
Chapter Four. The Model Twenty-Five Scanner.

Overview of Chapter Four.

This chapter provides a physical description and setup instructions for the Model Twenty-Five scanner, including the optional automatic document feeder.

This chapter is divided into five sections as follows:

- Section One. Features of the Model Twenty-Five Scanner.
- Section Two. Physical Description of the Model Twenty-Five.
- Section Three. Setting Up the Model Twenty-Five.
- Section Four. Installing the Automatic Document Feeder.
- Section Five. Maintenance and Safety Tips.

End of Overview of Chapter Four.

Chapter Four. Section One.
Features of the Model Twenty-Five Scanner.

The Xerox/Kurzweil Model Twenty-Five is a flatbed scanner capable of scanning at resolutions of up to three-hundred-fifty dots per inch. Pages to be scanned with the Model Twenty-Five can be loaded into the scanner manually one page at a time, or in stacks of up to thirty pages each with the optional automatic document feeder.

Documents that you place manually on the scanner can be up to eight-and-one-half inches wide by eleven inches long. Please note that all pages to be scanned, whether loaded manually or with the document feeder, must have outside margins of at least one-quarter inch.

If you are using the automatic document feeder, page sizes can be anywhere from seven inches to eight-and-one-half inches wide, and from five inches to fourteen inches long.

Some pages that are too short for the document feeder in vertical (portrait) orientation can be turned sideways and loaded into the feeder in horizontal (landscape) orientation. The maximum size for pages in landscape orientation is fourteen inches wide by eight-and-one-half inches long.

The Model Twenty-Five does not recognize the colors yellow and light blue. Therefore, any yellow, light blue, or green marks on the page are ignored in the scanning process.

End of Chapter Four, Section One.

Chapter Four. Section Two. Physical Description of the Model Twenty-Five Scanner.

Dimensions.

The Model Twenty-Five scanner by itself is a rectangular unit, roughly the size of a large briefcase laid flat. Looking at it from the front, the Model Twenty-Five is fifteen inches wide, by twenty inches deep, by six inches high. The shipping weight for the scanner is twenty-three pounds.

The optional automatic document feeder adds approximately two-and-one-half inches to the overall height of the Model Twenty-Five. The shipping weight for the feeder alone is ten pounds.

The Model Twenty-Five is shipped with one six foot long, three-prong power cord, one six foot long, twenty-pin Xerox/Centronics interface cable, and a spare one-hundred-twenty-five Volt, three Amp fuse. The unit is shipped with one fuse already installed, and the spare fuse is in a small plastic bag taped to the power cord.

Location of Parts and Switches.

What is Front and What is Back?

The top front edge of the Model Twenty-Five is beveled, whereas the side and back edges are square. On the right side of the beveled face there is a square membrane covered switch. When you are looking at the unit from the front, there is a row of vertical ventilation slots along the top of the right side.

The back face of the Model Twenty-Five has two equally sized cut-out sections on the bottom edge. There is a square cut-out section that houses the three-prong power cord receptacle near the lower left corner. In the center of the rear face there are three cut-out sections arranged vertically. The topmost cut-out provides an opening in which you can grasp and remove the scanner cover. The middle cut-out is oval shaped and contains the automatic document feeder receptacle. The bottom cut-out is rectangular and contains the Xerox/Centronics interface receptacle. These parts are discussed in more detail below.

Automatic Document Feeder.

The optional automatic document feeder for the Model Twenty-Five scanner has three primary parts:

The first and most complex part, located rearmost on the feeder, is the platen and motor housing. This housing is a rectangular box, eleven inches wide, by five-and-one-half inches deep, by two-and-one-half inches high, and is attached by a hinge along its bottom rear edge to the top back edge of the scanner unit. The housing contains the platen and motor assembly for transporting the pages to be scanned past the scanner bar. Additionally, the platen and motor housing has a flat metal lid, hinged along its top back edge, which can be opened to remove jammed paper from the platen. To open the paper-jam lid, feel for a slot-shaped opening spanning the width of the housing just beneath the top front edge. Grasp the lid at this slot and lift to open. The paper-jam lid locks open when it is perpendicular to the housing. To close the lid again, feel for a small metal tab, roughly three-eighths of an inch square, attached to the left side of the lid hinge on the inside of the housing. To unlock and close the paper-jam lid, lift this metal tab up.

The second part of the feeder is the scanner glass cover. The scanner glass cover for the feeder replaces the original scanner glass cover that came with your scanner. The cover is simply a flat plastic panel, eleven inches square, and is rigidly attached along its back edge to the bottom front edge of the platen and motor housing. Document pages are ejected onto the top face of the scanner glass cover after they have been scanned. To facilitate guiding pages out of the platen and motor housing, there are five vertical ridges, molded into the top face of the scanner glass cover and spanning seven inches from front to back.

The third and topmost part of the feeder is the paper tray, which is where you load your stacks of paper for scanning. The paper tray is simply a flat plastic panel, eleven inches wide by nine-and-three quarter inches deep. It is attached by a hinge along its back edge to the middle of the front face of the platen and motor housing. Molded into the top of the paper tray are two vertical-standing paper guides, spanning three-and-one-half inches from front to back. The left paper guide is fixed in position, and the right paper guide is adjustable to accommodate different paper sizes.

Automatic Document Feeder Receptacle.

The automatic document feeder receptacle receives the female end of the fifteen-pin document feeder interface cable, the other end of which is permanently attached to the automatic document feeder.

Looking at the Model Twenty-Five from the back, the automatic document feeder receptacle is in the three-inch wide by three-quarter inch high oval cut-out section that is almost precisely in the center of the back face of the unit. The receptacle is bordered on two sides by screw-down posts. Note that this receptacle is directly above the receptacle for the PC/Scanner interface cable.

Brightness Setting Switch.

The brightness setting switch is not used by PC/KPR. Some other software programs use the brightness setting switch to change the exposure at which documents are scanned, but with PC/KPR, all brightness settings are controlled through the PC/KPR software.

The brightness setting switch is the square, membrane covered button on the right side of the front beveled face on the unit.

Fuse Receptacle.

The fuse receptacle holds the Model Twenty-Five's single one-hundred-twenty-five volt, three Amp fuse.

Looking at the Model Twenty-Five from the back, the fuse receptacle is the rectangular, one inch by three-eighths inch plastic panel on the left corner of the back face of the unit, just above the power cord receptacle.

You can pry open the fuse receptacle by inserting a small flat-head screwdriver or similar tool in the notch in the center of the bottom edge on the plastic panel. The fuse receptacle slides out like a drawer.

Caution.

You must turn the power to the scanner OFF and UNPLUG the power cable before attempting to open the fuse receptacle. Failure to do so could result in an electrical shock to you and damage to the system.

On/Off Switch.

The On/Off switch turns the power to the Model Twenty-Five on or off.

Looking at the Model Twenty-Five from the front, the On/Off rocker switch is located on the back lower corner of the right side. The axis of the rocker switch is oriented vertically, so that when the front of the rocker is depressed the unit is on, and when the back of the rocker is depressed the unit is off.

PC/Scanner Interface Receptacle.

The PC/Scanner interface receptacle receives the male end of the Xerox/Centronics interface cable that links the scanner to the PC/KPR co-processor board.

Looking at the Model Twenty-Five from the back, the PC/Scanner interface cable receptacle is the three inch by three-quarter inch rectangular cut-out section that is in the bottom center of the back face of the unit. The receptacle is bordered on two sides by wire cable clips. Note that this receptacle is directly below the receptacle for the automatic document feeder cable.

Power Cord Receptacle.

The three-prong power cord receptacle receives the female end of the power cord.

Looking at the Model Twenty-Five from the back, the power cord receptacle is located in the square cut-out section on the lower left corner of the back face of the unit.

Scanner Glass.

The scanner glass is the surface on which you place pages to scanned. The scanner glass is a rectangular plate of clear glass, fourteen inches deep by eight-and-three-quarter inches wide, and is located beneath the cover on the top surface of the Model Twenty-Five.

Spanning the width of the scanner glass, one-and-one-half inches forward from the back edge, is the page calibration bar. When you place documents on the scanner manually, you line up the top edge of your page against this calibration bar. When you are using the automatic document feeder, pages never touch the main portion of the glass, but are instead scanned behind the calibration bar, one line at a time. The area of the scanner glass behind the calibration bar is mounted in an oval cut-out section, slightly wider than the rest of the glass.

Scanner Glass Cover.

The scanner glass cover protects the scanner glass from damage, helps hold the documents being scanned, and increases scanning accuracy by blocking out extraneous light. The scanner glass cover sits flat on top of the scanner and is hinged along its back edge and across the middle. The front edge of the cover has a slight lip to facilitate opening.

The cover is attached to the scanner by two plastic tabs inserted into two vertical slots on the back edge of the unit. The cover can be completely removed by grasping the cover from the back hinge and lifting straight up. Please note that the scanner glass cover must be removed before installing the automatic document feeder.

The inside of the cover is lined with a soft plastic sheet backed with foam, which provides a background against which the scanner calibrates pages to be scanned. Try not to touch this plastic sheet.

End of Chapter Four, Section Two.

Chapter Four. Section Three. Setting Up the Model Twenty-Five Scanner.

The instructions in this section are written under the assumption that you have unpacked your scanner according to the unpacking instructions shipped with your system. Therefore, the scanner unit itself should already be removed from its shipping carton and sitting on your desk.

Important - Before You Continue.

Before continuing with the instructions in this section, the PC/KPR co-processor board must already be installed in your system. If the co-processor board is not yet installed, go back to Chapter Two for instructions on how install the board, or contact Xerox/Kurzweil customer support for more help.

To set up your Model Twenty-Five scanner for use, follow the steps listed below:

Step One. Remove the Shipping Tape.

There is a band of plastic tape that secures the scanner bar during shipping. You must remove this tape before using the scanner, or the unit could be damaged.

Looking at the scanner from the back, the shipping tape is a single three-eighths inch wide plastic strip running vertically near the right edge on the back face of the unit. The tape runs in a long loop around the scanner bar inside the scanner, and the two ends of the tape are adhered to the outside of the unit.

First peel off the two adhesive ends of the tape. Next grasp one end of the tape and pull. The tape should pull out of the scanner unit easily and entirely.

Step Two. Attach the PC/Scanner Interface Cable.

Remove the PC/Scanner interface cable from its plastic bag. Note that the interface cable is thicker than the power cord. The interface cable also has larger plug ends than the power cord.

One of the plug ends of the interface cable has two thumbscrews on it. This is the end that attaches to the interface port receptacle on the PC/KPR co-processor board in your computer. Note that this plug end has male pins which insert into the female receptacle on the co-processor board.

The other plug end of the interface cable is larger, and has a notch in each of the two thin sides around the plug opening. This is the end that attaches to the scanner.

The opening on the ends of both plugs are irregularly shaped, like flattened ovals, with one of the long edges of the oval slightly wider than the opposite parallel long edge. For the geometrically inclined, this shape can also be described as a trapezoid with rounded corners.

Orient the plug on the scanner end of the cable so that the widest edge of the plug opening is facing up. Insert this plug end into the PC/Scanner interface receptacle on the back face of the scanner. Looking at the Model Twenty-Five from the back, the PC/Scanner interface cable receptacle is the three inch by three-quarter inch rectangular cut-out section that is in the bottom center of the back face of the unit. The receptacle is bordered on two sides by wire cable clips. Note that this receptacle is directly below the receptacle for the automatic document feeder cable. After you have inserted the plug, secure it to the scanner by snapping the wire clips on both sides of the receptacle into the notches on the plug end.

Next insert the other plug end into the receptacle on the co-processor board in your computer. Depending on the computer you are using, the orientation of this plug end may vary. Looking at a standard IBM computer from the back, orient the plug vertically, with the widest edge of the plug opening facing towards the right. The plug should insert into the receptacle easily - do not force it. If the plug does not seem to be inserting, try turning it so that the widest edge of the plug opening is facing the other side. After you have inserted the plug, secure to the computer by tightening down the two thumbscrews.

Step Three. Position the Scanner on Your Desk.

Find a comfortable place for your scanner. Avoid placing the scanner near heat or other air-conditioning sources. Do not place the scanner in direct sunlight or near an open window, or any other place where there is the potential for a lot of moisture. Note that the scanner works best when placed on a level surface.

Step Four. Attach the Power Cord.

Remove the power cord from its plastic bag. Note that the power cord has a three-prong male plug at one end, and a three-hole female plug at the other. Note also that there is a spare fuse in a small plastic bag attached to the power cord. It is recommended that you leave the fuse attached to the power cord so that you know where it is in case you need it.

Plug the female end of the power cord into the power cord receptacle on the back of the scanner. Looking at the Model Twenty-Five from the back, the power cord receptacle is located in the square cut-out section on the lower left corner of the back face of the unit.

Insert the male end of the power cord into a grounded three-prong outlet. Try to avoid using an extension cord. Do not attempt to insert the plug in a two hole outlet with a three-prong to two-prong adapter.

Step Five. Remove the Foam Sheet from the Scanner Glass.

The Model Twenty-Five scanner is shipped with a protective sheet of foam covering the scanner glass. This sheet of foam is not attached to the scanner in any way, and is instead merely held against the glass by the scanner glass cover.

Lift the scanner glass cover and remove the foam sheet. Set the foam sheet aside with the other packing materials.

The scanner is now ready for use.

End of Chapter Four, Section Three.

Chapter Four. Section Four.
Unpacking and Installing the Automatic Document Feeder.

Note: If you have already installed PC/KPR software on your system without the automatic document feeder, you will need to run the software installation program again after completing the installation steps in this section. If you do not run the software installation program again after installing the feeder, PC/KPR will not recognize that the feeder is attached.

Caution:

Before starting to install the automatic document feeder for the Model Twenty-Five scanner, be sure that the scanner is turned OFF and that the power cable is UNPLUGGED. Do not attempt to install the feeder without first unplugging the scanner power cable, or you could get an electrical shock as well as damage the hard-wired fuse in the scanner.

To install the feeder, follow the steps listed below:

Step One.

Unpack the Automatic Document Feeder.

The optional automatic document feeder for the Model Twenty-Five scanner is shipped in a box that measures twenty-three-and-one-half inches wide, by seventeen-and-one-half inches deep, by nine inches high. The box is taped shut. Fitted tightly within this box is another box, which contains the document feeder. This box is not taped shut.

The automatic document feeder is in a plastic bag in the box, and is protected by two large styrofoam inserts on two sides.

Remove the feeder by grabbing beneath it and lifting it straight up out of the box. Do not lift the feeder by the styrofoam inserts. Remove the styrofoam inserts and take the feeder out of the plastic bag. Gently place the feeder on a table top or the floor.

Inside the plastic bag that the feeder was shipped in, you may or may not find a small square packet that feels like it is filled with tiny beads. This packet is filled with silica gel, which protects the feeder from moisture during shipping. If you do find this packet of silica gel, you should throw it away, because once the silica has absorbed moisture, it cannot be used again. Keep all the other packing materials in case you need to ship or return the feeder for any reason.

Step Two.
Remove the Scanner Glass Cover.

Before you can install the automatic document feeder, you must remove the scanner glass cover from the scanner.

The scanner glass cover is attached to the scanner by two plastic tabs inserted into two vertical slots on the back edge of the unit. There is a cut-out section on the top back edge of the scanner that allows you to get your hand under the cover's back hinge. Remove the cover completely by grasping it from the back hinge and lifting straight up.

To protect the scanner glass during this installation procedure, cover the glass with a piece of paper or cloth, or if you still have it, the piece of foam sheet that was originally shipped with the scanner.

Step Three.
Remove the Mounting Screws for the Feeder.

There are two slotted thumbscrews on the top face of the scanner near the back edge. When you are using the scanner without an automatic document feeder installed, these thumbscrews have no purpose. However, when you install the feeder, these thumbscrews are used to secure the feeder to the scanner.

Remove the thumbscrews and set them aside for the moment.

Step Four.
Prepare the Feeder for Installation.

With both hands, hold the feeder by the long sides so that the heavier end of the feeder is facing away from you. Turn it so that the thin plastic, foam-backed sheet on the feeder is facing down, and the hard plastic paper guides are on top.

Place the feeder on the scanner glass so that the heavy end of the feeder is near to, but not extending over, the back of the scanner, and so that the thin foam-backed plastic sheet is facing down against the scanner glass. Please note that, in this step, the back end of the feeder should not extend out past the rear edge of the scanner unit.

The interface cable that links the feeder to the scanner is hard-wired into the back of the feeder. Extend this cable so it trails off the back of the scanner unit.

Step Five.
Attach the Document Feeder to the Scanner.

On the bottom rear edge of the feeder, spanning the width, there is a long metal mounting bracket, which attaches the feeder to the scanner unit. This mounting bracket is formed from a ten-and-one quarter inch by one-and-one-quarter inch rectangular plate, with a five-eighths inch deep flat metal lip extending out at a right angle. The mounting bracket is attached to the feeder by a spring hinge, which supports the feeder in the open position.

There are six holes and a one-half inch long peg in the rectangular plate on the mounting bracket. You are only concerned with two of these holes. Specifically, with the feeder positioned on the scanner as instructed above, there is an oval hole on the extreme right side of the rectangular plate, just next to a smaller round hole. Near the left end of the rectangular plate, just to the right of the half-inch peg, there is another round hole. This round hole and the oval hole are the two you are interested in.

There are two small pegs on top of the scanner unit near the back, to the left and right sides respectively of the left and right thumbscrew holes. The left peg is closer to the left thumbscrew hole than the right peg is to the right thumbscrew hole.

Place your hands on the rectangular plate on the mounting bracket so that you can feel the oval hole with your right hand and the round hole with your left. Position the feeder so that you can feel the two pegs on the top of the scanner in close proximity to the oval and round holes.

Tilt up the feeder just as you would the normal scanner glass cover - that is, as if the feeder was attached to the scanner and hinged at the back. Carefully position the mounting bracket until you feel the oval and round holes drop over the pegs on the scanner top.

Feel to make sure that there is a peg coming through the oval hole on the right side, and through the round hole on the left side of the mounting bracket. It is possible to accidentally position the bracket one set of holes off to the right, so that the pegs are inserted through the wrong holes. The thing that assures you that you have hit the correct holes is if you can feel a peg exposed through the oval hole.

Leave the feeder lifted up in the open position. The feeder will be fairly stable in this position, but you still must be careful not to knock it over.

Step Six.

Secure the Feeder to the Scanner with the Thumbscrews.

To secure the feeder to the scanner unit, reinsert the two thumbscrews you removed in Step Three, above. The two holes you originally removed the thumbscrews from are now lined up beneath two round holes in the rectangular plate on the feeder mounting bracket. The thumbscrews go through the two holes that are closest to the center of the rectangular plate. If the feeder is attached one set of holes off the the right, these thumbscrew holes will be blocked.

Tighten the thumbscrews securely and close the feeder.

Step Seven.
Connect the Feeder Interface Cable to the Scanner.

Caution:

Be sure that the scanner is turned OFF and that the scanner power cable is UNPLUGGED. Do not attempt to connect the feeder interface cable to the scanner without first unplugging the scanner power cable, or you could get an electrical shock as well as damage the hard-wired fuse in the scanner.

To connect the feeder interface cable, you must first locate the feeder interface cable receptacle on the back of the scanner.

The fifteen-pin feeder interface cable receptacle is located in the horizontal oval cut-out section, three inches long by five-eighths of an inch high, in the very center on the back of the scanner. The feeder interface receptacle is located directly above the larger PC/Scanner interface receptacle. Note that the receptacle you want here is a male socket with two screw posts, whereas the wrong receptacle is a female socket with two wire clips.

Plug the cable from the feeder into feeder interface cable receptacle on the scanner and tighten it down with the two thumbscrews that are attached to the cable end.

End of Chapter Four, Section Four.

Chapter Four. Section Five.
Maintenance and Safety Tips for the Model Twenty-Five Scanner.

Safety Tips.

Listed below are some general safety tips that should be observed when operating any electronic equipment.

One. Unplug Before Cleaning.

Unplug the scanner before you try to clean it. Do not use any abrasive or aerosol cleansers.

Two. Keep it Dry.

Avoid placing any liquids near the scanner. If the scanner does get wet, turn the power off immediately and let it dry thoroughly. If it is a sticky liquid that spilled, such as soda, it may be necessary to have the scanner serviced by Xerox/Kurzweil customer support.

Three. Maintain Stability.

Place the scanner on a smooth, level surface. If the unit is placed on an unstable cart, stand or table, it could fall, causing serious damage to the unit.

Four. Let it Breathe.

There are numerous ventilation slots and openings in the scanner and your computer cabinet. It is extremely important that these openings not be blocked or covered, otherwise the units could overheat, causing irreparable damage to the electronic components. Do not operate the unit on a bed, sofa, rug or other soft surface. Do not place the unit near heating outlets. Always leave room around the unit for air circulation and cooling.

Five. Do Not Be Shocked.

Plug the power cord into a grounded three-prong outlet only. If your outlets are the older two-prong type, it would be best if you contacted an electrician to replace them with the grounded three-prong type. If this is not practical, it is possible to use a three-prong to two-prong adapter, however this is not really a desirable alternative. If you do use a three-prong to two-prong adapter, be sure to use an adapter with a grounding tab, and to secure this tab properly to the electric socket.

Extension cords in general should be avoided. If you must use an extension cord, be sure it has a grounded three-prong plug. In no circumstances should you use more than one extension cord at a time. Make sure the connections to the extension cord and to the wall socket do not become loose.

Do not place anything on the power cords. Do not place them in a location where they are likely to be stepped upon, or where liquids could spill on them.

Six. Let Us Help.

Do not try to service the scanner yourself. Do not open or remove any covers unless instructed to do so by Xerox/Kurzweil customer support. Unplug the unit immediately and contact Xerox/Kurzweil customer support if any of the following circumstances occur:

If you hear a sound that obviously indicates something is wrong; for example a thumping noise in the scanner.

If the unit exhibits a distinct change in operating characteristics.

If any part of the unit feels extraordinarily hot.

If the unit has been dropped or damaged.

If the equipment indicates through an error message a need for servicing.

If the power cord is damaged or frayed.

Maintenance Tips.

Listed below are some tips that can help extend the trouble-free life of your scanner:

One. Keep it Clean.

Dust, fingerprints and other foreign material on the scanner glass can reduce recognition accuracy. Therefore, be sure to clean the glass frequently with a soft, dry cloth or lens tissue. Do not use facial tissues. You can safely use commercial glass cleaners on the glass, but be careful not to spray any of the cleaner inside the scanner through the ventilation slots.

If the scanner housing becomes dirty, clean it with a soft, damp cloth only. Do not use abrasives, detergents or household cleaners.

Two. Nothing Heavy, Nothing Sharp.

Do not place anything other than the material you are going to scan on the scanner glass. Do not pile books, papers or any heavy objects on top of the scanner glass cover. Be especially careful with pages that contain staples, as the scanner glass can be easily scratched. Where possible, remove any staples from the material you are going to scan.

Three. Do Not Strain.

Avoid putting strain on the scanner interface cable and power cord. Be sure to secure the interface cable plug ends to the scanner and your computer by tightening the thumbscrews or wire clips.

End of Chapter Four, Section Five.

End of Chapter Four.