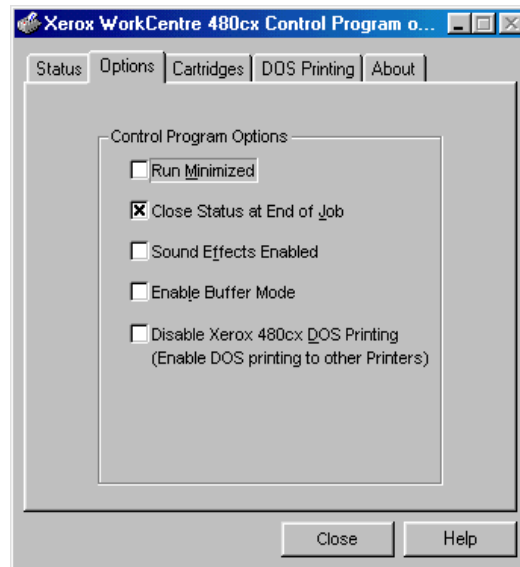
The Status tab includes these buttons:

- Cancel Print
- Pause
- Print Test Page

The information area displays which job is printing, which page and copy, the time, and any alert messages.

Using the Options Tab

This tab allows you to specify the Control Program setup options.



- **Run Minimized** - Select Run Minimized to prevent the Status tab window from appearing on your computer screen each time you send a job to print. When you select this option, a Status tab icon appears on your screen instead of the Status tab window. To open the Control Program, double-click the Status tab icon.

- **Close Status at End of Job** - Select Close Status at End Job to close the Control Program when the job is finished printing.
- **Sound Effects Enabled** - Select Sound Effects Enabled to turn on the sound effects that accompany printer software messages. If you live outside the U.S., these sound effects were enabled when you installed the software.
- **Enable Buffer Mode** - Select Enable Buffer Mode if your printer pauses frequently (every two or three lines) during a print job, and prints pages with alternating bands of light and dark print. The printer pauses frequently because it is printing data faster than the computer can send it. Banded printing occurs when the printer pauses frequently.

When you select this option, it takes longer for the first page of a job to begin printing.

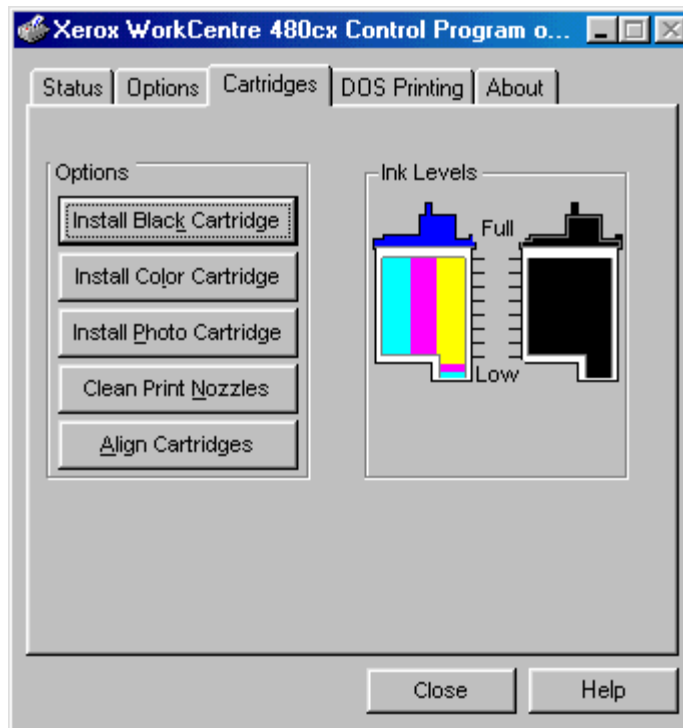
- **Disable Xerox WC480cx DOS Printing (Enable DOS printing to other printers)** - Select this feature when you are using a DOS application to print to a printer other than your Xerox WorkCentre 480cx. Uncheck this option when you are using a DOS application to print to your Xerox WorkCentre 480cx. After checking or un-checking this option, you must restart Windows 3.x for the change to take effect.



Note: If a Xerox printer and another printer are connected to the same port on your computer through a switch box or other device, check Disable Xerox WC480cx DOS Printing and restart Windows before switching from one printer to the other. Switching printers without selecting this option may cause printer errors.

Using the Cartridges Tab

This tab allows you to view the level of ink in the cartridges and to choose cartridge options.



The cartridge options:

- **Install Black Cartridge** - Click Install Black Cartridge to install a Black (P/N 8R7881) print cartridge in the printer. Choosing this option moves the print cartridge carrier to the load position and displays the Change Black Cartridge dialog box.

- **Install Color Cartridge** - Click Install Color Cartridge to install a Color (P/N 8R7880) print cartridge in the printer. Choosing this option moves the print cartridge carrier to the load position and displays the Change Color Cartridge dialog box.
- **Install Photo Cartridge** - Click Install Photo Cartridge to install a Photo (P/N 8R7883) print cartridge in the printer. Choosing this option moves the print cartridge carrier to the load position and displays the Change Photo Cartridge dialog box.
- **Clean Print Nozzles** - Click Clean Print Nozzles to start the print cartridge nozzle test and to clean the print nozzles. Use this procedure when there are missing portions in the printed characters.
- **Align Cartridges** - Click Align Cartridges to align the printheads. This procedure brings the printheads into vertical, horizontal, and bidirectional alignment.

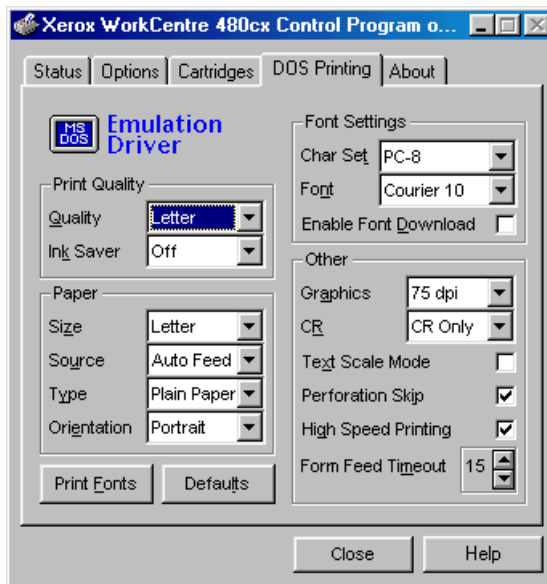
Align the cartridges after you install a new print cartridge, or when the black portions of text or graphics do not align with the color portions.



Note: The bidirectional alignment patterns cannot be adjusted when the Photo cartridge is installed.

Using the DOS Printing tab

Use the DOS Printing tab to change print settings for DOS applications that run from the DOS prompt in Microsoft Windows.



Select the desired options in the Print Quality, Paper, and Font Settings. Choose if desired: **Print Fonts** or **Defaults**.

Other settings:

- **Graphics** - Click Graphics to set the addressability in dots per inch (dpi). The default is 75 dpi.
- **CR** - Click CR to select a carriage return mode. CR + LF instructs the printer to perform a line feed (LF) after each carriage return (CR). The default is CR Only.

- **Text Scale Mode** - Click Text Scale Mode to turn text scaling on or off. Text Scale Mode affects the vertical line spacing of your print job. For example, for a 216 x 279 mm (8.5 x 11 in.) page with a 13 mm (1/2 in.) bottom margin, Off prints 63 lines per page; On prints 66 lines per page.

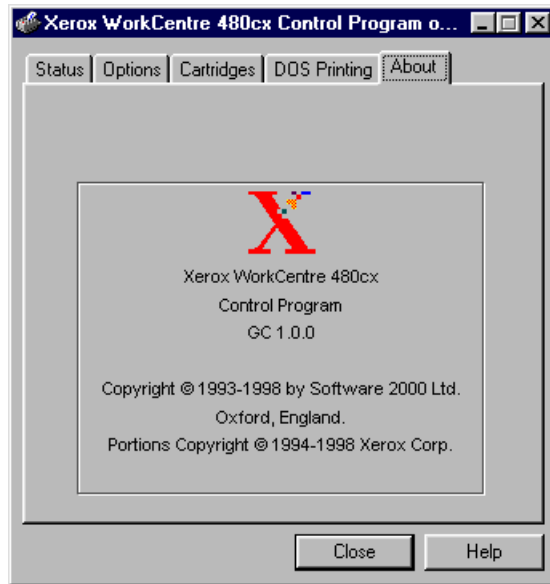


Note: When Perforation Skip is On, Text Scale Mode is ignored.

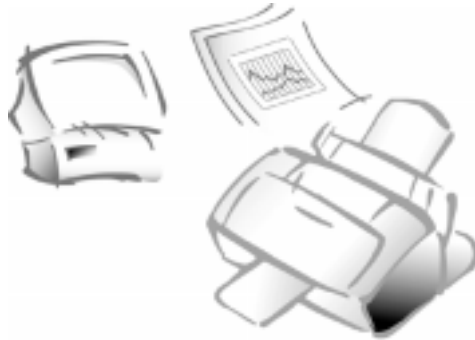
- **Perforation Skip** - Click Perforation Skip to turn Perforation Skip on or off. Turning Perforation Skip on adds a 13 mm (1/2 in.) top margin to the print job.
- **High Speed Printing** - Click High Speed Printing to print at a faster rate.
- **Form Feed Timeout** - Form Feed Timeout designates the timeout period for form feed. The default is 15 seconds.

Using the About Tab

The About tab gives the Software version number and Copyright information for the Control Program.



Chapter 6



Scanning

Overview

The WorkCentre 480cx TWAIN Scanner Program is an image-scanning program that operates under various image-editing and OCR applications. The WorkCentre 480cx TWAIN Scanner Program includes drivers which may be used with any TWAIN-compliant application software. The scanner program software will operate the WorkCentre 480cx scanner.

The TWAIN standard is an image data transfer protocol developed to allow one software package to use many devices. Some examples of TWAIN compliant devices are: flat-bed scanners, drum scanners, digital cameras, and video frame grabbers.

The TWAIN standard also allows many software packages access to the same image input device. Examples of some TWAIN-compliant software packages are: ScanSoft Pagis Pro, ScanSoft TextBridge Pro and Adobe Photoshop. ScanSoft Pagis Pro and Textbridge Pro are provided with your WorkCentre 480cx.

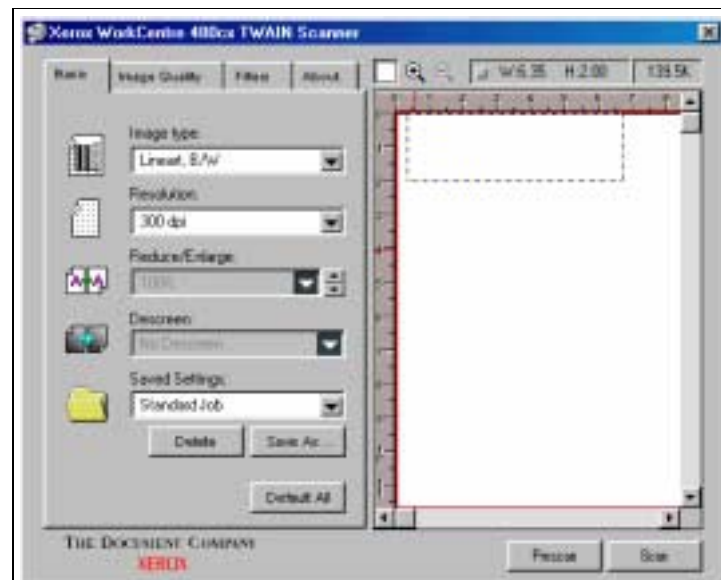
For questions concerning Pagis or TextBridge applications consult your on-line help or visit the Pagis website at <http://www.pagis.com>.

The WorkCentre 480cx TWAIN Scanner Program

The WorkCentre 480cx TWAIN Scanner Program provides an impressive array of scanning controls and previewing options:

- Monitor rendering capabilities
- Descreen
- Flip and rotate
- Inversion of images
- A variety of filters
- Control brightness
- Gamma correction
- Reduction or magnification of images, and more.

To access these features, the **WorkCentre 480cx TWAIN Scanner** window below opens when *Acquire* (or a similar selection) is selected from the **File** menu of a TWAIN compliant image editing application.



With this array of image previewing and scanning functions, you can see the results of the changes you made to an image, before you save the images you create.



Note: Your WorkCentre 480cx can scan in black/white, grayscale, and color.

Starting the WorkCentre 480cx TWAIN Scanner Application



Note: To install the WorkCentre 480cx TWAIN Scanner application, refer to *Installing Software* in the *Getting Started* section of this manual.

To use the WorkCentre 480cx as a scanner, the following are required:

- WorkCentre 480cx TWAIN Scanner application installed on the workstation connected to the WorkCentre 480cx.
- A TWAIN compliant image editing software application (for example, ScanSoft Paxis Pro, TextBridge, or Adobe Photoshop).

The WorkCentre 480cx TWAIN Scanner window will be displayed when you choose the WorkCentre 480cx to scan documents or photographs from the TWAIN compliant image editing application.

To start the WorkCentre 480cx TWAIN Scanner application:



Note: To start the WorkCentre 480cx TWAIN Scanner application from TextBridge Pro, refer to *Starting the WorkCentre 480cx TWAIN Scanner Application from TextBridge Pro* below.

- 1 Plug in the WorkCentre 480cx and switch on your PC.
- 2 Start Windows.
- 3 Start/Open the TWAIN-compliant image-editing application.
- 4 In most programs, choose the **Select Source** option from the **File** menu.
- 5 Select **WorkCentre 480cx** in the **Select Source** dialog box.
- 6 Open the **File** menu, and select the **Acquire** option. The WorkCentre 480cx TWAIN Scanner window will appear (see *The WorkCentre 480cx TWAIN Scanner Window* on page 6-7).
- 7 When the WorkCentre 480cx TWAIN Scanner window appears, you can select the appropriate scan options for the document or photograph to be scanned.

After adjusting the settings in the Scan window, you can perform a preliminary preview scan of the image before performing a final scan. To launch a preview scan:

- a) Load the document to be scanned in the Automatic Document Feeder.
- b) Click the **Prescan** button.

The WorkCentre 480cx scans the image and a preview appears in the WorkCentre 480cx TWAIN Scanner window.

- 8 Adjust the scan options as desired before initiating the final scan.
- 9 Reload the document back into the Automatic Document Feeder.
- 10 Click the **Scan** button.
- 11 The document is scanned by the WorkCentre 480cx and the updated image is displayed in the TWAIN compliant application.

Starting the WorkCentre 480cx TWAIN Scanner application from TextBridge Pro

- 1 From the **File** menu, click on **Select Scanner**. A list of supported scanners will be displayed.
- 2 From the list, select Xerox WorkCentre 480cx (TWAIN). Click OK.
- 3 From the TextBridge Pro **Process** menu, select **Get Page**. A Page Type dialog will be displayed.
- 4 Select the desired page type and select **Scanner** as the **Page Source**. Click OK.
- 5 The WorkCentre 480cx TWAIN Scanner application is displayed. Select the appropriate scan options for the document or photograph to be scanned.

After adjusting the settings in the Scan window, you can perform a preliminary preview scan of the image before performing a final scan. To launch a preview scan:

- a) Load the document to be scanned in the Automatic Document Feeder.
- b) Click the **Prescan** button.

The WorkCentre 480cx scans the image and a preview appears in the WorkCentre 480cx TWAIN Scanner window.

- 6 Adjust the scan options as desired before initiating the final scan.
- 7 Reload the document back into the Automatic Document Feeder.
- 8 Click the **Scan** button.
- 9 The document is scanned by the WorkCentre 480cx and the updated image is displayed in TextBridge Pro.



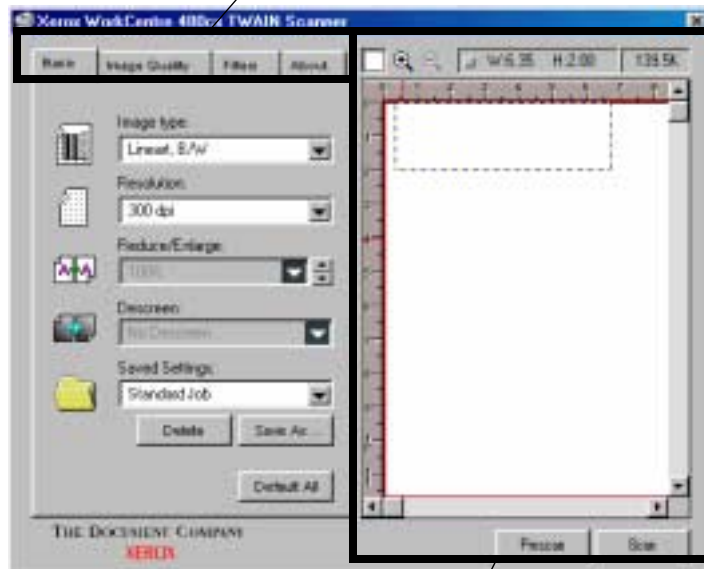
Note: For questions concerning TextBridge Pro, either refer to the on-line help or visit the Pagis web site at <http://www.pagis.com>.

The WorkCentre 480cx TWAIN Scanner Window

The 480cx TWAIN Scanner Window is used to view and modify the scanned image. Using the features of this window, various image processing options can be applied to the scanned image.

Scanner Control Tabs

For more information, see page 6-9.



Preview window

For details on the tools in the Preview windows, see page 6-40.

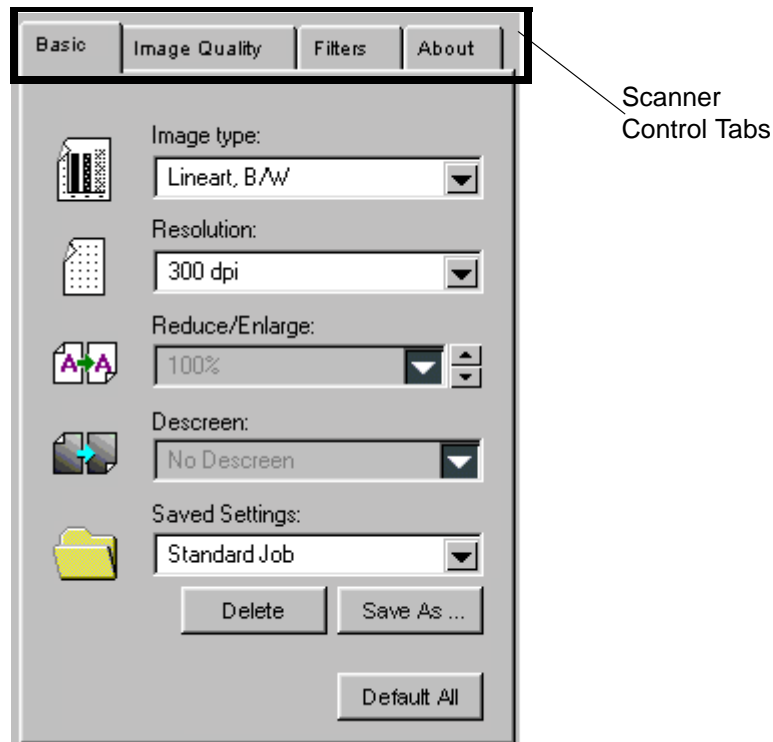
WorkCentre 480cx TWAIN Scanner Help

You can refer to the WorkCentre 480cx TWAIN Scanner application on-line help for assistance. To access on-line help, move the cursor over the feature of the window that help is desired for. A yellow popup dialog box will appear. Click on the dialog box to access on-line help.

On-line Help contains information about using the menus and commands of WorkCentre 480cx TWAIN Scanner application. Use Help anytime you need information on the use of a particular menu or command.

Scanner Control Tabs

You can adjust the settings for the document or photograph to be scanned prior to capturing the image using the features of the Scanner Control Tabs.



Each of these tabs is described in detail in the following sections of this User Guide:

- The Basic Tab see page 6-10.
- The Image Quality Tab see page 6-21.
- The Filters Tab see page 6-35.
- The About Tab indicates the version of the WorkCentre 480cx TWAIN Scanning application.

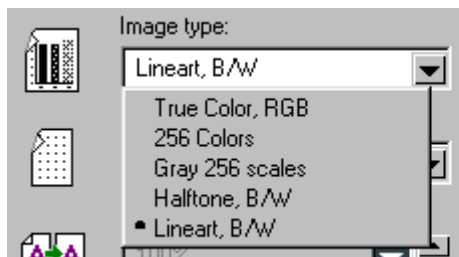
The Basic Tab

The features of the Basic Tab are described in this section. All of the features of this tab are available when the Image type selection is True Color, 256 Colors, or Gray 256 Scales. Refer to the table below which indicates the tab features that are available for the Lineart B/W and Halftone B/W Image Type selections.

	Color or Gray 256 Scales	Lineart B/W	Halftone B/W
Image Type	Available	Available	Available
Resolution	All selections available	300, 200, and 150 dpi selections only available	300, 200, and 150 dpi selections only available
Reduce/Enlarge	Available	Not Available	Not Available
Descreen	Available	Not Available	Not Available

Image Type

This menu specifies the mode in which the image is to be scanned. Each of the selections available are explained in detail below.



The following examples of the scan modes illustrate possible output for the scanned image.

True Color, RGB

In this scan mode, your scanner captures 24 bits of color image information for every dot (pixel) in your resulting scanned image. Therefore over 16 million colors are possible.

RGB simply stands for Red-Green-Blue; these being the additive primary colors. Additive refers to the addition, or mixing, of light of different colors. For example, mixing equal proportions of fully saturated red, green, and blue light produces white light.

Excellent color details can be obtained using this scan mode, but be aware that True Color images require considerable disk space to save them. For instance, an A4-size (8.5" x 11") 300-dpi True Color image may require 24 megabytes of storage space (uncompressed).

Additionally, a high color or true color graphics card is required to adequately display the color information.

256 Colors

Images scanned in 256 Colors mode are scanned in a maximum of 256 colors. The quality is not as high as True Color, RGB, but it is acceptable for most applications. File sizes are considerably smaller than those of True Color, RGB. An A4-size 300-dpi 256 Color image may require 8 megabytes of storage space (uncompressed). Photographs may be successfully scanned in 256 colors.



Gray 256 Scales

Halftone B/W

Lineart B/W

Gray 256 Scales

Images scanned in Gray 256 Scales mode are scanned in 256 shades of gray. If high quality copies of photographs or other continuous tone originals are desired, Gray 256 Shades mode is the best choice.

Gray 256 Scales provides accurate representation of black and white, and intermediate gray shades between black and white, for each individual pixel. It actually provides 256 shades, representing white by the value 255 and black by the value zero, with progressively lighter intermediate shades of gray by values from 1 through 254.

Halftone B/W

This scan mode uses various combinations of black and white pixels to simulate gray scales. While not the same level of image quality as the Gray 256 Scales image type, this image type is good for continuous tone images where smaller file size is more important than ideal image quality.

In this scan mode, each pixel of the image has two possible states: on (black) or off (white). This means that each pixel can be represented by 1 bit. For this reason, the file size is much smaller than that of a document scanned in the Gray 256 Scales mode, which uses 8 bits to define 256 shades of gray.

Lineart B/W

Lineart B/W mode is generally the best choice for printed text or pen-and-ink drawings.

Like the Halftone B/W image type, this image type defines the state of each pixel in the image with one bit that is either on or off.

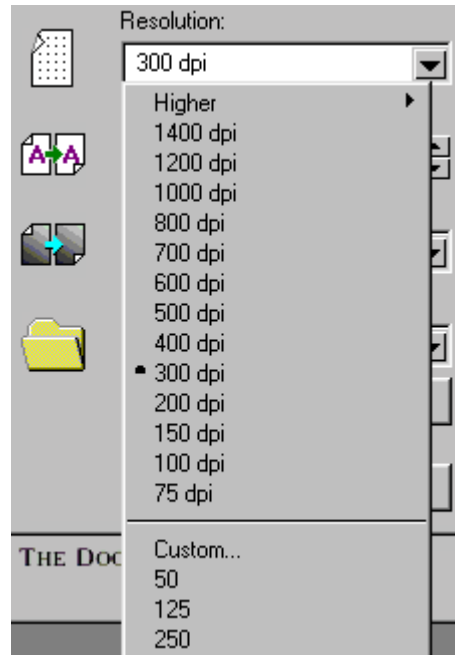
For this reason, files created in this mode will require approximately the same amount of disk space as a Halftone B/W file.



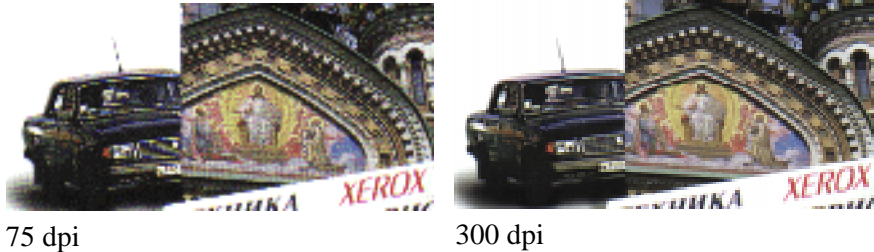
Note: In both Halftone and Lineart modes, the resolution can only be set at 150, 200, or 300 dpi.

Resolution

The resolution setting determines the amount of information the scanner will capture in a scanned image.



Resolution is measured in dpi (dots per inch). The higher the resolution is, the finer the image detail and the bigger the image file size is. Increasing the resolution will result in corresponding increases in image detail and image file size. See the examples of images at 75 and 300 dpi.



You can select any one of the resolution settings shown on the **Resolution** menu, or specify your own resolution by selecting the **Custom** option which invokes the **Custom Resolution** dialog box.

Using the **Custom Resolution** dialog box, three custom resolution settings can be made. These three settings can then be displayed and selected from the **Resolution** menu.

To use the Custom Resolution dialog box:

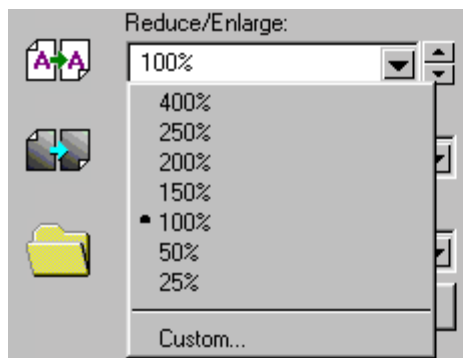
- 1 Type the desired resolution (in dpi)
- 2 Click **OK**.
- 3 The custom resolution created will then be displayed in the Resolution menu.



Note: The Resolution settings can be restored by clicking **Default All** at the bottom of the Basic tab.

Reduce/Enlarge

This feature allows an image to be automatically enlarged or reduced as it is scanned. The default scaling factor is 100%. The selected scaling factor affects size of the printed scan output. This feature is available when the scanned image type is set to one of the color choices or to Gray 256 scales.



Note: When scanning a printed image for screen display only, scale the image down to increase processing speed and decrease the file size.



Scaling 100%



Scaling 50%

Fixed scaling options are displayed as percentages of reduction or enlargement. Image width and height are scaled proportionally when fixed scaling factors are used. To scale to a size other than the fixed sizes, select the Custom option in the Scaling menu. The Custom Scaling dialog box will appear.

To change the Height or Width text box values:

- 1 Insert the desired height and width values into the Height and Width text boxes.
- 2 The units of measurement may be changed to inches, centimeters, millimeters, pixels, picas, points, or percentages of the original image dimensions by selecting the desired unit of measurement from the Units drop-down list boxes to the right of the Height and Width text boxes.
- 3 To prevent distortion of the image when changing height and width values, the height and width values are automatically linked—you need only enter one value, either a Height or Width value. The other value will be computed and the image will resize proportionately.



Note: You can also change Height and Width values by directly adjusting the selection frame.



Note: Output image file size is proportional to both Height and Width. If both Height and Width values are doubled, then the image area and image file size will increase four-fold.



Note: Once you have confirmed or changed the size, resolution, and final scan boundary settings, the scanning software determines the size of the resulting scanned image and displays this information.

Descreen

This selection is used to eliminate moire patterns from the output image. Moire patterns are objectionable patterns resulting from the superimposition of different patterns of curves. Moire occurs as a result of differences in the screen pattern used to print the document and the scanner electronics. Moire may appear as checkered patterns bands or dots. Descreen preprocessing can minimize the transfer of moire patterns into your image file.



Besides a default setting of No Descreen, the Descreen selector provides three grades of descreen preprocessing as described below.

No Descreen

No descreening.

Art print (175 lpi)

The Art print selection is used to smooth the fine dot pattern found in high quality art prints and magazines made in a resolution higher than 200dpi.

Magazine (133 lpi)

The Magazine selection is used to smooth the fine dot pattern found in glossy magazines made in the resolution higher than 200dpi.

Newspaper (85 lpi)

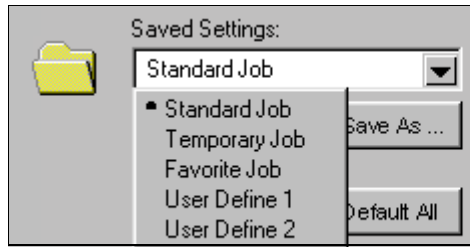
The Newspaper selection smooths the coarse grain pattern commonly found in newspaper images made in a resolution higher than 200dpi.



Note: The preview display is not affected by the Descreen option. In order to see the results of Descreen process, it is always necessary to scan the image, and examine the output image on the workstation display.

Saved Settings

Saved Settings allow the user to save a custom scan configuration.



Saved settings are used when the user wants to scan with a specific set of parameters on a regular basis. The saved settings give the user the ability to create a named set that can be selected at any time, avoiding the work of manually re-entering the parameters.

The Image Quality Tab

The features of the Image Quality tab are described below. All of the features of this tab are available when the True Color RGB, 256 Colors, and Gray 256 Scales selections are made for Image Type. Refer to the table below which indicates the tab features that are available for the Lineart B/W and Halftone B/W Image Type selections.

	True Color RGB and 256 Colors	Gray 256 Scales	Lineart B/W	Halftone B/W
Color Channel Selection	All channels Available	Gray Channel Only	Gray Channel Only	Gray Channel Only
Highlight Control	Available	Available	Available	Available
Shadow Control	Available	Available	Not Available	Not Available
Midtone Control	Available	Available	Not Available	Not Available
Advanced Features	Available	Available	Not Available	Not Available

Color Channel



The Color Channel radio buttons are used to specify the color channel in which to change the Highlight, Shadow and Midtone values.

Gray Channel

The Channel Selector allows you to select an active channel.

The Gray Channel is the **only** channel available when the scanned image is scanned as Gray 256 Scales, Halftone, B/W, and Lineart, B/W. The Gray Channel is also available when the scanned image is scanned in True Color, RGB or 256 Colors.

Red, Green, Blue Channels

The Red, Green, and Blue Channels are available when the scanned image is scanned in True Color, RGB or 256 Colors.

With color scanning selected, you may select a color channel from the above set of buttons. This will allow you to adjust the highlight, shadow, and midtone for each color in the Red, Green, and Blue spectrum.

Highlight



This control changes the highlighting of the entire image. It sets the value that the scanner and/or your image processing software uses for the white reference. Increasing the highlight value darkens the light areas of your image. Decreasing the highlight value lightens the light areas of your image.

The Highlight value represents the lightest value in an image. All pixels above this point will be rendered as pure white. If you subsequently broaden the highlight points on the Level Adjustment graph, the pixels will be re-mapped within the new range, thus allowing you to see more detail in the image.

The Highlight scroll bar allows you to manually set a highlight level. The default for the Highlight settings is 255. You can increase or decrease the highlights in a particular image as needed by adjusting this scroll bar. The value in the adjacent box will change in the range 1 to 255 as the slider moves.

Shadow



The Shadow value represents the darkest value in an image. All pixels below this point will be rendered as pure black. If you subsequently broaden the shadow points on the Level Adjustment graph, the pixels will be re-mapped within the new range thus allowing you to see more detail in the image.

The default value for Shadow is 0. You can increase or decrease the shadows in a particular image as needed by adjusting this scroll bar.

Increasing the shadow value has the net effect of darkening the dark areas of your image. Decreasing the value has the net effect of lightening the dark areas of your image.

Midtone



All optical devices such as monitors and scanners have some differences in their light sensitivity characteristics. 480cx TWAIN Scanner provides Midtone adjustment for you to compensate for these differences in your scanner, and it produces better scanned images.

To change the Midtone value, move the Slider to the left or right to change the values in the adjacent text box. The value in the adjacent box will change in the range 0.1 to 10.0 as the slider moves.

Ordinarily, good results can be obtained from your machine by leaving the slider at its default value of 1.50 for Gray and 1.30 for Red, Green, and Blue.

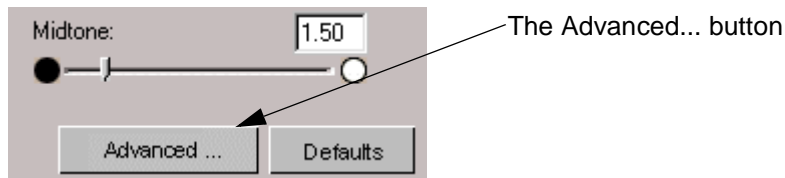
You may select the Reset Settings from the Settings menu to get the default value. However, you can adjust the tone values of any or all of the color channels of your images by selecting the Red, Green, or Blue Channel buttons and dragging the sliders to change the Midtone value. You can also directly enter a value in the textbox.

The Advanced Selection

The Advanced selection will present features that allow you to modify the Level Adjustment and Tonal Map of the document.

For both the Level Adjustment and the Tonal Map functions, the window displayed contains small representations, known as thumbnail views, of the original and enhanced images (Samples 1 and 2).

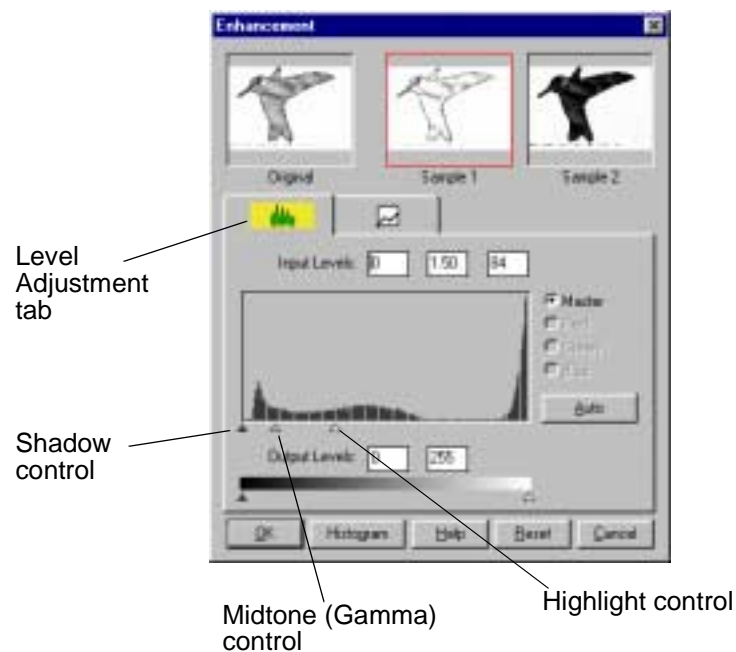
To activate the Level Adjustment or Tonal Map functions, click on the **Advanced...** button at the bottom of the Image Quality tab.



When this button is selected, the Level Adjustment window is displayed by default.

Level Adjustment

The Level Adjustment dialog box shows the distribution of brightness levels in your image. To adjust the histogram plot, drag the triangles located below the horizontal bar to the desired values. The left (black) triangle changes the shadow levels. The right (white) triangle changes the highlight levels. The middle (gray) triangle controls the midtone levels.



By varying the Shadow points and Highlight points you can change the relative shades and highlights of the image. The Shadow point represents the darkest value and the Highlight point is the brightest value.

The Midtone point represents the Gamma setting for your particular screen. On the histogram, the Shadow and Highlight scales are divided into 255 units.

Therefore, all pixels in the original that are darker than the current shadow point are now completely black in the enhanced image. Conversely, all pixels in the original that are brighter than the current highlight point are now completely white in the processed image.

Setting the highlight point to 200 renders all pixels greater than or equal to 200, on the original, completely white in the processed image. Similarly setting the Shadow point to 200 renders all points less than or equal to 200, on the original, completely black in the enhanced image. Photographers often refer to these effects as "high-key" or "low-key". High-key is an image pushed to the white end, and low-key is an image pushed to the black end of the tone curve.

The Midtone is a relative measure of the gamma of your monitor. The scale for Midtone ranges from 0 to 255. The gamma curve is on a geometric series. This means that at a value of 255 it tends to infinity.

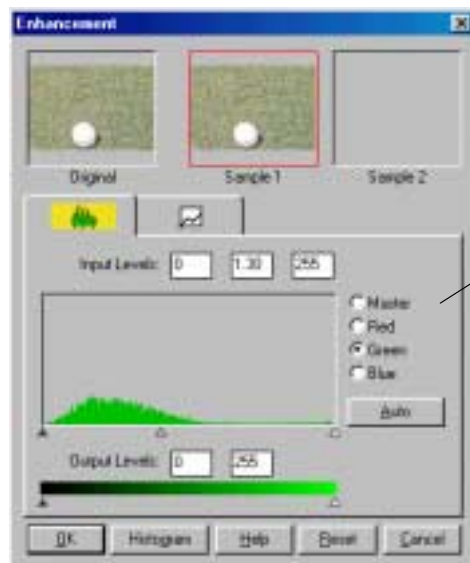
The Midtone is bound by the Shadow and Highlight terms and cannot exceed them at any time. So, if the Highlight is set to 255 and the Shadow is set to 0, a gamma of 1 is equal to a Midtone of 128. Similarly, if the Shadow is set at 200 (lower boundary) and the Highlight is set at 220 (upper boundary), a gamma of 1 is equal to a Midtone of 210.

Master, Red, Green, Blue Channel

With color scanning selected, you may select a color channel via the color buttons. This will allow you to adjust the highlight, shadow, and midtone for each color in the Red, Green, and Blue spectrum.

The histogram plot is a bar chart of pixel counts, or frequencies, plotted against brightness levels with 0 (black) on the left end and 255 (white) at the right end. The height of each line shows the number of pixels at a particular brightness value.

To make changes to the histogram plot, and thus, to a preview image, drag the triangular-shaped handles located below the horizontal bar.



Color Channel Buttons

The effect of the Histogram plot changes in the Histogram dialog box may be restricted to a single color channel by selecting the Red, Green, or Blue channel buttons. Changes may be applied to all three color channels by selecting the Master button. Color saturation information at indicated levels will appear above the Histogram plot.

Clicking the Histogram button at the bottom of the dialog box displays a histogram for the entire preview area, with statistics.



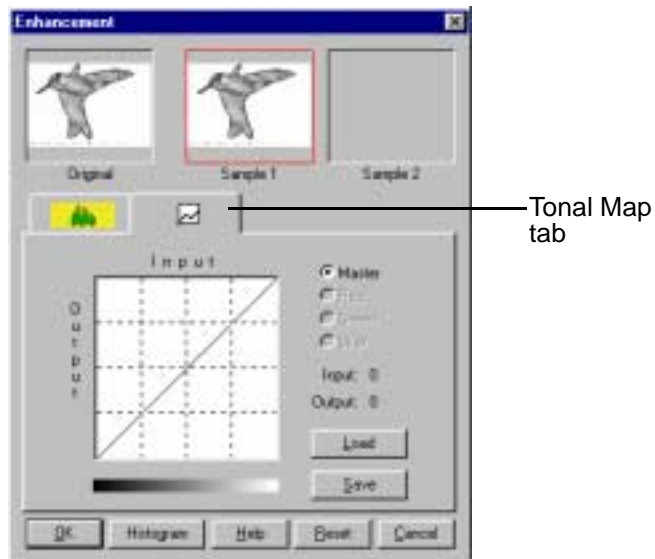
Note: For grayscale scanning, the Red, Green, and Blue buttons will not be available.

Operation Summary:

- 1 Select the **Advanced...** button on the **Image Quality** tab. This will display the **Level Adjustment** window.
- 2 On the histogram, use the mouse key to click on the **Black**, **Gray**, or **White** triangles to make changes to the **Shadow**, **Midtone**, and **Highlight** respectively.
- 3 To see the changes and compare them to the original previewed image, click on **Sample 1** to see the enhanced image.
- 4 To make a second enhancement for comparison, click on **Sample 2**. Make new enhancements to the original. Compare the images of **Samples 1** and **2**.
- 5 After completing enhancement settings, click on the desired sample to choose the image.
- 6 Click **OK** to save the changes and close the **Enhancement** dialog box. If you do not want to save the changes, click on the **Cancel** button to and close the **Enhancement** dialog box. Click the **Auto** button to allow the software to make appropriate highlight and shadow adjustments.

Tonal Map

If you select the Tonal Map tab, the following will be displayed.

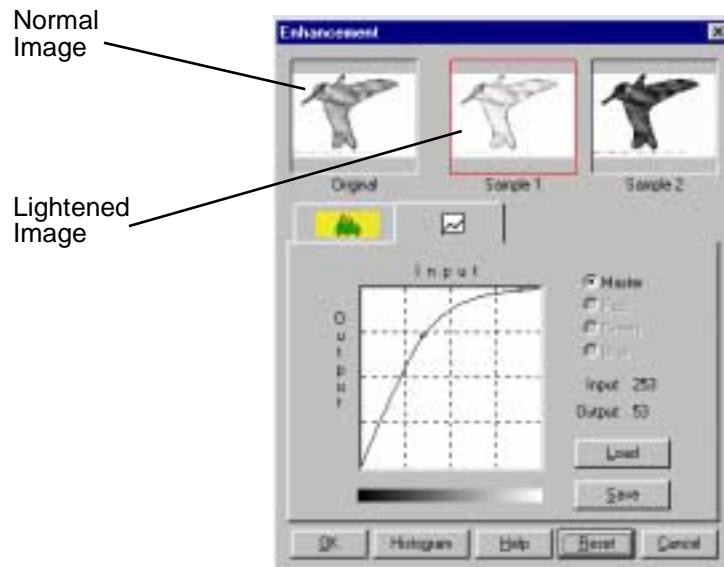


The Tonal Map is yet another way to adjust Highlight, Midtone, or Shadow levels in your images. When you open the **Tonal Map** dialog box, a tonal map consisting of a diagonally straight line appears. Notice that at every point on the default tonal map, the output shadow, midtone, and highlight brightness levels are equal to the input shadow, midtone, and highlight brightness levels.

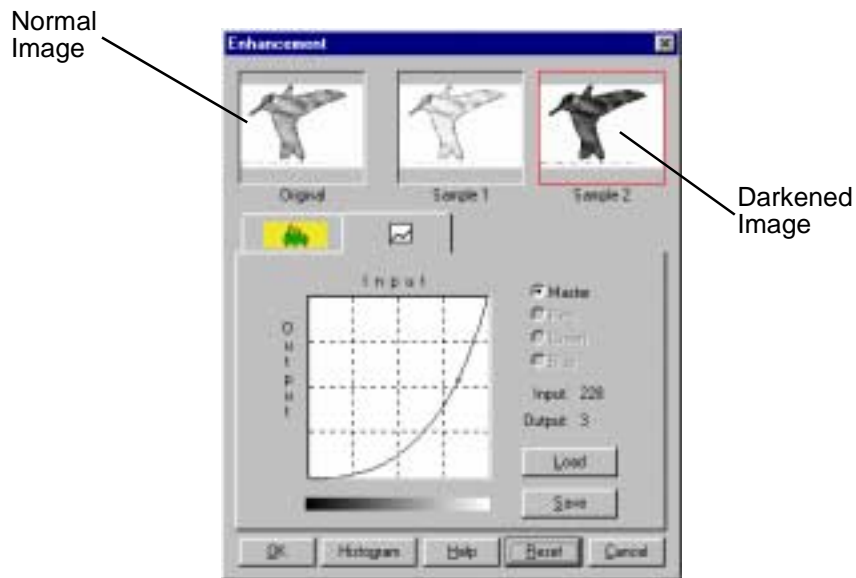
The shape and slant of the tonal map represent brightness level ratios between the input of the original image and the output image data. By clicking on the tonal map line, a hand-shaped cursor will appear which can be dragged to change the shape of the tonal map line.

The horizontal axis represents the original input brightness and the vertical axis represents the enhanced brightness. Values on either scale range from 0 to 255.

As shown in the figure below, if the curve is changed into a convex shape above the original diagonal, the enhanced image will be brighter than the original.



If the curve is changed into a concave shape below the original diagonal, the enhanced image will be darker than the original.



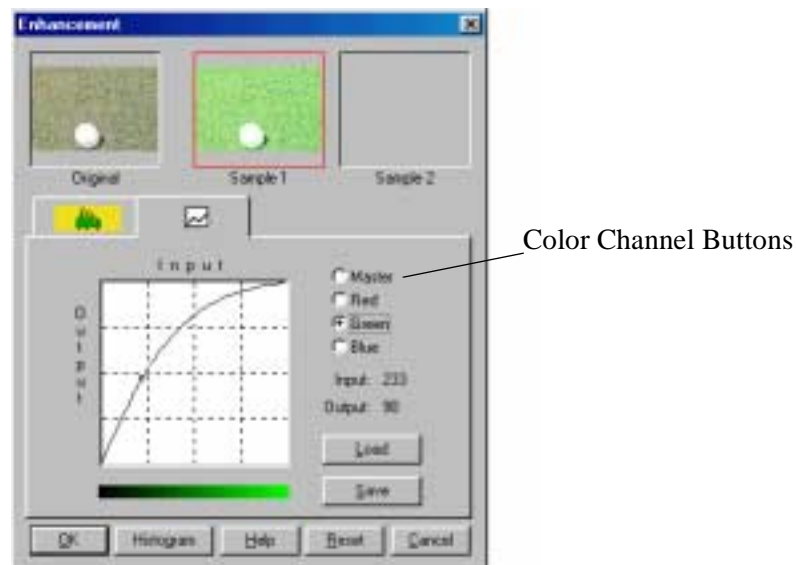
Operation:

- 1 Click on the **Tonal Map** icon in the **Preview** window or the **Tonal Map** tab in the **Enhancement** dialog box. **Tonal Map** dialog box will appear.
- 2 Click on the **Tonal Map** curve, an indicator appears which can then be dragged to change the shape of the curve.
 - a) If a previously saved **Tonal Map** is desired, select the **Load** button. An **Open** dialog box appears for you to open the desired file.

- b) Or, click on the **Reset** button to return the **Tonal Map** to the default diagonal as in the original.
 - c) Click the **Save** button to save the changes as a customized setting. A **Save As** dialog box will appear upon selection of this button. Enter the name for the customized curve and click on the **OK** button.
- 3 Select the **Histogram** button to see a histogram of the changes made.
 - 4 Select the **OK** button to accept all the changes or the **Cancel** button to abandon all unsaved changes.

Tonal Map with Color Scanning

With color scanning selected, you may select a color channel via the color buttons. This will allow you to adjust the Tonal Map for each color in the Red ,Green , and Blue spectrum. The same procedure applies for color as is described above for Gray 256 Scales.



In the above example, the Green curve has been dragged to a convex shape. This action results in a brighter green in Sample 1.

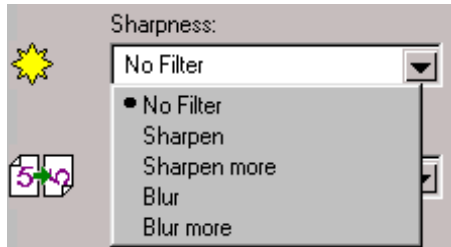
The Filters Tab

The features of the Filters Tab are described below, and are used to apply various visual modifications to the scanned image. All of the features of this tab are available when the Color or Gray 256 Scales selections are made for Image Type. Refer to the table below which indicates the tab features that are available for the Lineart B/W and Halftone B/W Image Type selections.

	True Color RGB and 256 Colors	Gray 256 Scales	Lineart B/W	Halftone B/W
Sharpness Control	Available	Available	Not Available	Not Available
Rotate Control	Available	Available	Not Available	Not Available
Flip Image Control	Available	Available	Not Available	Not Available
Invert Image Control	Available	Available	Available	Available

Filter

Filter is typically useful for high-contrast images which soften or sharpen edges and boundaries of an image.



No Filter

This is the default filter option. No filtering will take place when using this option.

Sharpen

This selection emphasizes the edges of an image. It sharpens the image boundaries by increasing the relative contrast between adjacent pixels. In general, sharpen filters should only be used when you want to accentuate the differences between one area and another.

Sharpen More

This option further emphasizes the edges of an image. This option produces a much stronger contrast than the Sharpen option.

Blur

This selection softens the image by smoothing out any sharp transitions in intensity between two adjacent pixels.

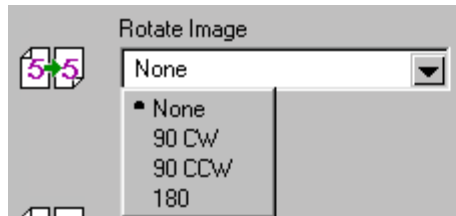
Blur More

This option further softens the image by performing the same function as the Blur option, but to a greater extent.

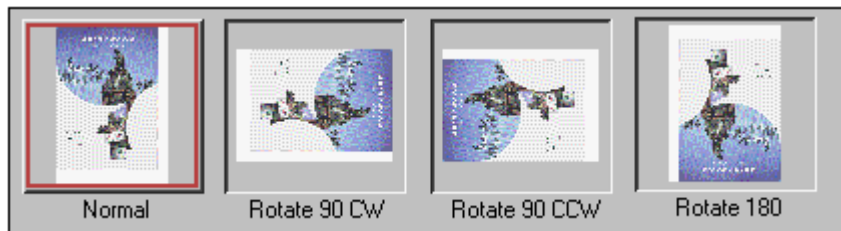


Note: If you blur the image too much, you will risk losing texture and depth in the image.

Rotate Image



This selection provides the ability to rotate an image. The rotation mechanism rotates an image in 90° or 180° increments.



Flip Image

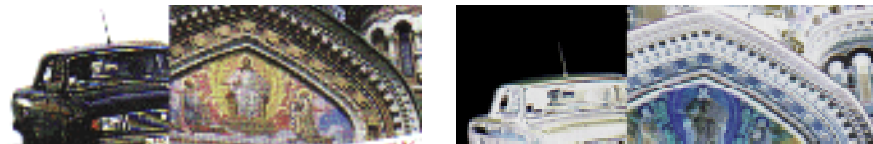


This selection provides the ability to flip an image. The flipping mechanism flips an image about the horizontal or vertical axis.



Invert Image

This function inverts all the tone values, providing a photographic negative of the original. This effect is similar to using the Tonal Map to tonally invert the image.



Preview Window

After adjusting the settings in the Scanner Control window, choose any one of the tools in the Preview Window to further enhance the image. The following is detailed information about the tools available in the Preview Window.

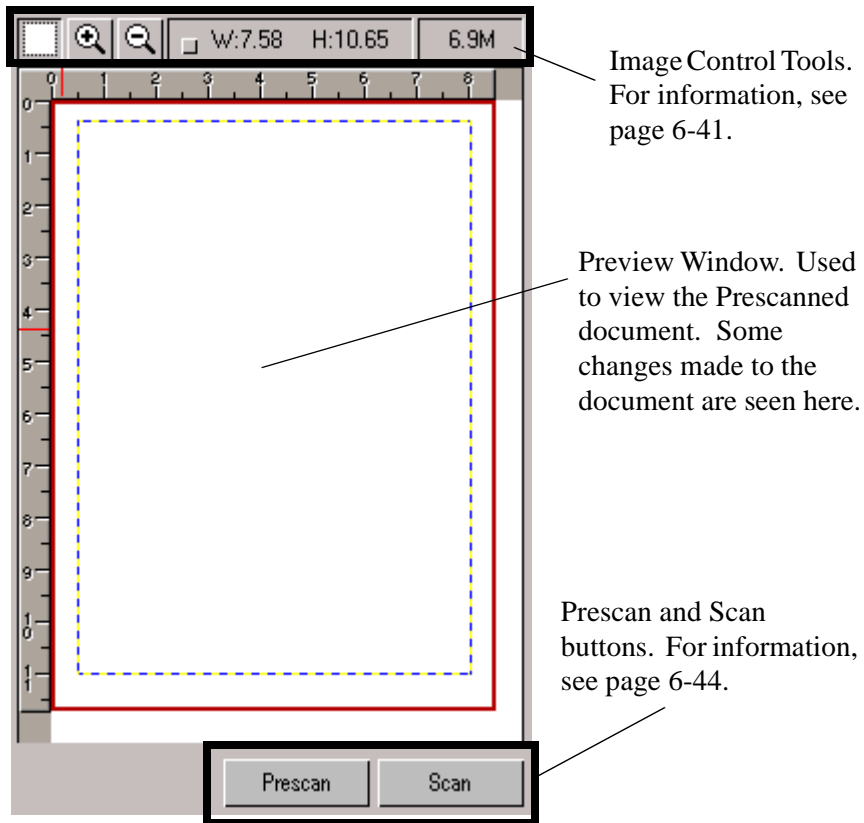
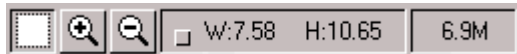


Image Control Tools



The Image Control Tools are used to control the image displayed in the Preview Window. The functions of these tools are described below.

Frame Tool



After a preview image has been created, you can define the boundaries of the area to be included in your final scan by using the Frame tool.

Use the Frame tool to select a rectangular portion (selection frame) of the preview screen, or select the entire preview screen, for the final scan boundaries. When you select the Scan button, only the area within the selection frame will be included in the final scan.

To use the Frame tool:

- 1 Select the Frame tool by clicking the Frame tool icon.
- 2 Drag the cursor to the preview area and release the mouse button when the selection frame is in the desired position.
- 3 To adjust the selection frame size or shape, drag any edge or corner of the frame in or out. Alternatively, hold down the Shift key and the mouse key on one of the sides of the frame and then move the cursor accordingly. This action will contract or expand the entire frame while maintaining the proportions of the selection frame.

- 4 To move the selection frame to a different area of the image without changing its size or shape, place the cursor within the selection frame and drag it to the desired location.
- 5 To create an entirely new selection frame, place the cursor outside the existing selection frame and drag diagonally. The first selection frame will disappear while the second one remains.



Note: If you hold down the Shift key and drag the mouse diagonally, the sides of the selection frame will resize proportionally.

Zoom In and Out Tools



The Zoom In and Out tools allow you to zoom in or out on an image within the Preview window; zooming in (the + sign appears on the zoom cursor) enlarges the view of the active image so that you can work on small details in an image. Zooming out (the - sign appears on the zoom cursor) reduces the view of the active image.

To use the Zoom In tool:

- 1 Select the Zoom In tool by clicking the Zoom In tool icon.
- 2 Drag the cursor to the preview area. The cursor will change to a magnifying glass whenever it is in the preview space.

- 3 Zoom in (magnify an area) by positioning the cursor on an area of interest in the preview area and clicking the left mouse button. The preview area will be doubled in size. Click again and the area will again be enlarged by a factor of 100%. By repeating this process, you can enlarge the preview display of the image up to 800% of its original size.

As an alternative to the method stated above, select the Zoom tool and then, while holding the mouse key down, drag the cursor over the area you want to enlarge. A solid frame, defining the area of enlargement, will appear while the mouse key is being held down. Upon release of the mouse key, the defined area will be enlarged.

- 4 Use the scroll bars to view hidden areas of the displayed preview image.

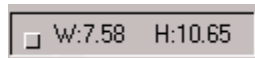
To use the Zoom Out tool:

- 1 Select the Zoom Out tool by clicking the Zoom Out tool icon.
- 2 Drag the cursor to the preview area. The cursor will change to a magnifying glass whenever it is in the preview space.
- 3 Zoom out by positioning the cursor in the preview area and clicking the left mouse button.



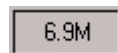
Note: The Zoom In and Out tools do not affect the image produced by the Scan control. It only affects the Preview Display.

Width and Height Indicators



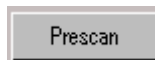
The Width and Height indicators will display the width and height of the frame defined with the frame tool.

File Size Indicator



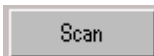
The file size indicator will display the file size that will result for the scanned image defined with the Frame tool.

Prescan Button



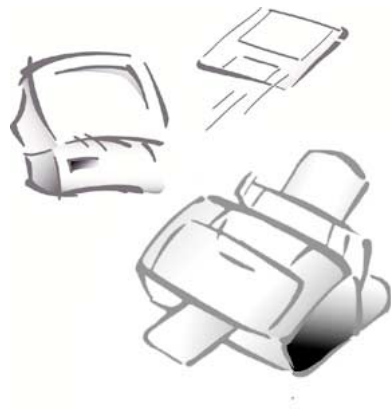
The Prescan button is used to obtain a low resolution preview of the document. The prescanned document will appear in the Preview Window.

Scan Button



The Scan button is used to obtain the final scan of the document after all of the enhancement features have been applied to the prescanned document.

When Scan is selected, the scanned image does not appear in the Preview Window. It appears in the TWAIN compliant application from which the scan was originated.



Chapter 7

Troubleshooting

This section describes Troubleshooting for the following areas:

- Clearing Jams
- LCD Display Error Messages
- Fax Problems
- Printer Problems
- Print Quality Problems

Refer to the specific subsection for a description of the problem and associated solutions.

Clearing Jams

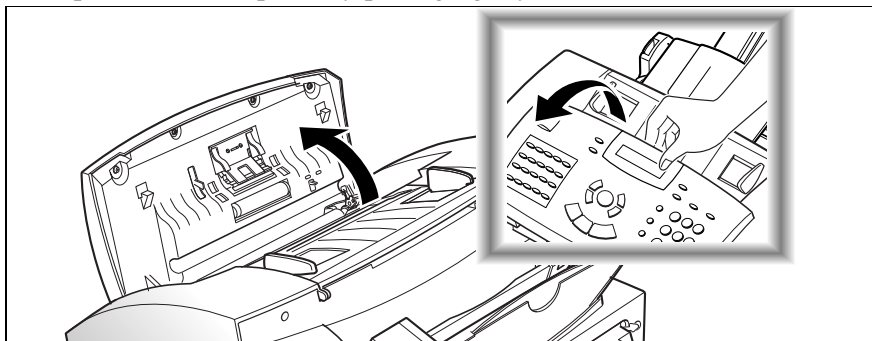
Document Jams While Sending a Fax

If a document jams while you are sending it, DOCUMENT JAM appears in the display.

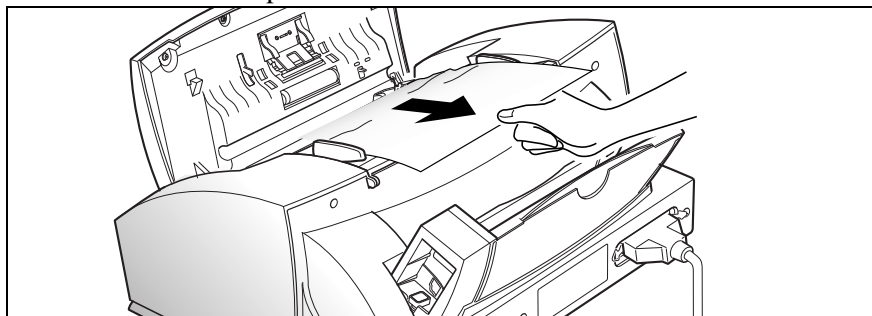


CAUTION: Do not pull the document out of the slot or you may damage your machine.

- 1 Open the control panel by pulling lightly on the Control Panel cover.



- 2 Carefully remove the jammed document. Close the control panel firmly until it clicks into place.

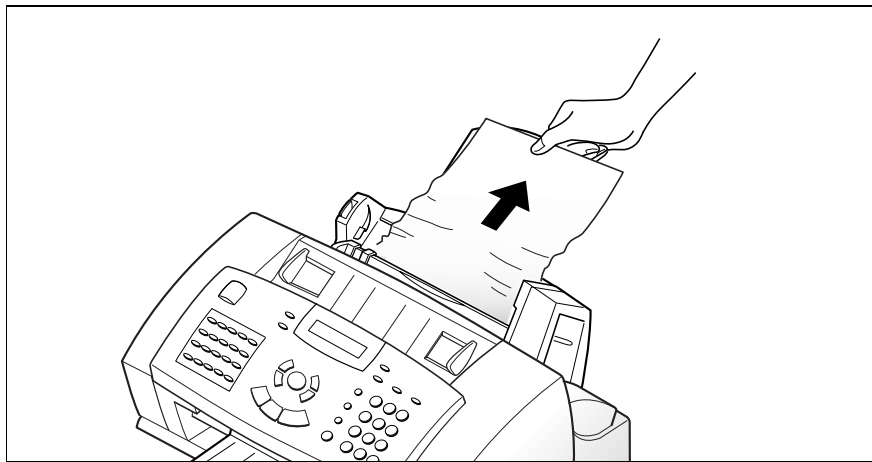


Paper Jams While the Machine is Printing

By carefully selecting paper type and loading them properly, you should be able to avoid most paper jams. If paper jams occur, an error message appears in the display. Follow the steps below to clear jam. To avoid tearing paper, pull the jammed paper out gently and slowly.

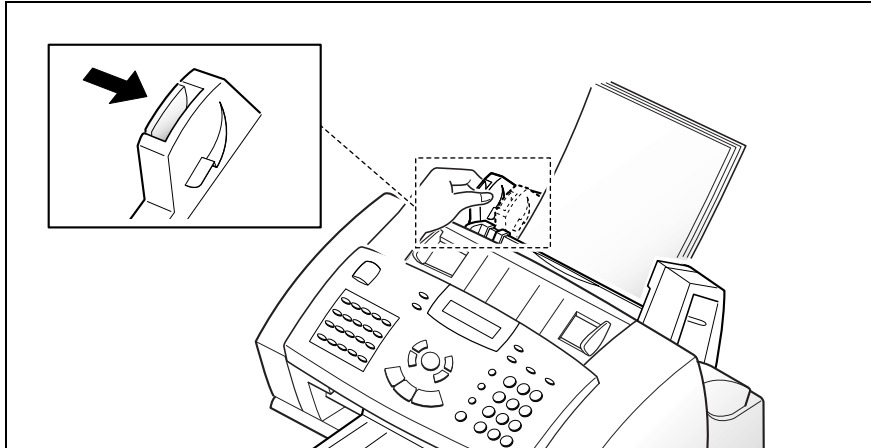
If Jammed in the Paper Feed Area at the Rear of the Machine

- 1 Remove the stack of paper (if necessary).
- 2 Remove the jammed paper by gently pulling it straight up as shown in the diagram below.



- 3 After you remove the jammed paper, reload the stack of paper back into the Automatic Paper Feeder with the print side facing you. Before loading, ensure the edges of the stack of paper are even and straight.

- 4 Adjust the paper guide to match the width of the paper.

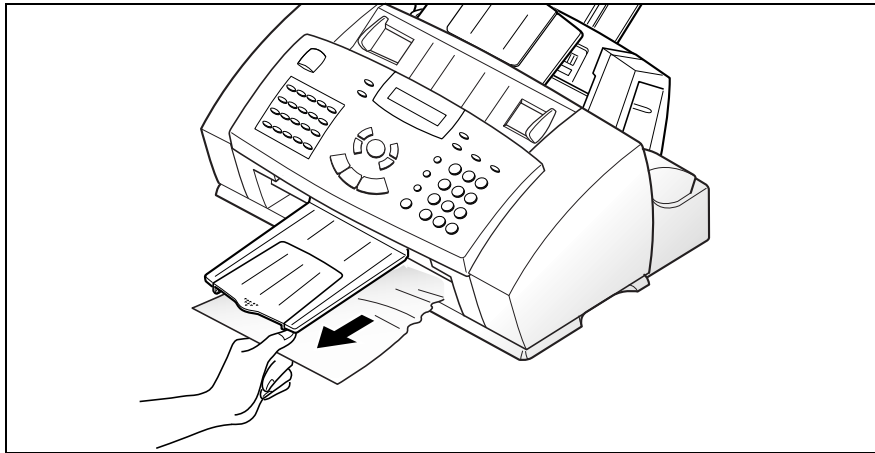


If Paper is Jammed in the Printer Output Area

If the paper jams as it exits to the printer exit tray, PAPER JAM will appear on the display. Remove the jammed paper by pulling gently on the paper as shown in the diagram below.

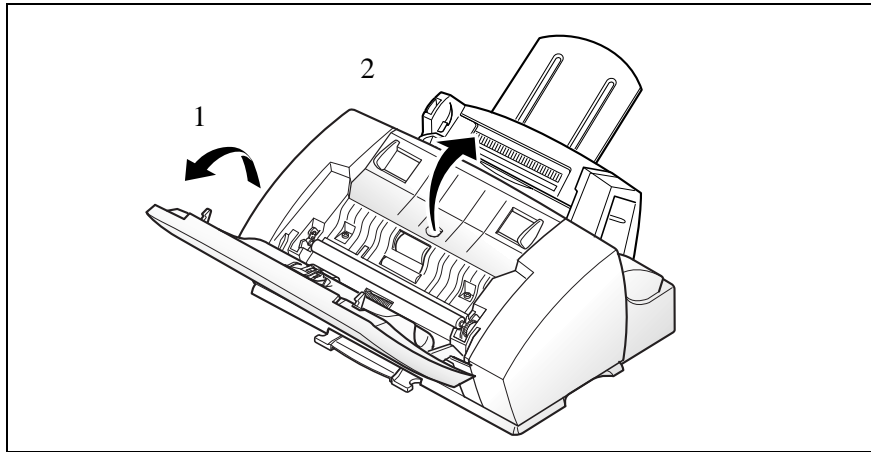


CAUTION: If there is resistance when you pull the paper, and it does not move easily when you pull, stop pulling. Continue with the next section, *If Paper is Jammed Inside the Machine*.

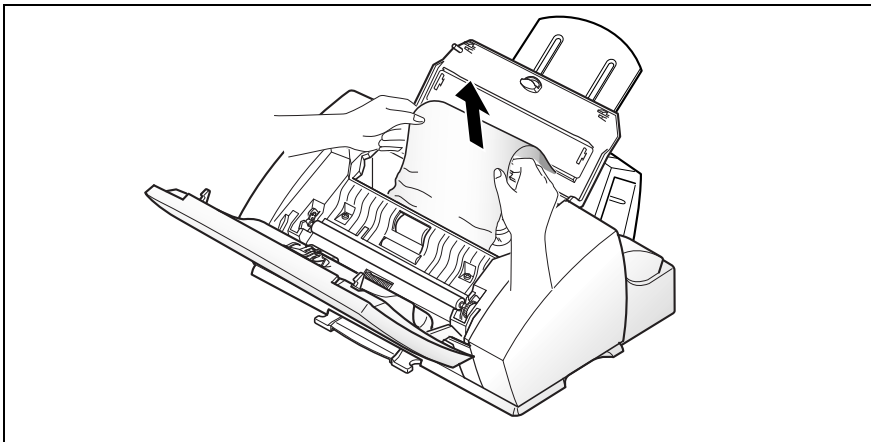


If Paper is Jammed Inside the Machine

- 1 Open the Control Panel cover (1) and the Cartridge Compartment cover (2).



- 2 Carefully remove the jammed paper as shown in the diagram below.



- 3 Close the Control Panel cover and the Cartridge Compartment cover.

Tips for Avoiding Paper Jams

By carefully selecting print materials and loading them properly, you should be able to avoid most paper jams. If jams do occur, follow the steps outlined in *Clearing Jams* on page 7-2. If jams occur frequently, make sure that you are following these tips to avoid jams.

- Follow the procedures in *Loading Paper* on page 1-20 to load paper properly. Make sure the adjustable paper guides are positioned correctly.
- Do not overload the paper. Never exceed the maximum capacity of 100 sheets of paper in the Automatic Paper Feeder.
- Flex, fan, and straighten paper before loading it.
- Do not load wrinkled, creased, damp, highly curled, or previously stapled paper.
- Do not mix paper types.
- Use only recommended print paper.
- Ensure that the recommended print side is facing up when loading paper into the feeder.
- Store print materials in an acceptable environment.

LCD Display Error Messages

LCD Display	Meaning	Solution
CARTRIDGE MISMATCH	The print cartridge is not correctly installed in the machine	Following the procedure in <i>Installing Ink Cartridges</i> on page 1-11, remove and re-install the print cartridge.
INK OUT	The print cartridge is out of ink.	Install a new print cartridge.
DUPLICATED	The number entered is already stored in another one-touch or speed dial location	Check the number and enter under one location.
RETRY REDIAL?	The machine is waiting for the programmed interval to automatically redial a previously busy station.	You can press Start to immediately redial, or Stop to cancel the redial operation.
COMM. ERROR	There is a fax communications problem.	Try faxing again.

LCD Display	Meaning	Solution
INCOMPATIBLE	<ul style="list-style-type: none"> Remote machine did not have the requested feature, such as Polling. The remote machine has insufficient memory to complete the operation you are attempting. 	<p>Confirm the features of the remote party's machine.</p> <p>Try sending the fax to a another fax machine.</p>
DOCUMENT JAM	The document jammed in the paper feeder.	Refer to <i>Clearing Jams</i> on page 7-2 to remove any jammed paper.
DOOR OPEN	The cover is not securely latched.	Press down on the cover until it snaps in place.
GROUP NOT AVAILABLE	You have tried to select a group location where only a single location number can be used.	Group Location Feature is not available.
LINE ERROR	Your machine cannot connect with the remote site, or it has lost contact because of a problem on the phone line.	<ul style="list-style-type: none"> Try again. If the failure persists, wait an hour or so for the line to clear, then try again. Turn on ECM mode. See <i>User Options (System Data)</i> on page 1-51.

LCD Display	Meaning	Solution
LOAD DOCUMENT	You have attempted to set up a sending operation without loading a document.	Load a document and try again.
MEMORY FULL!	The machine's memory is full.	<ul style="list-style-type: none"> • Delete unnecessary documents. • Retransmit after more memory becomes available. • Split the transmission into more than one operation.
NO ANSWER!	The remote machine has not answered and all redial attempts have been made.	Try again. Make sure the remote machine is operational.
NO. NOT ASSIGNED	The One-Touch or Speed Dial location you tried to use has no number assigned to it.	<ul style="list-style-type: none"> • Dial the number manually with the numeric keypad. • Assign the number to a One-Touch or Speed Dial button and try again.

LCD Display	Meaning	Solution
NO PAPER	<p>The paper feed tray is empty.</p> <p>The message is also displayed if paper narrower than A4, Letter, or Legal is loaded to print a PC file. The file can be printed regardless of the message.</p>	<p>If the machine runs out of paper while printing a fax, it will restart printing when more paper is loaded.</p> <p>If it runs out when printing from a PC, press the Form Feed button after loading more paper.</p>
PAPER JAM	Paper jammed inside the unit.	Press the Stop button and clear the jam. Refer to <i>Paper Jams While the Machine is Printing</i> on page 7-3.
POLLING ERROR	<ul style="list-style-type: none"> The remote fax machine you want to poll is not ready to respond to your poll. When setting up to poll another fax machine, you have used an incorrect poll code. 	<ul style="list-style-type: none"> The remote operator should know in advance that you are polling and have their fax unit loaded with the original document. Enter the correct poll code.
POWER FAILURE	A power failure occurred.	If there are documents stored in memory, a Power Failure Report will be printed automatically when the power is restored.

Fax Problems

Symptom	Solution
The machine is not working, there is no display, and the buttons are not working.	<ul style="list-style-type: none">• Unplug the power cord and plug it in.• Check for power at the outlet.
There is no dial tone.	<ul style="list-style-type: none">• Check that the telephone line cord is connected properly.• Check the phone wall socket by plugging in another phone.• Try using a different telephone cord.
The telephone numbers stored in memory do not dial correctly.	Make sure the telephone numbers are stored correctly in memory. Print a Telephone Numbers List. See <i>To Print Reports</i> on page 1-50 .
The document does not feed into the machine.	Make sure the document is not wrinkled or creased and you are feeding it correctly. Also ensure that the document is within specification for size and thickness.
You cannot receive faxes automatically.	<ul style="list-style-type: none">• Ensure that either FAX or TEL/FAX mode is selected.• Ensure there is paper and ink in the machine.• Ensure that your machine's memory is not full. Check the display for a MEMORY FULL error message.

Symptom	Solution
The machine cannot receive faxes manually.	Ensure that you are hanging up the handset before you press the Start button. NOTE: This applies only to Xerox WorkCentre 480cx models equipped with a telephone connected to the EXT jack on the bottom of the machine.
The machine will not transmit faxes.	<ul style="list-style-type: none"> • Make sure that the document is loaded face down. • Check that the LCD display reads TX. • You may have hung up the handset of the external phone before you pressed Start. • Ensure the machine you are sending to is able to receive faxes.
You cannot poll another machine.	<p>The fax machine you are calling may be using a poll code.</p> <p>The document you are trying to retrieve is not loaded into the remote machine.</p>
Blank spaces or poor text quality appear in incoming faxes.	<ul style="list-style-type: none"> • The machine sending the fax may be faulty. • Line errors due to excessive noise on phone line. • Check your machine by making a copy. • Try cleaning the print heads. See <i>Clean Head</i> on page 1-43.
Stretched words appear on incoming faxes.	The machine sending the fax had a temporary document jam.
Lines appear on copies or outgoing faxes.	Check your machine's scan glass for marks and clean it, if necessary. See <i>Cleaning the Document Scanner</i> on page 8-2.

Symptom	Solution
Spots or lines appear on received faxes.	<ul style="list-style-type: none"> • Check to see if the phone line is noisy. • Check the print head in your machine by making a copy. • Check the transmitting machine for a dirty scan glass.
The machine dials a number, but fails to make a connection with another machine.	The other machine may be turned off, out of paper, or cannot answer incoming calls. Have the operator of the other machine investigate the problem.
The machine is unable to store a document in memory.	There may be insufficient memory available to store the document. If the display shows a MEMORY FULL error message, delete any documents you no longer need from the memory, then try storing the document.
Blank areas appear at the bottom of each page, or on other pages, only a small strip of text is printed at the top of the page.	Check the paper settings in the user option setup. Refer to <i>Selectable Options</i> on page 1-52.

Printer Problems

Symptom	Cause and Solution
The printer does not print.	<ul style="list-style-type: none">• The PC cable is not connected properly.• The PC cable is defective. Swap the cable with one known to work. If necessary, replace the cable.• If the PC cable is one that was not received with the machine, ensure that it is compliant with the IEEE 1284 standard.• The printer port is configured incorrectly. Check printer setting in Windows to make certain that the print job is being sent to the correct port (for example, LPT1).• A paper jam has occurred. Refer to <i>Clearing Jams</i> on page 7-2.• The printer may be configured incorrectly within an application. Check the application to verify that all print settings are correct.• The printer driver may be incorrectly installed. Re-install the printer driver. See <i>Uninstalling Software</i> on page 1-34. Try printing a test page.
The paper does not feed into the printer.	<ul style="list-style-type: none">• Paper has not been loaded properly. Remove and re-insert the paper correctly. Refer to <i>Loading Paper</i> on page 1-20.• There is too much paper in the Automatic Paper Feeder. Decrease the number of sheets of paper in the Automatic Paper Feeder.

Symptom	Cause and Solution
Half of the printed page is blank.	<ul style="list-style-type: none"> • The page layout is too complex. Simplify the page layout, and remove any unnecessary graphics from the document. • The page orientation setting may be incorrect. Change the page orientation in the Print Setup dialog box. • The paper size and the software paper size settings do not match. Load the correct paper in the printer or change the software paper size settings in the Print Setup dialog box. • Scaling may be set to less than 100%. Change the scaling setting in the Paper/Output dialog box. • The printer cable may be incorrect. Use or replace the cable with an IEEE-1284 rated cable. • The ink cartridge may be empty.
The printer prints the wrong data, or it prints incorrect characters.	<ul style="list-style-type: none"> • The printer cable may be connected improperly. Check the cable connection. • There may be a problem with the printer driver software. Exit Windows and reboot the computer. Turn the printer off and on. • The printer cable may be incorrect. Use or replace the cable with an IEEE-1284 rated cable.

Symptom	Cause and Solution
The paper constantly jams.	<ul style="list-style-type: none"> • There is too much paper in the Automatic Paper Feeder (APF). Remove some of the paper from the APF. If printing onto transparencies, or labels, insert them one at a time in the Manual Paper Feeder. • An incorrect type of paper is being used. Use only paper that meets the specifications required by the printer. • The paper setting method may be incorrect. If printing onto envelopes, insert the envelopes so that there is a gap of approximately 1 mm (1/32") between the left and right edges of the envelopes at the paper guide.
Printing is too slow.	<ul style="list-style-type: none"> • If using Windows 3.x, Print Manager may be disabled. From the Control Panel Printers menu, check the Use Print Manager box. • If using Windows 3.x, the Background Printing item in the Option menu of Print Manager may be set incorrectly. Select Background Printing from the Option menu in the Print Manager. • If using Windows 95/98 or NT 4.0, the Spooling Setting may be set incorrectly. From the Start menu, select Settings and Printers. Click the Work Centre icon with the right mouse button, select Properties, click the Details tab, and then click the Spool Settings button. Select the desired spool setting from the available choices.

Print Quality Problems

Symptom	Cause and Solution
Light or blurred characters.	<ul style="list-style-type: none">• You may be using Quick Print 600 dpi print quality or Normal 600 dpi mode. Try using High 1200 dpi print quality.• The print cartridge may be running out of ink. Replace the print cartridge. The Status monitor shows the amount of ink left in the cartridge.• Make sure you are using the correct type of paper. Try another type of paper.• You may be printing on the wrong side of the paper.• The print head may need cleaning. See <i>Print Cartridge Nozzle Test</i> on page 8-7.
Solid black areas on transparencies contain white streaks.	<ul style="list-style-type: none">• Try changing the fill pattern in your application software.• The print head may need cleaning. See <i>Print Cartridge Nozzle Test</i> on page 8-7.
Smudged or dark characters.	<ul style="list-style-type: none">• Make sure you are using the correct type of paper. Try another type of paper.• Make sure the paper is straight and unwrinkled.• Let ink dry before handling the paper. You can use 'Dry Time Delay' check box in the print setting. See <i>Main Tab</i> on page 5-8.• Change the Print Quality setting to Quick Print 600 dpi. See <i>Main Tab</i> on page 5-8.• The print head may need cleaning. See <i>Print Cartridge Nozzle Test</i> on page 8-7.

Symptom	Cause and Solution
Characters with white lines	<ul style="list-style-type: none"> The print cartridge may be running out of ink. Replace the print cartridge. The Status monitor shows the amount of ink left in the cartridge. Remove and reinstall the print cartridge. See <i>Replacing the Print Cartridge</i> on page 8-17. The print head may need cleaning. See <i>Print Cartridge Nozzle Test</i> on page 8-7. If printing on transparencies, try changing the fill pattern in your application software.
Incorrect format or characters do not align correctly at left margin.	<ul style="list-style-type: none"> The media is incorrectly loaded or is an unsupported size or type. See <i>Paper Guidelines</i> on page 1-27. For special media, it is recommended to feed one sheet at a time. Make sure you do not have hard-coded spaces at the left margin in your application. The print head may need cleaning. See <i>Print Cartridge Nozzle Test</i> on page 8-7. The print cartridge may be mis-aligned. See <i>Cartridge Alignment</i> on page 8-19.
Vertical straight lines are not smooth in tables, borders, and graphs.	<ul style="list-style-type: none"> Perform the <i>Print Cartridge Nozzle Test</i> on page 8-7. The print cartridge may be mis-aligned. See <i>Cartridge Alignment</i> on page 8-19.
Solid black areas on transparencies contain white streaks.	Change the fill pattern in the application used to create the images on the transparency.

Symptom	Cause and Solution
Printed color does not match screen colors.	<ul style="list-style-type: none"> • The color print cartridge has run out of one or more inks. Install a new cartridge. See page 3.30. • The print head may need cleaning. See <i>Print Cartridge Nozzle Test</i> on page 8-7.
Black and white is printing instead of expected color printing.	<ul style="list-style-type: none"> • The print settings may be incorrect. Check Document Type setting in the printer driver Document/Quality dialog. See <i>Main Tab</i> on page 5-8. • A black cartridge may be installed instead of a color cartridge. Replace with a color cartridge. See <i>Replacing the Print Cartridge</i> on page 8-17.
Color print quality is poor.	<ul style="list-style-type: none"> • Ensure that you are using the correct type of paper. • Ensure that the Paper Type setting is correct for the type of paper loaded. See <i>Main Tab</i> on page 5-8. • Change the Print Quality setting to High or Normal. See <i>Main Tab</i> on page 5-8.
Printer power is on, but nothing prints.	<ul style="list-style-type: none"> • The printer is improperly connected to the computer. Make sure the printer cable is firmly connected to the printer and the computer. • Make sure the printer cable is IEEE 1284-compliant bi-directional parallel interface cable. • Bad printer cable, or computer port. Try another cable. • Make sure your application has the Document WorkCentre 480cx selected as the default printer.

Symptom	Cause and Solution
Printer seems to be printing, but no characters are printing.	Check the print cartridge. Tape may be covering the ink nozzles of the print cartridge. The print cartridge may be out of ink. Replace with a new one. See <i>Replacing the Print Cartridge</i> on page 8-17. The status monitor shows the amount of ink left in the cartridge.
Unexpected characters are printed or characters are missing.	<ul style="list-style-type: none"> • Make sure your application has the WorkCentre 480cx selected as the default printer. • The printer cable may not be securely connected to the printer and the computer, or the printer cable may not be correct type. Check the printer cable. • The print head may need cleaning. See <i>Print Cartridge Nozzle Test</i> on page 8-7.
Printer prints very slowly.	<ul style="list-style-type: none"> • You may be using High 1200 dpi print quality. Change the Print Quality setting to Quick Print 600 dpi. See <i>Main Tab</i> on page 5-8. • Graphics print more slowly than text. • Color prints more slowly than black. • Special media prints more slowly than plain paper. • Another application currently open affects print speed. Close the running program if not required.
Control panel of your machine does not respond.	Unplug the power cord, then plug in the machine.
Page does not print.	Some extremely complicated page formats may not be printable on the printer. If you are using too many fonts, or if you are printing complex graphics, you can experience this problem. Simplify the page format or use fewer fonts.

Paper Feeding Problems

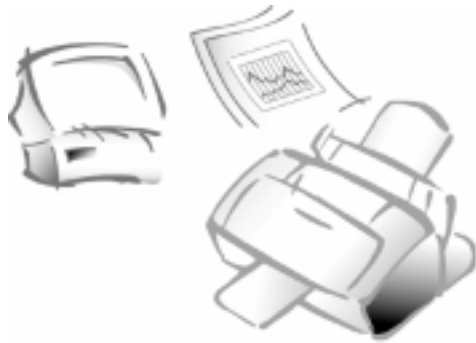
Symptom	Cause and Solution
Paper is jammed during printing.	Clear the paper jam. See <i>Paper Jams While the Machine is Printing</i> on page 7-3.
Paper sticks together.	<ul style="list-style-type: none">• Ensure there is not too much paper in the Automatic Paper Feeder (APF). Depending on the thickness of your paper, the APF can hold up to 100 sheets of paper.• Make sure you are using the correct type of paper.• Remove paper from the APF and flex or fan the paper.• Humid conditions may cause some paper to stick together.
Paper fails to feed.	<ul style="list-style-type: none">• Make sure the envelope guide is not in the upright position.• Remove any obstructions inside the machine.
Multiple sheets of paper feed	<ul style="list-style-type: none">• Different types of paper may be stacked in the Automatic Paper Feeder. Load the paper of only one type, size, and weight.• When loading paper, do not force the paper down into the printer.• If multiple sheets have caused a paper jam, clear the paper jam.

Symptom	Cause and Solution
Paper skews or buckles	<ul style="list-style-type: none"> • Ensure there is not too much paper in the APF. Depending on the thickness of your paper, the APF can hold up to 100 sheets of paper. • Make sure the paper guide does not cause the paper to bow in the APF. • Make sure you are using the correct type of paper. • When loading paper, do not force the paper down into the machine. • Make sure the right side of the paper is aligned with the right edge of the feeder, and the left paper guide is set against the left side of the paper. • Make sure the envelope guide is not in the envelope position.
Transparencies stick together in the paper exit.	Use only the transparencies specially designed for printer. Remove each transparency as it exits from the printer.
Envelopes skew or fail to feed correctly.	<ul style="list-style-type: none"> • Ensure that the envelope guide has been turned upright to the envelope load position. • Ensure that the paper guide is against the left side of the envelopes.

Scanning Problems

Symptom	Cause and Solution
You cannot scan a document into memory.	<ul style="list-style-type: none">• Make sure you load the document to be scanned in the document tray.• There may not be enough available memory to hold the document you want to scan.• If there are any fax documents stored in memory waiting to be sent when the remote machine answers, you can print out the received documents that are stored in memory.
The unit scans very slowly.	<ul style="list-style-type: none">• Graphics are scanned more slowly than text.• Communication speed becomes slow in scan mode because of the large amount of memory required to analyze and reproduce the scanned image. Set your computer to ECP mode through BIOS setting. It will help to increase the speed. For details on how to set BIOS, refer to the documentation for your computer.
The following message appears on the computer screen: <i>Scanner is busy receiving or printing data. When the current job is completed, try again.</i>	There may be a copying or faxing job in progress. When the current job is completed, try the job again.

Symptom	Cause and Solution
<p>The following message appears on the computer screen: <i>There is no document or the document is loaded improperly. Insert the document properly and try again.</i></p>	<p>Insert the document properly and push it down until the machine grips the document.</p>
<p>The following message appears on the computer screen: <i>The selected port is currently being used. Restart your computer and try again.</i></p>	<p>A scan error occurred and the scanning has not been completed properly. Reset your computer.</p>
<p>The following message appears on the computer screen: <i>Port is disabled. Check if the port is properly connected, power is on, scanner is not busy. Then restart your computer.</i></p>	<p>The printer cable may be improperly connected or the power may be off. Ensure the WC480cx is plugged in. If the problem persists, turn the computer and printer off. Wait about 10 seconds, turn them both on and try again.</p>
<p>The following message appears on the computer screen: <i>Port is disabled. Check if the port is properly connected, or power is on. Then restart your computer.</i></p>	<ul style="list-style-type: none"> An I/O error has occurred during scanning. Check for proper cable connection and for a bad cable.



Maintenance

Clearing Memory

You can selectively clear information stored in your machine's memory.

- 1 Press **Menu**, then press **Memory Clear** on the One-Touch keypad. MEMORY CLEAR ITEM (1-4) appears briefly on the display followed by the list shown below. Use the **UP** and **Down** buttons to scroll through the list of options.

Memory Clear Items

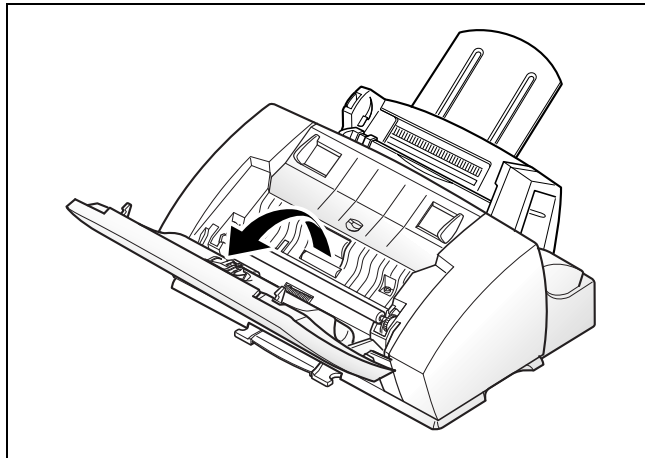
1. SYSTEM ID	The System ID number and name are cleared from the machine's memory.
2. SYSTEM DATA	Restores user-selectable options to the default value.
3. PHONEBK/MEMORY	Clears the One-Touch, Speed Dial, or Group Dial numbers stored in memory. All the Scheduled Job operations you have reserved are also canceled.
4. TX-RX JOURNAL	Clears all records of transmissions and receptions.

- 2 Highlight the memory items you want to clear by pressing the **UP** or **DOWN** button repeatedly until the item to be cleared is blinking.
- 3 Press the **Start/Enter** button.
ARE YOU SURE? appears in the LCD display.
- 4 Press **1** to confirm, or use the **Right** or **Left** button to choose YES, then press the **Start/Enter** button. The selected memory is cleared.

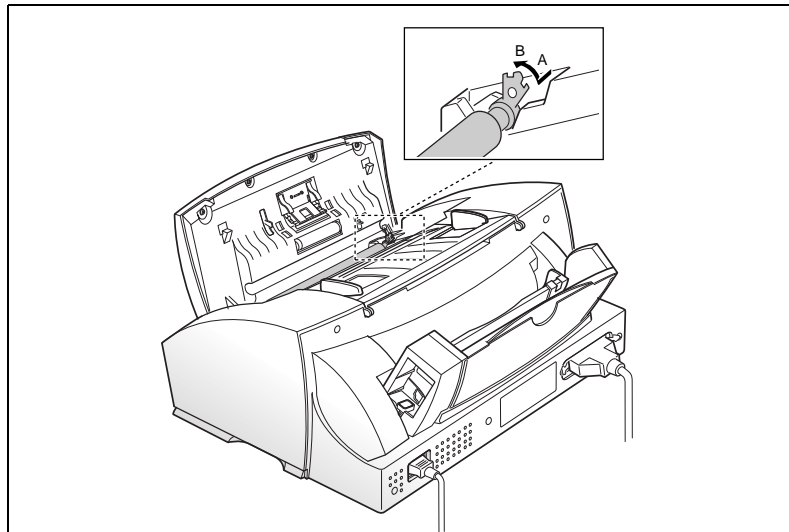
Cleaning the Document Scanner

To keep your machine working properly, occasionally clean the white roller, Automatic Document Feeder (ADF) rubber, and the scanning glass. If they are dirty, documents sent to another fax machine may not be clear.

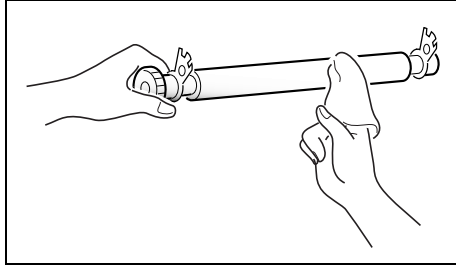
- 1 Power off the WorkCentre 480cx by unplugging it from the wall outlet.
- 2 Open the Control Panel by pulling lightly on the Control Panel Cover assembly.



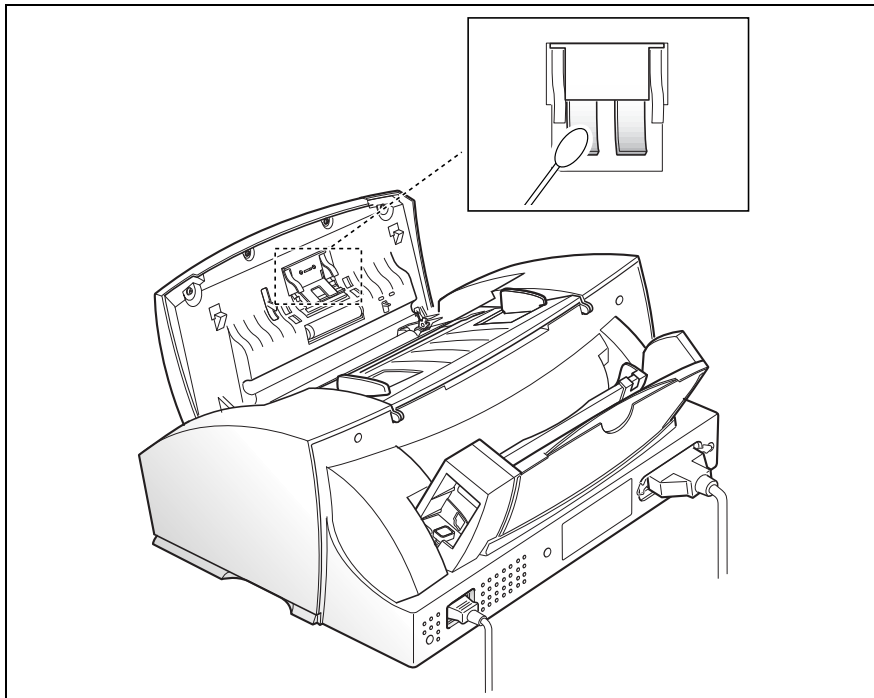
- 3 Disassemble the white roller as follows:
 - a) Both ends of the white roller have plastic bushings that are used to secure the roller in the machine. Pull the two bushings slightly inward (A).
 - b) Rotate the bushings until they reach a vertical position (B).
 - c) Pull the roller upward and out of the machine.



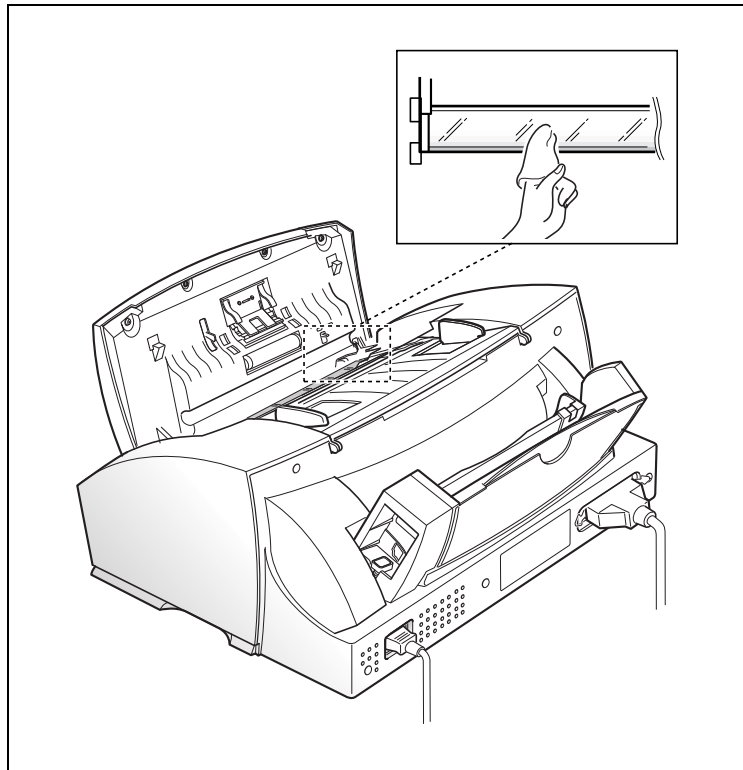
- 4 Wipe the roller surface with a soft cloth dampened with water.



- 5 Using a cotton swab or a soft dry cloth, clean the ADF rubber pad.

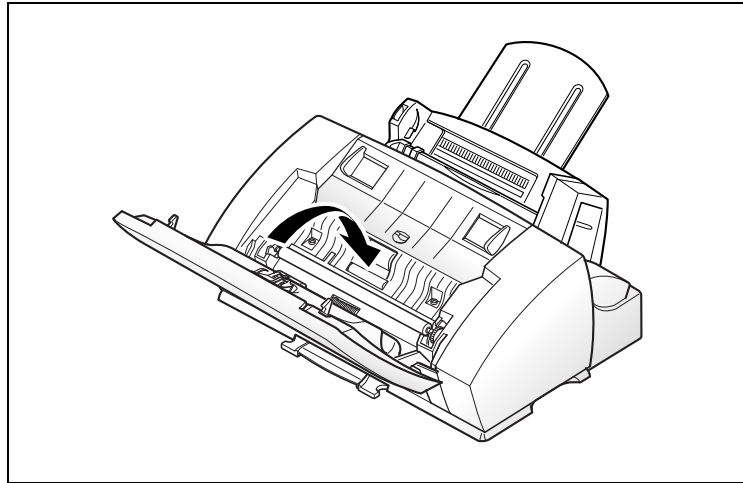


- 6 Carefully wipe the scanning glass with a **SOFT, DRY CLOTH**. If the glass is very dirty, first wipe it with a slightly dampened cloth, then with a dry cloth. Be very careful not to scratch the glass surface.



CAUTION: Never spray liquid directly onto the scanning glass.

- 7 Replace the roller by performing steps one and two in reverse order.
- 8 Close the control panel firmly until it clicks into place.



Managing the Print Cartridges

Tips for your print cartridges

To get the maximum benefit from your print cartridges:

- Do not remove a print cartridge from its packaging until you are ready to install it.
- Do not refill the print cartridge. The warranty will not cover damage caused by using refilled cartridges.
- Store the print cartridge in the same environment as the printer.
- Do not remove a print cartridge from the printer except to replace it. Immediately replace the print cartridge or store it in the storage unit. The print cartridge will not print correctly if removed from the machine and left exposed for an extended period.
- Do not swap the color cartridge with the black or photo cartridges. The color cartridge should be installed in the Left carrier and the black or photo cartridge should be installed in the Right carrier.
- If you have an opened print cartridge you are not currently using and do not have an available print cartridge storage unit, store it in an airtight plastic bag. Do not leave it exposed to the air for an extended period; this promotes drying out and clogging of the print nozzles.

Print Cartridge Nozzle Test

You should test the print cartridge when the print is not clear or image information is missing. The problem may be caused by blocked nozzles on the print cartridge.

The nozzle test cleans the print cartridge by purging the nozzles. Then it prints a test so you can see the results. Use the nozzle test:

- When you suspect the nozzles are clogged.
- When characters are not printing completely.

Cleaning the Print Heads

To clean the print head using your Xerox WorkCentre

The Clean Head procedure cleans the print nozzles and removes any deposits that may impair printing functions.

To run the Clean Head Procedure:

- 1 Press the **Menu** button, then press the **Maintenance** button on the one-touch keypad. The display indicates SELF TEST ?.
- 2 Press the **Up** button. CLEAN HEAD ? appears in the LCD display.
- 3 Press the Start/Enter button. PRINTING... appears on the LCD display.

The WorkCentre 480cx prints a head cleaning test pattern. Notice the series of diagonal lines across the top and bottom of the test pattern. Breaks within a line of the same color indicate a clogged nozzle. Try running the Clean Head procedure again if you see breaks in the diagonal lines.

To clean the nozzles from your PC:

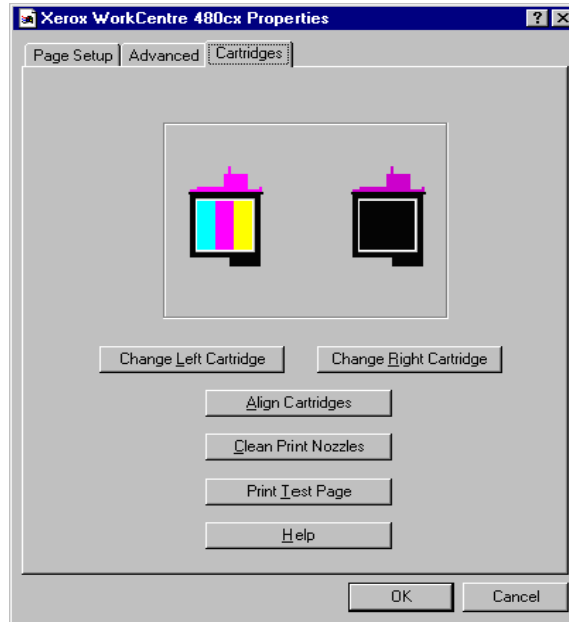
In Windows 95/98 or Windows NT 4.0:

- 1 Go to **Start, Programs**, Xerox WorkCentre 480cx.
- 2 Select Xerox WorkCentre 480cx Control Program on LPT1.
- 3 The Control Program window opens.

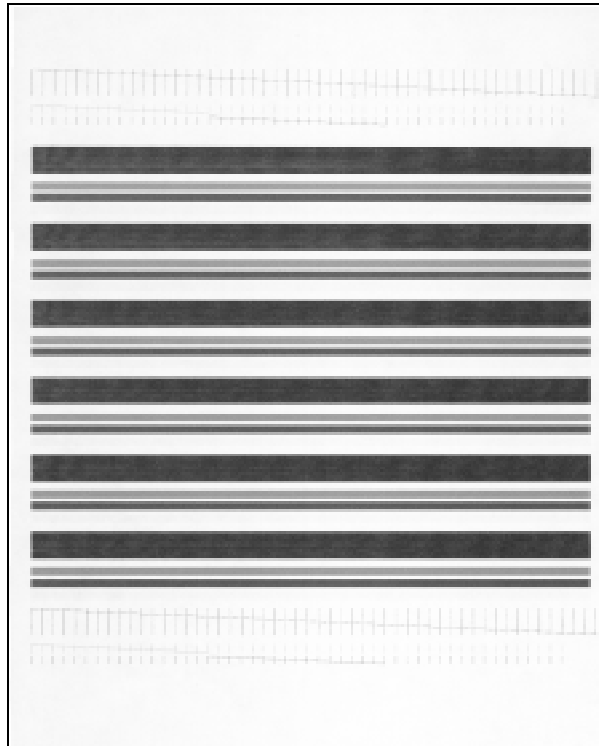


Note: For Windows 3.x: At system startup, open the Xerox WorkCentre 480cx group from Program Manager. Double-click on the Xerox WorkCentre 480cx Control Program icon.

- 4 Click the **Cartridges** tab, then click the **Clean Print Nozzles** button. The printer feeds a sheet of paper and prints the nozzle test pattern.



Examine the test pattern. The example below shows a test pattern of all nozzles functioning correctly on the color and black print cartridges.



Compare the diagonal same-color lines at the top and bottom of the test pattern. Look for a break in the diagonal lines; a broken line shows any clogged nozzles.

If the bottom line shows improvement, rerun this test. If improvement continues, rerun the test. If all nozzles are not printing after running the test three times, continue with step 5.

- 5 If print quality does not improve, remove and reinstall the print cartridge. Repeat the nozzle test.
- 6 If the line is still broken, wipe the nozzles and contacts. Refer to *Wiping the Print Cartridge Nozzles and Contacts* on page 8-11.

Wiping the Print Cartridge Nozzles and Contacts

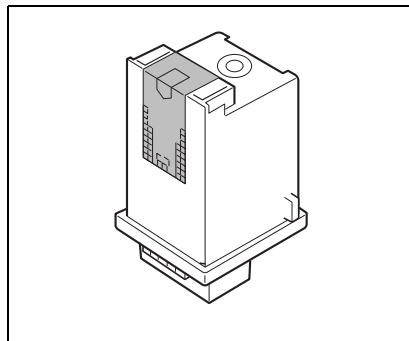
If print quality does not improve after repeating the nozzle test, the problem may be caused by dried ink on the print cartridge:

- nozzles
- contacts
- carrier contacts in the printer

Follow this procedure:

- 1 Remove the print cartridge. See *Replacing the Print Cartridge* on page 8-17.
- 2 Use a clean, lint free cloth, dampened with water only, to gently clean the entire copper colored area, including the nozzles and contacts. To dissolve any dried ink, hold the damp cloth against the nozzles for about three seconds. Gently blot and wipe dry.

If you are cleaning a color print cartridge, be especially careful to wipe the nozzles in only one direction so the colors do not mix.



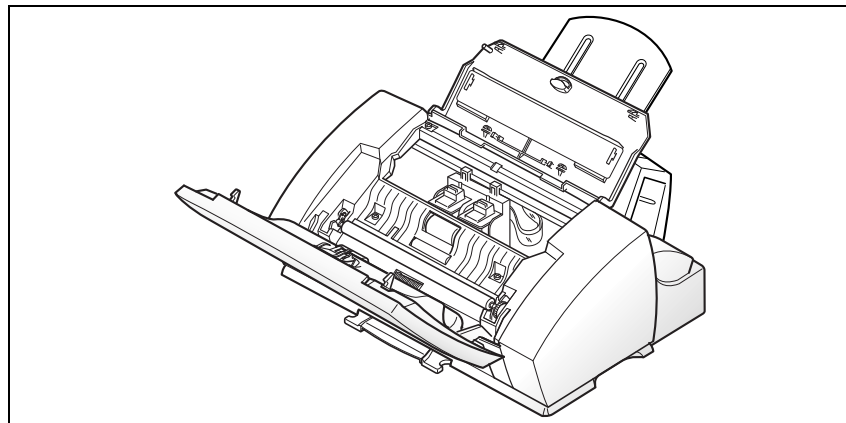
- 3 Allow the copper-colored area to dry, then reinstall the print cartridge and repeat the nozzle test.

If the line is still broken, clean the print cartridge carrier contacts in your machine *Cleaning the Cartridge Carrier Contacts* on page 8-12.

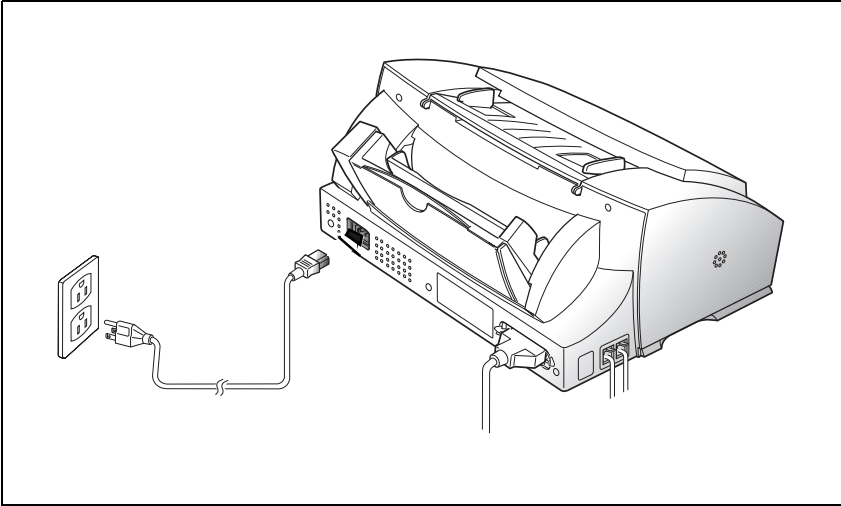
If print quality still has not improved, replace the ink cartridge.

Cleaning the Cartridge Carrier Contacts

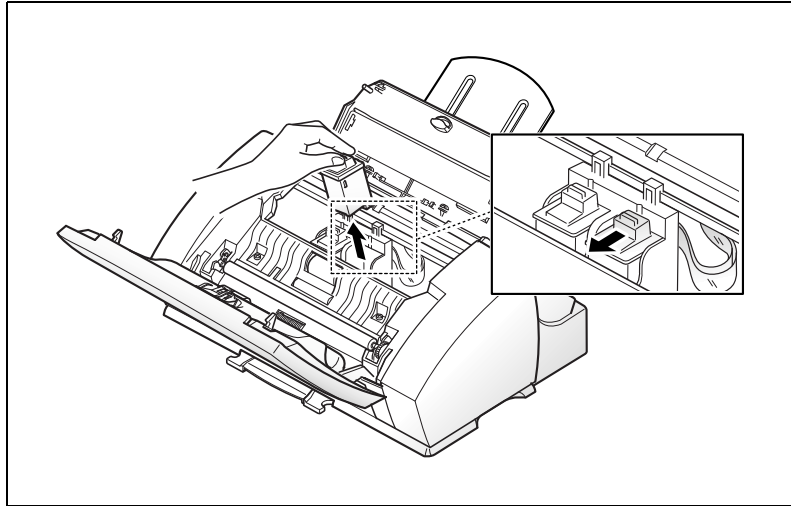
- 1 Open the Control Panel and the Cartridge Compartment Cover.



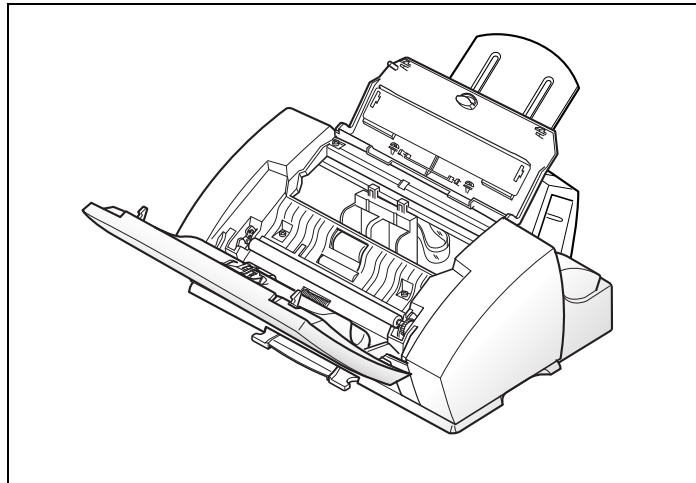
- 2 Unplug the power cord from the electrical outlet or the rear of the machine.



3 Remove the Print Cartridges.

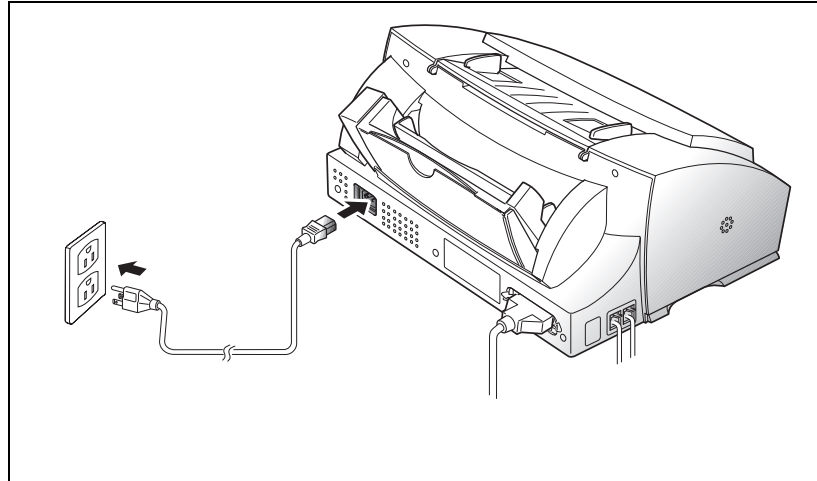


- 4 Use a CLEAN, LINT FREE, DRY CLOTH to clean the print cartridge carrier contacts inside the printer.

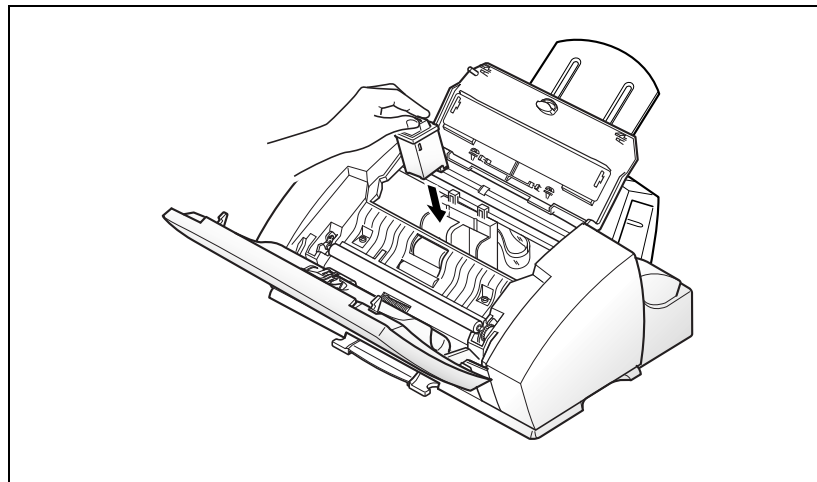


- 5 Close the Control Panel and the Cartridge Compartment Cover.

- 6 Plug the power cord in.



- 7 Open the control panel and the cartridge compartment cover. Install the print cartridge.



Replacing the Print Cartridge

The print cartridge includes the ink supply and the print head. Each time you replace the print cartridge, you are replacing the print head as well.

When you notice the print becomes light or BLACK INK LOW appears in the display, replace your cartridge.



Note: When BLACK INK LOW appears during PC printing, the machine continues printing. After PC printing is completed, replace the print cartridge.



Note: Your machine counts and keeps Black ink low counts for the Black print cartridge. However, for Color or Photo cartridges, you must check for the ink low status through the Control Program when PC printing. Refer to *The Xerox WorkCentre Control Program* on page 5-21.

To replace the print cartridge, perform the following steps:

- 1 Open the control panel (1) and the cartridge compartment cover (2).
- 2 Pull the handle of the print cartridge(s) you want to replace toward you until there is a click. Remove the print cartridge(s).
- 3 Remove a new print cartridge from its packaging and carefully remove the tape covering the print head. Hold the print cartridge by the colored tab or black areas only. Do not touch the copper area.
- 4 Insert the print cartridge in the cartridge holder, then push the print cartridge firmly to the rear of the machine until it clicks into place.

If the print cartridge moves loosely in the carrier, it has not clicked into place. Repeat this step.

- 5 Close the cover and the control panel.

- 6 The LCD displays CARTRIDGE CHANGED? NO. Select the desired action item using the **Up** or **Down** arrow.

If you	Select
did not change any cartridge	CARTRIDGE CHANGED? NO
changed a color cartridge	CARTRIDGE CHANGED? LEFT
changed a black or photo cartridge	CARTRIDGE CHANGED? RIGHT
changed a color and a black or photo cartridge	CARTRIDGE CHANGED? BOTH

- 7 Press **Start/Enter**.
- 8 Select the replaced cartridge type using the **Up** or **Down** arrow. If the replaced cartridge is a used cartridge, select: OLD COLOR, OLD BLACK, or OLD PHOTO. If the replaced cartridge is a new cartridge, select: NEW COLOR, NEW BLACK, or NEW PHOTO to reset the ink counters.
- 9 Press **Start/Enter**. The machine returns to Standby mode.



Note: If you selected NEW COLOR, NEW BLACK, or NEW PHOTO, the machine automatically prints out an Alignment Pattern to adjust the alignment for new print cartridges.



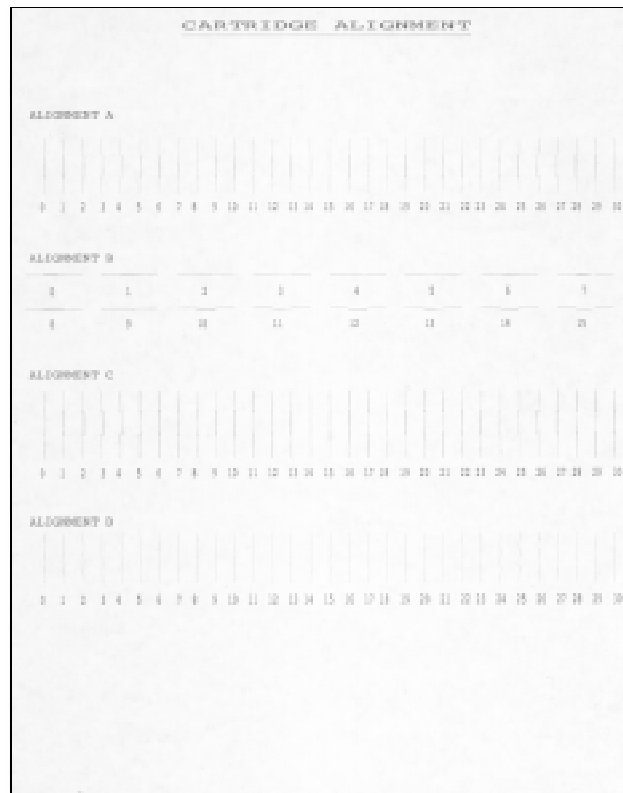
Note: If you are interrupted and leave the print carrier in the load position for more than 30 minutes, the print cartridge carrier moves to the standby position.

Cartridge Alignment

You should print the cartridge alignment test if vertical lines or characters appear crooked. The cartridge alignment test will straighten the vertical lines.

To align the cartridge from your PC:

- 1 Open the Xerox WorkCentre 480cx Control Program on LPT1. Refer to *Starting the Xerox WorkCentre 480cx Control Program* on page 5-21 and to *Using the Cartridges Tab* on page 5-25.
- 2 Click the **Align Cartridges** button.
- 3 The printer feeds a sheet of paper and prints the alignment test pattern.



Examine the test print. If the vertical lines are straight, no adjustment is needed. If the lines are not straight, select the number in which the lines appear the straightest and click OK. To align the cartridge using the control panel of your WorkCentre:

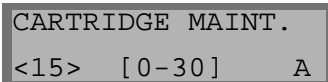
The Arrange Alignment menu settings provides an easy way to check and adjust Ink Cartridge print head alignment.

To run the Arrange Alignment:

- 1 Press the **Menu** button, then press the **Maintenance** button on the one-touch keypad. The display indicates SELF TEST ?.
- 2 Press the **Down** button. ARRANGE ALIGNMENT ? appears in the LCD display.
- 3 Press the **Start/Enter** button. PRINTING... appears on the LCD display.

The WorkCentre 480cx prints out a Cartridge Alignment pattern sheet consisting of a series of four test patterns. The patterns are designated A,B,C, and D. Each pattern is made up of a series of lines which are individually numbered. By selecting the straightest line from each pattern, you can optimize the print head alignment.

After printing out the Cartridge Alignment sheet, the Cartridge Maintenance set up menu appears on the LCD display.



```
CARTRIDGE MAINT.  
<15> [ 0-30 ] A
```

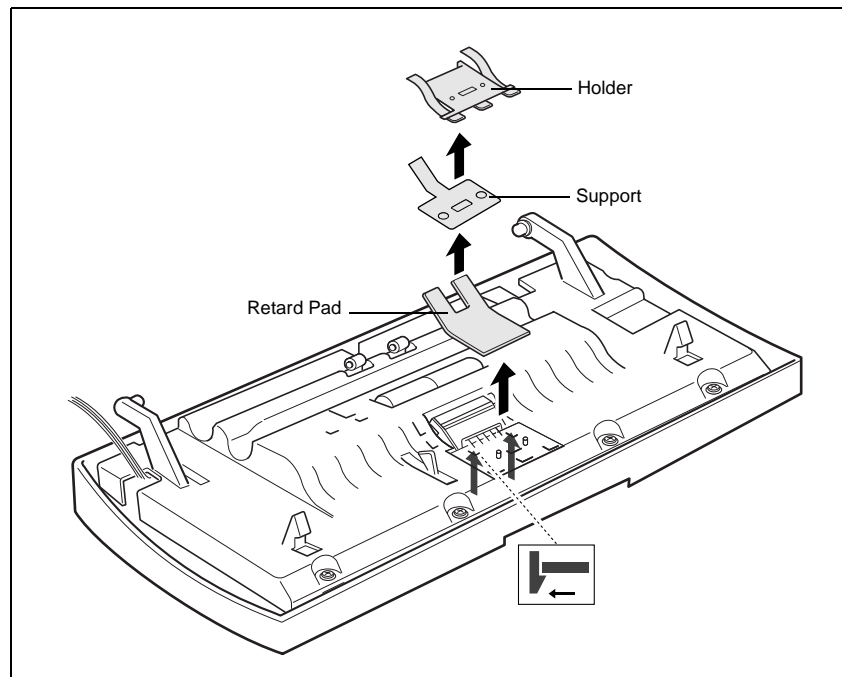
The letter A located on the right end of the lower line in the display corresponds to alignment test pattern A. The range of numbers bracketed in the center of the display indicates the range of valid pattern selection choices. The flashing number on the left side of the display indicates the line from print pattern A that is currently selected as optimal.

- 4 Using the Number Keypad, enter the number of the line which appears the straightest from pattern A.
- 5 Press the **Start/Enter** button to confirm your selection. The LCD panel updates and the set up screen for the Alignment B test pattern is displayed.
- 6 Using the Number Keypad, enter the number of the line which appears the straightest from pattern B.
- 7 Press the **Start/Enter** button to confirm your selection. The LCD panel updates and the set up screen for the Alignment C test pattern is displayed.
- 8 Using the Number Keypad, enter the number of the line which appears the straightest from pattern C.
- 9 Press the **Start/Enter** button to confirm your selection. The LCD panel updates and the set up screen for the Alignment D test pattern is displayed.
- 10 Using the Number Keypad, enter the number of the line which appears the straightest from Alignment pattern D.
- 11 Press the **Start/Enter** button to confirm your selection. The LCD panel updates and the set up screen for the Alignment A test pattern is displayed.
- 12 Press the **Stop** button to return to normal operation.

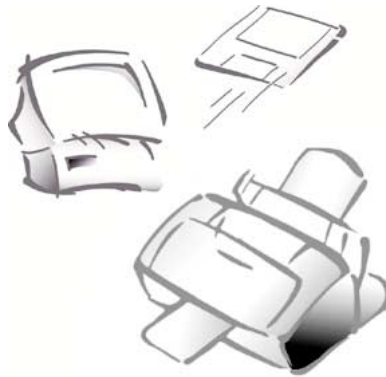
ADF Rubber Retard Pad Replacement

After about one year of operation, your retard pad will become worn and may impair the performance of the document feeder. Follow this procedure to replace the pad:

- 1 Open the document feeder cover.
- 2 Insert a sharp, thin object such as the tip of a small screwdriver and release the latches. This will release the Holder so that you can remove Retard Pad and Support from the machine.



- 3 Remove the retard pad and plastic support from the machine.
- 4 Insert a new retard pad and support onto the holder, and snap in into place.



Chapter 9

Appendix

Specifications

Applicable line	Public Switched Telephone Network (PSTN) or behind PABX (FCC Part 68 2-wire compliant)
Compatibility	ITU Group 3
Fax Data coding	MH/MR/MMR (ITU-T-T4)
Modem speed	14400/12000/9600/7200/4800/2400 bps
Transmission speed	Approx. 6 sec./ page (V.17 ECM: 14.4 kbps)
Effective scanning width	8.1 inches (208 mm)
Effective printing width	8.0 inches (203 mm)
Scanning method	Sheet-fed Contact Image Sensor (CIS)
Memory	2.5 MByte
Halftone	64 levels
Printing speed	8 PPM Mono Draft (Letter/A4 Size) 4 PPM Color Draft (Letter/A4 Size)
Black Ink Cartridge Yield	About 1075 Sheets (5% Pattern, A4)

Color Ink Cartridge Yield	About 240 Sheets (15% Pattern, A4)
Source document output tray	30 sheets (20 lb or 75 g/m ²)
LCD	16 characters x 2 lines
Dimension (W x D x H)	438 x 360 x 192 mm
Weight	14.5 lb with tray (6.6 Kg)
Power requirements	AC 220V / AC 110V (Auto Switching), Rated frequency: 50-60Hz
Power consumption	(Standby) 13 Watts (Maximum) 490 Watts
Environmental conditions	Temperature : 50°F to 90°F (10°C to 32.5°C) Humidity : 20% to 80% RH
Auto dialer	One-touch dialing (registration for 20 numbers) Speed dialing (registration for 50 numbers)
Document size - Width - Length	3.0 to 8.5 inches (76.2 to 216 mm) Single page: 5 to 14 inches (127 to 356 mm) Multi pages: 5 to 11.7 inches (128 to 297 mm)
Recording paper size - for automatic paper feeder - for manual paper feeder	Letter: 8.5 x 11 inches (216 x 279 mm) A4 : 8.27 x 11.69 inches (210 x 297 mm) Legal : 8.5 x 14 inches (216 x 356 mm) Length: 5 to 14 inches (127 to 356 mm) Width: 5.6 to 8.5 inches (143 to 219 mm)
Recording paper weight - for automatic paper feeder -for manual paper feeder	20lb to 24 lb (75 to 90 g/m ²) 12.5 to 32 lb (31 to 130 g/m ²)
Automatic paper feeder capacity	100 sheets; 16 to 20 lb (60 to 75 g/m ²) weight
Printing method	Color Thermal-Inkjet
Printing resolution	1200 x 1200 dpi

Scanning resolution (fax) – Horizontal x Vertical	Standard: 203 x 98 dpi Fine: 203 x 196 dpi Super fine: 300 x 300 dpi
Scanning resolution (scanner)	75 dpi - 300 dpi optically and the higher resolutions up to 4800 dpi can be supported by interpolating via bundled Twain driver
Copy resolution	300 x 300 dpi
Battery backup	1 hour

FCC Regulations

Send Header Requirements

Federal communications commission (FCC) regulations require all persons within the United States who send any message via a facsimile machine to include an identifying message in the transmission. The message must clearly contain an identifier and telephone number for the entity (business or individual) sending the message.

This facsimile machine provides the local ID and name features required for the FCC regulation. To satisfy the FCC regulation, the telephone number and name must be included with the printed document. To comply with the FCC rules, carefully read and follow the instructions listed in this document to program the local ID and name.

Data Coupler Information

This Xerox WorkCentre 480cx machine contains an internal data coupler. Its use is restricted by the FCC (Federal Communications Commission). To comply with the FCC rules, you must carefully read and follow the instructions listed below.

This equipment complies with Part 68 of the FCC rules. On the rear of this equipment is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN). If requested, provide this information to your telephone company.

The REN is used to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your number is called. In most, but not all areas, the sum of the RENs of all devices should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should call your local telephone company to determine the maximum REN for your calling area.

ASK your local telephone company for the modular jack type installed on your line. Connecting this machine to an unauthorized jack can severely damage telephone company equipment. You, not Xerox, assume all responsibility and/or liability for any damage caused by the connection of this machine to an unauthorized jack.

You may safely connect the machine to the following standard modular jack: USOC RJ-11C. Use the standard line cord (provided with the machine) to connect it.

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant.

Do not connect this machine to a party or coin operated phone line.

Repairs to the machine should be made only by a Xerox representative or an authorized Xerox service agency. This applies at any time during or after the service warranty period. If unauthorized repair is performed, the remainder of the warranty period is null and void.

If you find the telephone line is damaged or the telephone company notifies you that your machine is causing damage, disconnect the machine from the telephone line and call for service. Do not reconnect the machine until necessary repairs are made.

The telephone company will, where practical, notify you when they need to temporarily disconnect service. However, if action is reasonable and necessary, but prior notice is not practical, they may still temporarily disconnect your service. In such cases they must:

- Immediately notify you of their temporary action.
- Reconnect service when the source of damage is removed.
- Inform you of your right to bring a complaint to the FCC under FCC rules.

The telephone company may make changes to its communications facilities, equipment, operations, or procedures. Such action must be reasonable, required in the operation of their business, and consistent with FCC rules. They must give you prior written notification if the changes can:

- Make your machine incompatible with their equipment.
- Require modification or alteration of the machine.
- Otherwise physically affect performance of the machine.

When programming emergency numbers and/or making test calls to emergency numbers:

- Remain on the line and briefly explain to the dispatcher the reason for the call before hanging up.
- Perform such activities in the off-peak hours, such as early morning hours or late evenings.

Radio Frequency Emissions

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

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

Change or modifications to this equipment not specifically approved by the Xerox Corporation may void the authority granted by the FCC to operate this equipment.

Shielded cables must be used with this equipment to maintain compliance with FCC regulations.

Canadian Certification

Notice: The Industry Canada Label on the machine identifies certified equipment. This certification means that the equipment meets certain telecommunications networks protective, operational and safety requirements. Industry Canada does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord).

The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority or electrician, as appropriate.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of Industry Canada.

Cet appareil numérique est conforme aux limites d'émission de bruits radioélectriques pour les appareils de classe B stipulées dans le Règlement sur le brouillage radioélectrique du ministère des Industries du Canada.

Safety and Legal Requirements for the UK

Approvals and Certification



The CE marking applied to this product symbolises Xerox Limited Declaration of Conformity with the following applicable Directives of the European Union as of the dates indicated:

January 1, 1995: Council Directive 73/23/EEC amended by Council Directive 93/68/EEC, approximation of the laws of the member states related to low voltage equipment.

January 1, 1996: Council Directive 89/336/EEC, approximation of the laws of the member states related to electromagnetic compatibility.

A full declaration, defining the relevant directives and referenced standards can be obtained from your Xerox Limited representative or by contacting:

Xerox Limited Product Safety,
Xerox Limited Technical Centre,
PO Box 17,
Bessemer Road,
Welwyn Garden City,
Herts AL7 1HE, England



WARNING: This product is certified manufactured and tested in compliance with strict safety and radio frequency interference regulations. Any unauthorised alteration which includes the addition of new functions or the connection of external devices may impact this certification. Please contact your local Xerox Limited representative for a list of approved accessories.



WARNING: In order to allow this equipment to operate in proximity to industrial, Scientific and medical (ISM) equipment, the external radiation from the ISM equipment may have to be limited or special mitigation measures.

Your product and supplies have been designed and tested to meet strict safety requirements. These include safety agency examination and approval, and compliance to established environmental standards. Please read the following instructions carefully before operating the product and refer to them as needed to ensure the continued safe operation of your product.

Follow all warnings and instructions marked on, or supplied with, the product.

Unplug this product from the wall outlet before cleaning. Always use materials specifically designated for this product. Use of other materials may result in poor performance and could create a hazardous situation.

Do not use aerosol cleaners. Follow the instructions in this User Guide for proper cleaning methods.

Never use supplies or cleaning materials for purposes other than what they were intended. Keep all supplies and material out of reach of children.

Do not use this product near water, wet locations, or outdoors.

Do not place this product on an unstable cart, stand, or table. The product may fall, causing personal injury or serious damage to the product.



WARNING: This product must be earthed.

This product is equipped with a 3-wire, grounding-type plug (i.e., a plug having a third grounding pin). This plug will only fit into a grounding-type power outlet. This is a safety feature. To avoid the risk of electric shock, contact your electrician to replace the receptacle if you are unable to insert the plug into the outlet. Never use a grounding adapter plug to connect the product to a power source receptacle that lacks a ground connection terminal.

This product should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your local power company.

Do not allow anything to rest on the power cord. Do not locate the product where persons will step on the cord.

Slots and openings in the cabinet and in the back and bottom of the product are provided for ventilation. To ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.

Never push objects of any kind into the slots of the product as they may touch dangerous voltage points or short out parts which could result in a fire or electric shock.

Never spill liquid of any kind on the product.

Never remove any covers or guards that require a tool for removal, unless directed to do so in a Xerox approved maintenance kit.

Never defeat interlock switches. Machines are designed to restrict operator access to unsafe areas. Covers, guards, and interlock switches are provided to ensure that the product will not operate with covers opened.

Use of an extension cord with this product is not recommended or authorized. Users should check building codes and insurance requirements if an extension cord is to be used. Ensure that the total ampere ratings of the products plugged into the extension cord does not exceed the extension cord ampere rating. Also make sure that the total amperage of all products plugged into the wall outlet does not exceed the outlet rating.

If you need additional safety information concerning the copier or Xerox supplied materials you should contact your Xerox representative or you may contact Xerox Environment Health and Safety on:

*(UK) 44 (0)1707 353434

***Safety Quality Standards:** The Xerox WorkCentre 480cx is certified to EN 60950.

Other National Standards: The Xerox WorkCentre 480cx is also certified in compliance with applicable standards by various national bodies.

The Electricity at Work Regulation (in England and Wales) UK ONLY

Electricity at Work Regulations:

The Electricity at Work Regulation 1989 came into force in England and Wales on the 1 April 1990. This 1989 Regulation places a duty on all employers and self-employed persons to ensure the electrical system in their premises are constructed, maintained and operated in such a manner as to prevent, so far as reasonably practical, danger. This includes ensuring all electrical equipment connected to such electrical systems are safely constructed, maintained and operated.

All Xerox equipment have been designed to exacting safety standards. They have all undergone a variety of stringent safety tests including earth bond, insulation resistance and electrical strength tests. Xerox Limited manufacturing plants have been awarded ISO 9000 quality certification and are subject to regular audits by the British Standards Institution or equivalent national standards body.

Xerox equipment which has been properly and regularly serviced and maintained should not have to undergo additional specific safety tests pursuant to the 1989 Regulation. Customers wishing to complete safety testing should contact Xerox Limited Technical Centre (see page 9-9) for advice prior to any test implementation.

Xerox equipment should, however, be properly and regularly serviced and maintained at all times.

QUESTION: What is the Electricity at Work Regulation?

ANSWER: The Electricity at Work Regulation 1989 came into force in England and Wales on the 1 April 1990. This 1989 Regulation places a duty **on all employers and self-employed persons** to ensure the electrical systems in their premises are constructed, maintained and operated in such a manner as to prevent, so far as reasonably practicable, danger. This includes ensuring all electrical products connected to such electrical systems are safely constructed, maintained and operated.

QUESTION: Does Xerox Limited comply with the Electricity at Work Regulation?

ANSWER: The regulation places a duty on **all employers and self-employed persons** to ensure the electrical systems in their premises are, effectively safe.

The regulation does not impose on, amongst others, **manufacturers or suppliers** of such electrical systems. However, rest assured that all Xerox equipment which Xerox Limited and its authorised distributors supplies to customers, conform with all the relevant safety legislation and standards.

QUESTION: Is Xerox equipment safe?

ANSWER: All Xerox equipment supplied by Xerox Limited and their authorised distributors conform to all relevant safety legislation and standards.

QUESTION: Is the Xerox equipment in my premises safe?

ANSWER: All Xerox equipment supplied by Xerox Limited and their authorised distributors conform to all relevant safety legislation and standards. However, like all electrical equipment, they have to be regularly serviced and maintained by competent persons.

Xerox Limited Customer Service Engineers ensure Xerox equipment is serviced and maintained to exacting Xerox safety standards. If you would like your Xerox equipment to be serviced and maintained to such high standards, please contact your local Xerox Limited Customer Service Organisation. They will be pleased to assist you.

QUESTION: Does the Xerox equipment in my premises comply with the Electricity at Work Regulations?

ANSWER: All employers and self-employed persons must ensure that the electrical systems in their premises are safe. This will include ensuring Xerox equipment in such premises is safe.

Xerox Limited's Product Safety function has prepared a guide which contains a list of tests which may be completed by your Xerox Limited Customer Service Organisation. **THESE TESTS MUST BE CARRIED OUT ONLY BY PERSONS WHO POSSESS THE RELEVANT SKILL, KNOWLEDGE AND EXPERIENCE TO CARRY OUT SUCH TESTS.**

Please contact the Xerox Limited Customer Service Organisation for further information.

THE USE OF INAPPROPRIATE TEST PROCEDURES AND TEST EQUIPMENT MAY PROVIDE MISLEADING RESULTS AND MAY CAUSE DEATH, PERSONAL INJURY AND/OR DAMAGE TO PROPERTY.

QUESTION: I would like to carry out my own safety tests on the Xerox equipment in my premises.

ANSWER: You may, of course, request such tests as you deem necessary to satisfy yourself that your Xerox equipment is safe. Your Xerox Limited Customer Support will be pleased to advise you on such testing.

QUESTION: I require records of all tests.

ANSWER: After safety testing, your Xerox Limited Customer Service Engineer will provide you with a certificate which details the results of all tests completed.

In the event of any defect being noted, the Xerox equipment will be switched off and disconnected from the supply until the defect has been corrected. You will be advised of such action to enable such defects to be corrected.

PLEASE NOTE: YOU MUST ENSURE THAT YOUR XEROX EQUIPMENT IS SAFE AT ALL TIMES.

Please contact us if you have any queries regarding the information provided in this document.

Xerox Limited Product Safety,
Xerox Limited Technical Centre,
PO Box 17,
Bessemer Road,
Welwyn Garden City,
Herts AL7 1HE, England

European Product Marking Requirements

CTR 21 Annex II

The equipment has been approved in accordance with Council Decision 98/482/EC for pan-European single terminal connection to the public switched telephone network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.

In the event of problems, you should contact your equipment supplier in the first instance.

CTR 21 Annex III

The Xerox fax options for the WorkCentre 480cx have been approved in accordance with Council Decision 98/482/EC for pan-European single terminal connection to the public switched telephone network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point. In the event of problems, you should contact your local Xerox representative in the first instance.

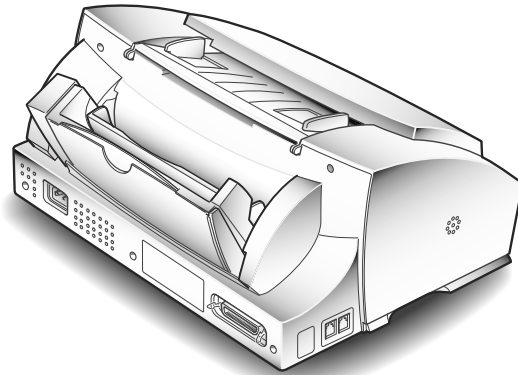
In general, under the scope of this approval, this product has been designed to work with the national PSTNs of the following countries:

Austria	Greece	Norway
Belgium	Iceland	Portugal
Denmark	Ireland	Spain
Finland	Italy	Sweden
France	Luxembourg	Switzerland
Netherlands	United Kingdom	

The test standard used for this approval is TBR21. To assist in the use and application of terminal equipment approved against this standard, the European Telecommunication Standards Institute (ETSI) has issued an advisory document (EG 201 121) which contains notes and voluntary additional requirements to ensure network compatibility of TBR21 terminals. The Xerox fax functions have been designed against, and are fully compliant with, all of the relevant advisory notes contained in this document.

The fax kits may also be configured by a Xerox representative to be compatible with other country networks. Other countries, not listed above, will be approved against their own National requirements. Please contact your Xerox representative if the WorkCentre 480cx needs to be reconnected to another country's network. There are no user adjustable settings on the fax option.

Telephone Connectivity Guidelines



This section will help you connect and set up your WorkCentre 480cx with several different telephone accessories.

The Quick Install Guide and User Guide cover the most common ways to set up the WorkCentre. This guide covers those again, as well as more complicated setups.

These include:

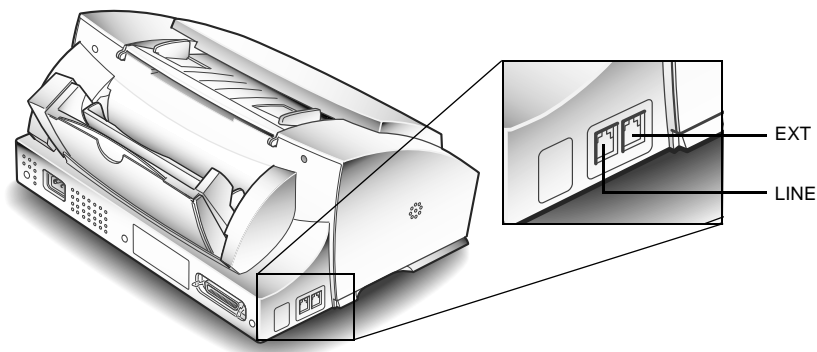
- Using your WorkCentre as a stand-alone fax machine without a PC.
- Connecting the WorkCentre to a PC and extension telephone (the most common).
- Connecting the WorkCentre to a PC, extension telephone, and answering machine.
- Connecting the WorkCentre to a PC with a fax/data modem, and extension telephone.
- Connecting the WorkCentre to a PC with a fax/data modem, answering machine, and extension telephone.
- Connecting the WorkCentre to a PC with a fax/data modem with voice mail capabilities, and extension telephone.

All of the above configurations are connected to a single telephone line.

The WorkCentre Telephone Connectors

There are two telephone connectors on the side of the WorkCentre. They are:

- Line
- EXT



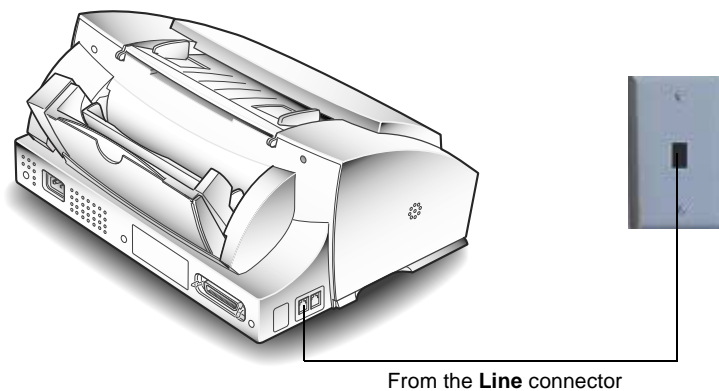
The **Line** connector is always used as a direct connection from your WorkCentre to your telephone wall outlet.

EXT is used for other accessories, such as an answering machine, extension telephone, and PC fax/data modem.

The rest of this guide shows how to connect these accessories to the WorkCentre using a single telephone line, and explains the WorkCentre settings you may use.

You're using your WorkCentre as a stand-alone fax machine without a PC

This is the simplest of all configurations. Plug one end of a telephone cable into the WorkCentre's **Line** connector, and the other end into the wall outlet.



The WorkCentre is set up at the factory to automatically answer an incoming call. If you do not want the WorkCentre to answer the phone, set the **Receive mode** to **TEL**. At the control panel, press the **Receive** button (until TEL displays).

Or, you may want to leave the **Receive mode** on **Fax**, but increase the number of rings before the WorkCentre answers the call. At the control panel, press the following keys:

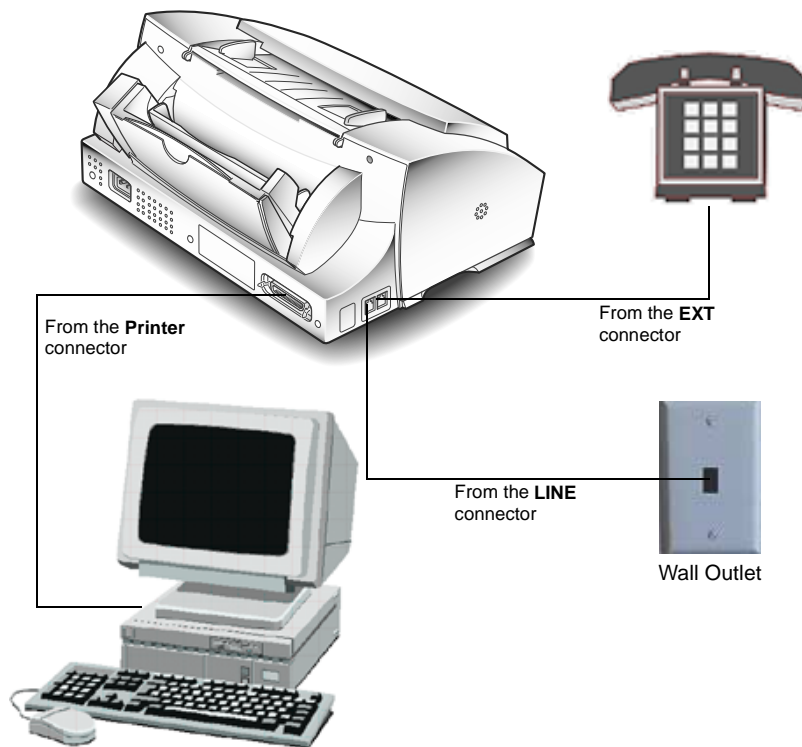
MENU, SYSTEM DATA, UP ARROW 7 TIMES (until ANSWER ON RINGS displays)

Next, enter the number of times the telephone will ring before the WorkCentre answers the call (1 - 7), and press the STOP button.

You can connect an extension telephone to **EXT** on the WorkCentre.

You're connecting the WorkCentre with the following:

- PC (without a fax/data modem)
- extension telephone



This is probably the most common configuration. Plug one end of a telephone cable into the WorkCentre's **Line** connector, and the other end into the wall outlet. Plug the extension telephone into the **EXT** connector. The PC printer port is connected to the WorkCentre's printer port with the Xerox supplied printer cable.

The WorkCentre is set up at the factory to automatically answer an incoming call. If you do not want the WorkCentre to answer the phone, set the **Receive mode** to **TEL**. At the control panel, press the **Receive** button (until TEL displays).

Or, you may want to leave the **Receive mode** on **Fax**, but increase the number of rings before the WorkCentre answers the call. At the control panel, press the following keys:

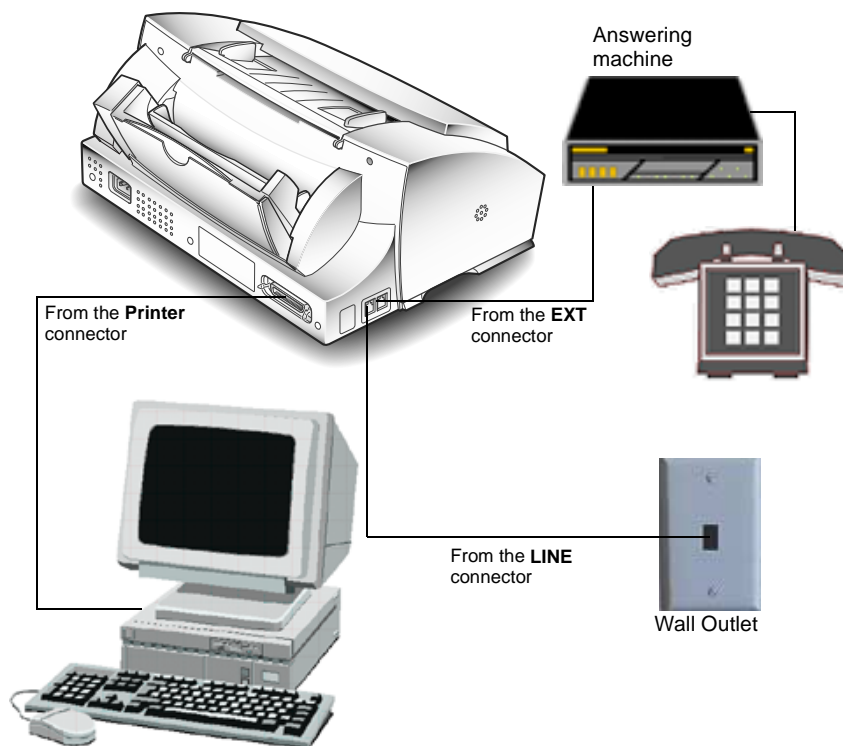
MENU, SYSTEM DATA, UP ARROW 7 TIMES (until ANSWER ON RINGS displays)

Next, enter the number of times the telephone will ring before the WorkCentre answers the call (1 - 7), and press the STOP button.

Connect an extension telephone to the EXT connector on the WorkCentre.

You're connecting the WorkCentre with the following:

- PC (without a fax/data modem)
- extension telephone
- answering machine



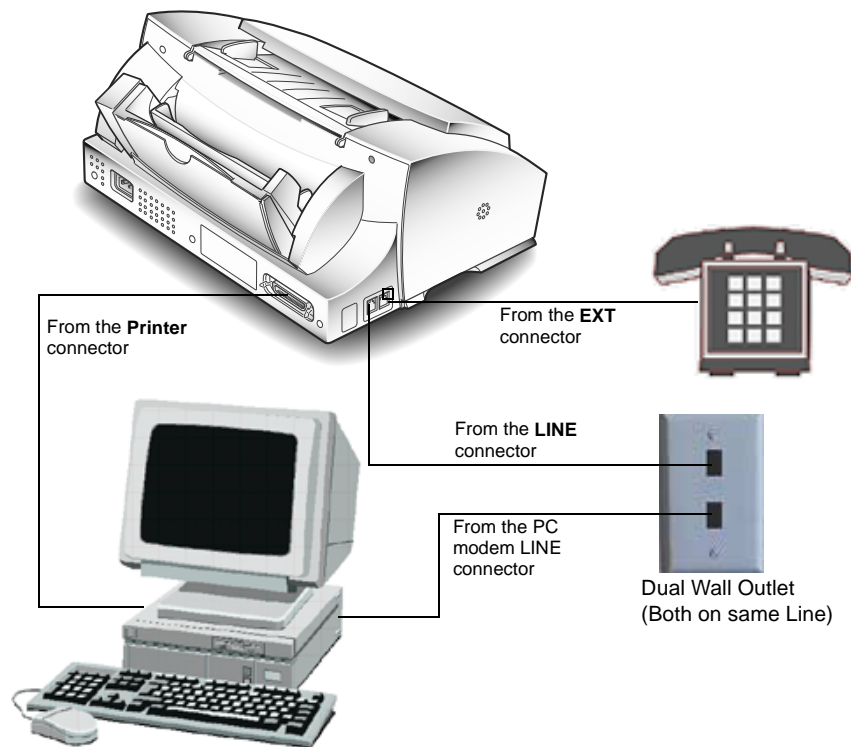
In this configuration, you probably want the answering machine to answer incoming calls, but have the WorkCentre take over if the incoming call is a fax.

Plug one end of a telephone cable into the WorkCentre's **Line** connector, and the other end into the wall outlet. Plug the answering machine **Line** into the **EXT connector**, and plug the extension telephone into the answering machine. The PC printer port is connected to the WorkCentre's printer port with the Xerox supplied printer cable

Set the WorkCentre's **Receive mode** to **ANS/FAX**. At the control panel, press the **Receive** button (until ANS/FAX displays).

You're connecting the WorkCentre with the following:

- PC with a fax/data modem
- extension telephone



In this configuration, you may have two fax machines; the WorkCentre and your PC fax/data modem.

Plug one end of a telephone cable into the WorkCentre's **Line** connector, and the other end into the wall outlet. Also, plug the PC fax/data modem **Line** into the wall outlet. Plug the extension telephone into the **EXT** connector. The PC printer port is connected to the WorkCentre's printer port with the Xerox supplied printer cable.

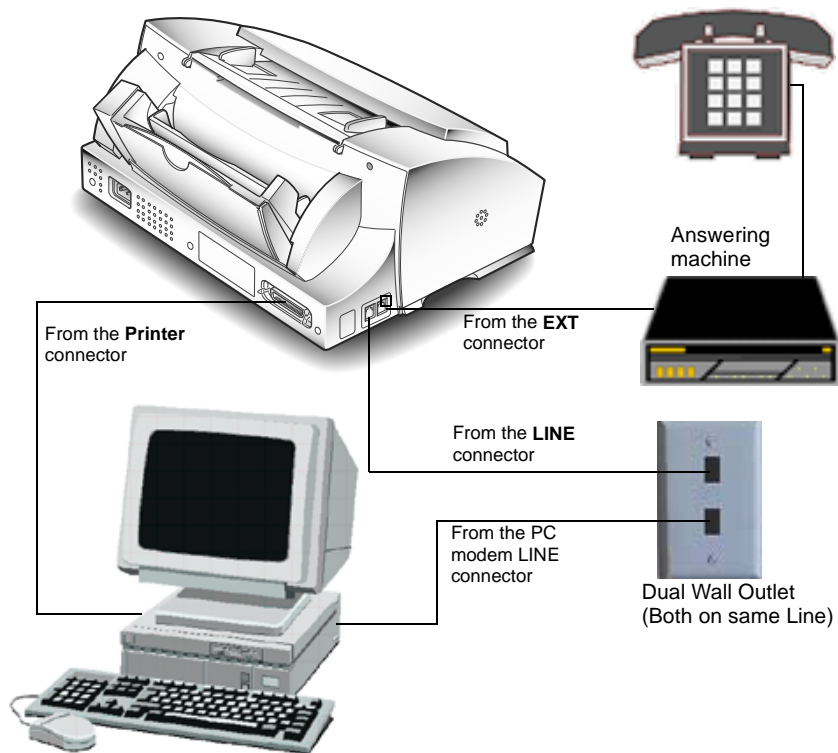
If both units are set to *automatically* answer an incoming call, the machine set to answer the call in the *fewest* number of rings will receive the incoming fax. The WorkCentre is set at the factory to automatically answer incoming calls in 1 ring.

If you do not want the WorkCentre to answer the phone, set the **Receive mode** to **TEL**. At the control panel, press the **Receive** button (until TEL displays).

Consult your PC fax/data modem documentation to determine how to set answer mode options.

You're connecting the WorkCentre with the following:

- PC with a fax/data modem
- extension telephone
- answering machine



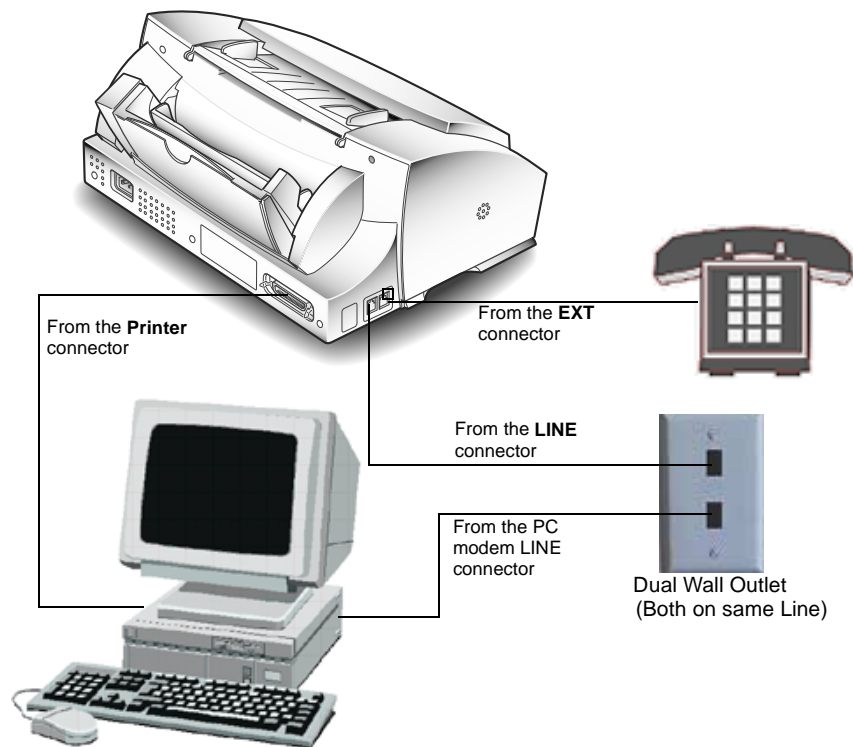
In this configuration, you have two fax machines; the WorkCentre and your PC fax/data modem. In addition, you have an answering machine connected to the WorkCentre.

Plug one end of a telephone cable into the WorkCentre's **Line** connector, and the other end into the wall outlet. Also, plug the PC fax/data modem **Line** into the wall outlet. Plug the answering machine into the **EXT** connector on the WorkCentre and the external telephone into the **Line out** connector of the answering machine. The PC printer port is connected to the WorkCentre's printer port with the Xerox supplied printer cable.

The answering machine will answer incoming calls, but the WorkCentre will take over if the incoming call is a fax. Set the WorkCentre's **Receive mode** to **ANS/FAX**. At the control panel, press the **Receive** button (until ANS/FAX displays).

You're connecting the WorkCentre with the following:

- PC with a fax/data modem that has voice mail capabilities
- extension telephone



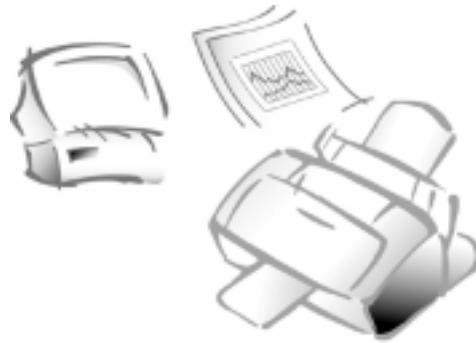
In this configuration, you have two fax machines; the WorkCentre and your PC fax/data modem. In addition, the PC fax/data modem can be used for voice mail (answering machine).

Plug one end of a telephone cable into the WorkCentre's **Line** connector, and the other end into the wall outlet. Also, plug the PC fax/data modem **Line** into the wall outlet. Plug the extension telephone into the **EXT** connector. The PC printer port is connected to the WorkCentre's printer port with the Xerox supplied printer cable.

You should use the PC fax/data/voice mail to answer incoming calls and receive faxes. Use the WorkCentre to send hard copy faxes and print.

At the WorkCentre, set the **Receive mode** to **TEL**. At the control panel, press the **Receive** button (until TEL displays).

Consult your PC fax/data modem documentation for answer mode and other settings.



Chapter 10

Glossary

10

Glossary of Terms and Definitions

The following terms and definitions pertain to the Xerox WorkCentre 480cx.

Term	Definition
ANS/FAX Mode	To use this mode, you must have an answering machine attached to the EXT jack on the back of the machine. In ANS/FAX mode, the machine automatically answers the phone call. If the machine detects a fax signal, it will receive that fax. If a fax signal is not detected, the machine will send the call to the answering machine. For this function, the LCD display on the control panel shows ANS/FAX.
Automatic Paper Feeder	You can stack up to 100 sheets of plain paper or up to 10 envelopes or other special media in this feeder. It will automatically feed the loaded media one at a time.

Centronics	This refers to the type of printer cable needed for this machine. It is called a Centronics parallel interface cable that supports bi-directional communications (IEEE standard 1284) between your machine and your PC.
Contrast	This refers to the difference or contrast between light and dark areas of an image. There is a Contrast button on the control panel, to increase or decrease image contrast on printed sheets.
Dial Mode	You can select the type of phone line service for your machine: Dial or pulse mode.
Document Scanner	The Document Scanner is a device in your machine that scans your document for the purpose of copying or faxing that document.
Document Exit Tray	The Document Exit Tray fits into the slots on the front of your machine, just above the Printer Exit Tray. The Document Exit Tray holds those sheets scanned for fax purposes.
Document Guides	Also called paper guides. These guides can be adjusted to the width of the paper medium There are two pairs of guides: one for the Automatic Paper Feeder and one for the Manual Paper Feeder.

Document Tray	The Document Tray fits into the slots in the top of your machine. It holds those documents that will be scanned for fax or copy purposes.
dpi	Dots per inch abbreviation. A unit of measure indicating the resolution of the image. The greater the dpi value, the higher the resolution of the image. There is a Resolution button on the control panel.
DRPD	Distinctive Ring Pattern Detection abbreviation. This is a telephone company service that lets you use a single phone line to answer several different phone numbers.
Dual job	Your machine can perform more than one function at the same time. For example, you can print a PC document while sending a fax, or store a fax for later transmission while printing an incoming fax.
ECM MODE	This refers to Error Correction Mode, and lets you compensate for poor phone line quality and ensures accurate, error-free transmission. When ECM Mode is enabled, transmission time may increase.
EXT Jack	This is a jack on the back of the machine where you can plug a phone set or answering machine.

FAX Mode	In FAX Mode, the machine automatically answers the call to receive a fax. For this function, the LCD display on the control panel shows FAX.
FCC	Federal Communications Commission. This a branch of the United States Federal Government that establishes laws and standards for any machines involving communications. There is an FCC Registration number on your machine's Xerox label, located on the back of the machine.
Flash	Pressing this button on the control panel performs the equivalent of a switch-hook. This is useful when you have call waiting, and want to put the first caller on hold to take the second call. If you do not have call waiting, pressing the Flash button could disconnect your call.
Forced Memory	When this feature is turned on, all documents will be automatically scanned into memory before transmission. This eliminates the waiting time between faxes.
Home Contrast	This term is the same as default contrast mode, and is used whenever a document is sent or copied. You can override this default mode.

Home Resolution	This term is the same as default resolution mode, and it is used whenever a document is sent or copied. You can override this default mode.
IC	Industry Canada. This refers to IC labels that identify equipment certified in Canada.
ips	Inches per second.
Landscape	Landscape orientation on the printed page refers to the image horizontal dimension being longer than the vertical dimension.
LCD	Liquid Crystal Display. The LCD on your machine is located near the top edge of the control panel. This LCD is used to display all menu items and error messages.
LPT1	Line Printer 1. Most PCs have a single parallel port that is connected to the printer with a Centronics cable. Some PCs have a second parallel port called LPT2.

MB	Megabyte. A measure of memory storage capacity.
mm	Millimeter. A unit of length.
MMDDYYYY	This expression refers to MonthDayYear in an eight digit format.
One-touch buttons	This is a set of 20 buttons found on the left front of the machine's control panel. Each button can be set up to automatically speed dial a phone number or a group of phone numbers.
One-touch Label	This is a removable paper label that is positioned over the one-touch buttons on the left front of the machine's control panel.
OS	Operating System. Windows 95 is an Operating System.
Parallel interface port	This refers to the printer port found on the back of your machine. The Centronics printer cable plugs into this port.

Portrait	A printing term specifying that the long axis of the printed page is vertically oriented.
Power Saving	This feature lets you reduce machine power when the printer is idle. You can change the length of time the printer waits after a job is printed before power is reduced.
Printer Driver	The Printer Driver is software that you load into your PC that enables your PC to print a document from its PC application to your printer.
Printer Exit Tray	This tray fits into the bottom front of your machine, and holds the printed sheets as they exit from the machine. This tray has an extender flap for longer sheets.
RAM	Random Access Memory. All PCs need RAM to execute programs.

Redial	When you press the Redial button, the machine automatically begins to send the document that is loaded in the document tray, using the phone number previously dialed.
Redial Interval	This refers to the period of time before an automatic redial occurs.
Redial Try	This refers to the number of redials the machine will attempt before giving up.
REN	Ringer Equivalence Number. This number can be found on the label located on the back of your machine.
Resolution	<i>see</i> DPI.
Ringer volume	You can adjust the machine's ringer to the desired volume.
RTI	Receive Terminal Identification. This feature automatically prints the page number, the date, and the time of reception on each page of a received fax.

RX Reduction	When your machine receives a document that is longer than the paper loaded in your machine, the machine can reduce the data in the document to fit into your loaded paper size. Options also include Horizontal Reduction (reduce data in size) and Discard Size (discard excess image at the bottom).
Select language	You can select the LCD display language from English, German, French, Italian or Spanish.
Sound control	You can choose if an alarm to sounds when an error occurs in the machine.
System ID	The System ID consists of your telephone number (up to 20 digits and pauses) and name (up to 20 characters).
System reports	Your machine can print many different system reports including: Help List, Message Confirmation Report, Schedule Information List, Telephone Number List, System Data List, Transmission or Reception Journal, Multi-Communication Report, Call Back Message, and Power Failure Report.
TEL LINE	This is a jack on the back of your machine into which you plug the telephone line cord for all phone-related purposes.

TEL Mode

In TEL Mode, your machine is set for you to manually answer any call. If you hear a fax signal, you then press the Start button and hang up the handset of the external phone to begin receiving the fax. For this function, the LCD display on the control panel shows TEL.

TEL/FAX Mode

In TEL/FAX mode, the machine automatically answers the call. If the machine detects a fax signal, it will receive that fax. If a fax signal is not detected, the machine will give another ringing tone to tell you it is a phone call. For this function, the LCD display on the control panel shows TEL/FAX.

Xerox label

This is the machine label found on the back of your machine. It contains such items as the Federal Communications Commission Registration number, the Ringer Equivalence Number and the machine's serial number.

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