



**PRINTFOLD®**

**(Synergix) Fold System 40  
&  
Model 2750  
ENGINEERING DOCUMENT FOLDER  
  
OPERATOR'S MANUAL**

Printfold Company, Inc. • 825 North Easton Road • Doylestown, PA 18901 • USA

Tel: 215-345-0800 or 800-DOC-FOLD Fax: 215-348-3031 E-mail: CUSTSVC@PRINTFOLD.COM

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**MODEL 2750**

**&**

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**WARNING**

The interlock system is designed to prevent access to components capable of causing injury. Do not try to defeat any interlock by taping or otherwise artificially holding it closed.

**WARNING**

Line voltage (115 or 230Vac) is present at exposed points on the accordion folder base frame (back of the power entry module, and at fuses on the power supply board). This applies whether or not the interlock circuit is intact. Access to these danger points is prevented by a plastic panel at the rear of the accordion folder, which must not be removed by other than a qualified service technician.

## Chapter 1

### INTRODUCTION

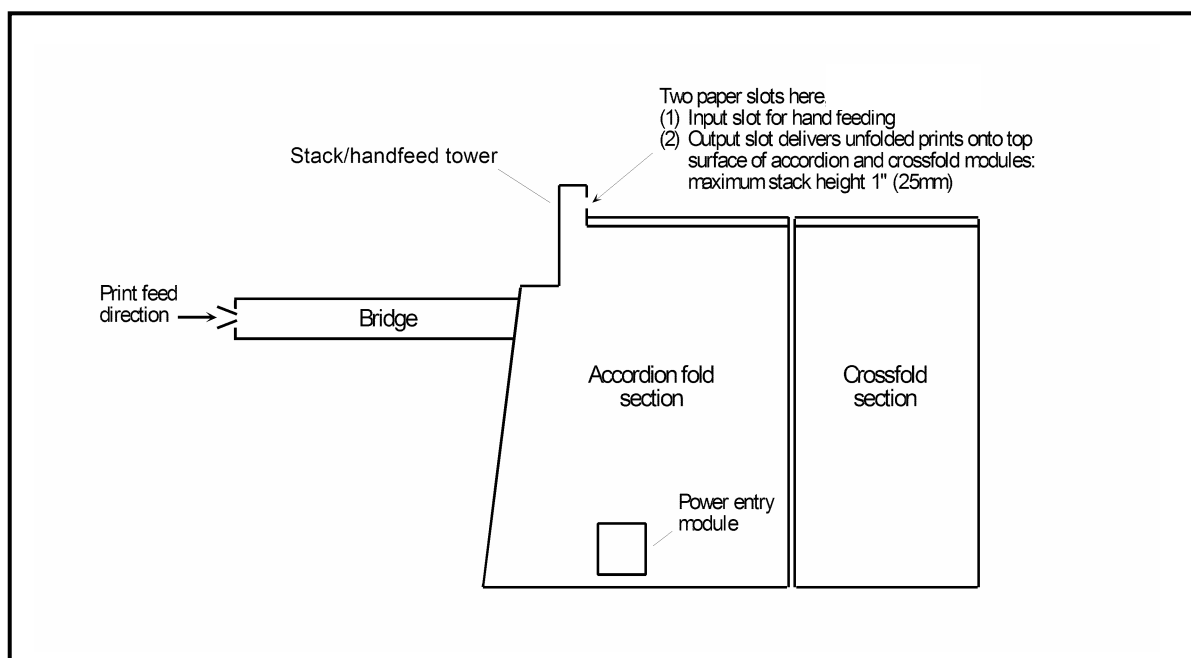
#### General information

There are four variants of the Printfold Model 2750 Folder, each accommodating a specific range of print speeds:

XES Model <b>2753</b>	Print speeds up to 5 ips (120 mm/s)
XES Model <b>2755</b>	Print speeds up to 6 ips (160 mm/s)
XES Model <b>2757</b>	Print speeds up to 8 ips (200 mm/s)
Synergix <b>Fold System 40</b>	Print speeds up to 10 ips (250 mm/s)

The Printfold 2750 Folder is self-programming, and fully automatic. It turns on automatically when a document exits the printer/copier, and turns off when the flow of prints ceases. There is no need to figure the fold pattern for each and every document, nor is it necessary to remember which packet types and sizes are possible with a given width of media. For example, with few exceptions, the folder can deliver an 8½" x 11" folded packet from any standard width of printer output from 11" through 36", including metric sizes.

Each print is measured as it enters the 2750 Folder, which then determines the appropriate number and style of folds to produce the desired packet. The folder accepts any mix of prints, in random order. All prints other than A-size are automatically folded into the selected format, then stacked with the title block "up and out" (except for Z-fold packets, which exit title block down).

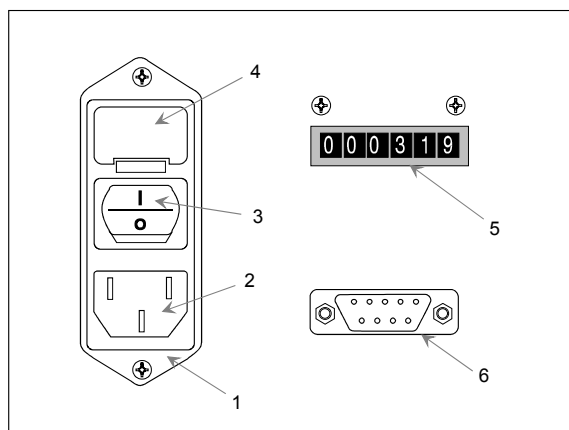


#### Main components of the Model 2750 Folder

The bridge is pivoted at the rear, allowing the in-feed to be adjusted in height to match most engineering printers and copiers. It can also be tilted vertically to allow service access to the back of the printer/copier.

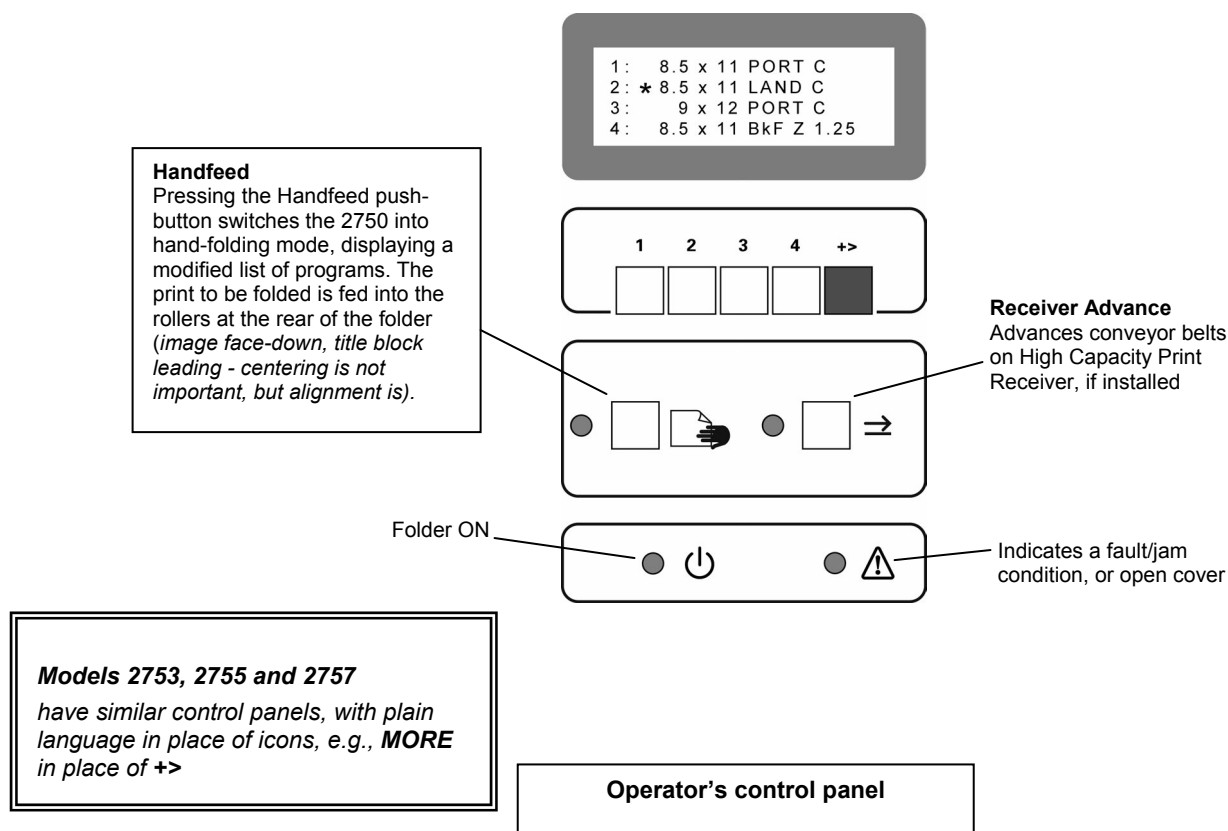
## Power entry module / counter / communications port

The power entry module, with on/off switch and main fuse block, is located at the base of the right accordion side panel. Adjacent to the power entry module are the print counter and communications port, diagram below. The communications port is a DB9 female type receptacle, configurable for an RS232 or RS422 link.



- 1 Power Entry Module
- 2 Line Cord Receptacle, for IEC-320 type line cord
- 3 On / Off Rocker Switch,  
I = On  
O = Off
- 4 Fuse Drawer, 3AG type fuse
- 5 Linear Feet Counter
- 6 Communications Port, type DB9-F

After initial power-up, or upon the closing of a door or lid, the folder motors operate for a few seconds, during which time the folder microprocessors perform diagnostic test and check for jam conditions. On completion of these tests, the folder returns to the standby condition, motors stopped. *(The folder automatically starts up when an incoming print is detected at the leading edge of the bridge.)*



## Main control panel

The main control panel is located on top of the tower section of the accordion unit. It comprises five push buttons for fold selection and service-related functions, a four-line x 20-character display, and additional push buttons controlling optional features that may or may not be installed. *All control functions other than fold selection are password protected to prevent accidental reprogramming by non-trained persons.*

In normal operations the folder will be connected to a host controller and the display will read **ONLINE**. Fold selections are made through the host controller. Additionally the host coordinates shut down and job recovery functions. If a fault occurs, or an interlock is opened (e.g., by removal of a cover panel), the display indicates the problem's location. Additionally, the technician may use the display to list machine settings, review recent error conditions, and to actuate various motors and solenoids for setup purposes.

When the folder is not connected to a host controller, the fold programs available to the operator are shown on the display in groups of four, the current selection being marked with an asterisk.

### Handfeed

Pressing the HANDFEED button on the control panel activates the off-line folding system, allowing prints to be fed by hand into lower set of rollers at the rear of the tower. When the off-line system is active, the control panel displays fold choices which may differ from those used in on-line folding.

*For hand feeding, the print must be image down, with short edge leading. Bookfolding is not possible with hand feeding.*

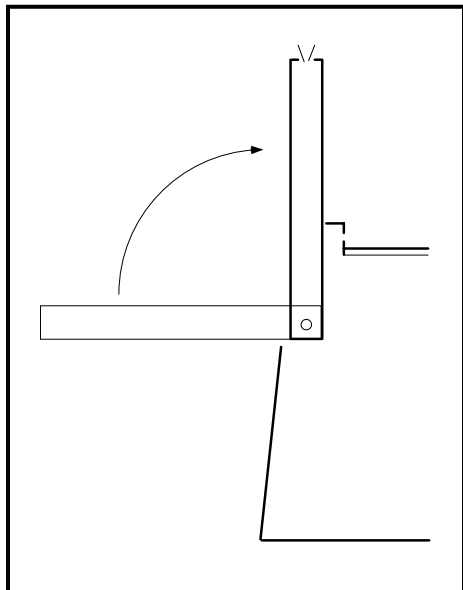
### Receiver Advance

Pressing the green RECEIVER ADVANCE button advances the High Capacity Print Receiver (optional, except on Fold System 40) for easy removal of the folded prints. Pressing this button also resets the Receiver full counter. *When the High Capacity Print Receiver is installed as an option the key cap is replaced with a green one.*

Note: The folder assumes that all sheets have been removed from the receiver after the button is pressed. This action resets a software "print counter" used to determine when the receiver reaches a full condition.

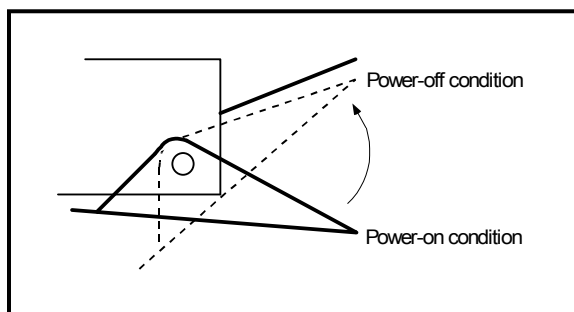
## Bridge

The bridge is the link between printer and folder. Its main functions are determining the media width on which the incoming document was printed, and providing the means for measuring length of the document. It also signals the in-feed system to accelerate once the document has left the printer, the purpose of this being to increase the separation between one document and the next. This allows the folder to accommodate high-speed printers with small inter-copy gaps.



### Instant service access

There is no need to set aside extra space for access to the printer. The bridge pivots to the upright position, clearing almost 3' (90cm) between printer and folder.

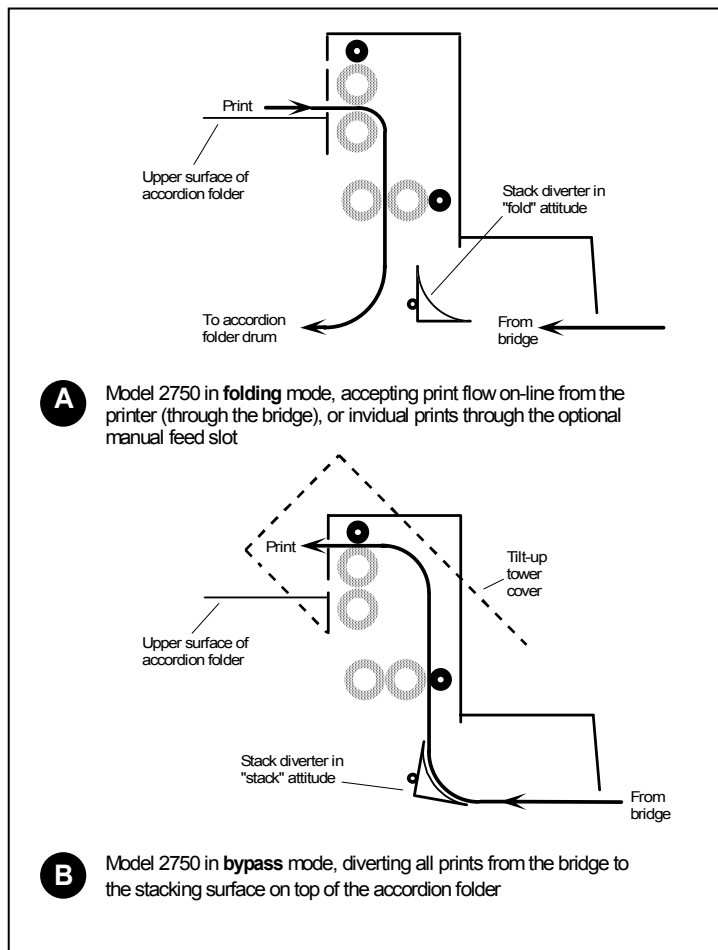


### Automatic document diversion

In the event of a paper jam or power failure, a solenoid-actuated diverter at the input end of the bridge swings to the upper position, diverting documents to the floor,

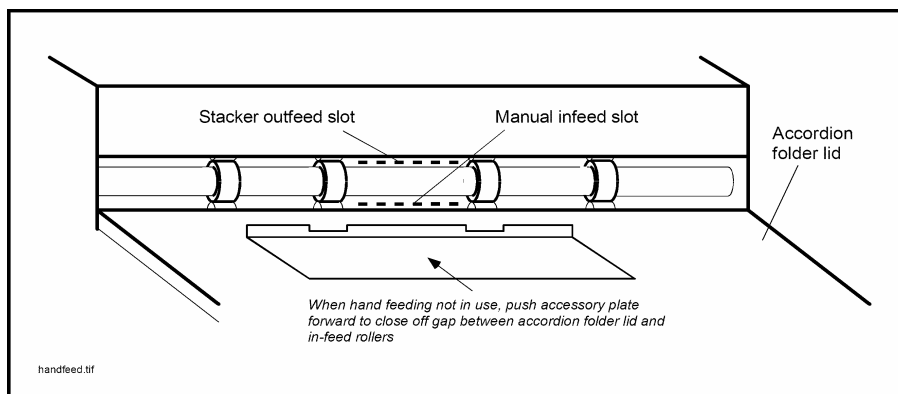
## Stacker/Handfeed

Pressing the **Handfeed** button on the control panel activates the off-line folding system, allowing prints to be fed by hand across the top of the accordion folder into the rollers at the rear of the tower, diagram next page. The tower also enables the flat-sheet **bypass**, or **stacking** function. This is selectable in the same way as a fold program on the control panel (press the button indicated for **Stack**). In the bypass mode, the stack diverter at the rear of the bridge is flipped down so that prints exiting the bridge flow through the tower instead of the accordion folder.



### Tower in normal (folding) and bypass modes

In (A) the underside of the stack diverter is horizontal, allowing prints to pass beneath to the accordion folder. In (B) the diverter is flipped down by solenoid action. Both the down-going (manual feed) and up-going paths may be accessed for jam clearance when the tower cover is tilted up as shown.

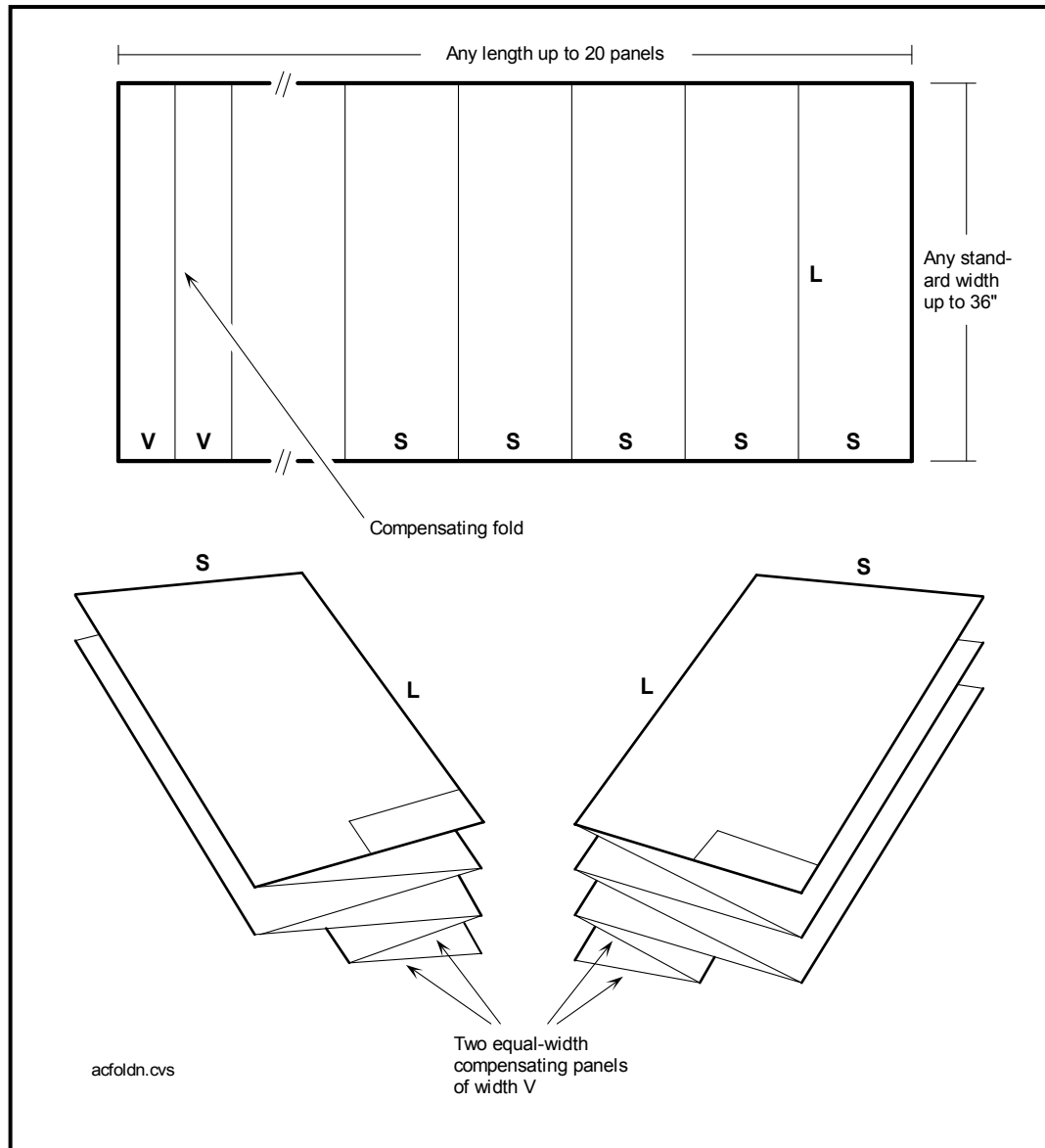


**The handfeed system** is operative when the push button on the control panel is IN and its adjacent LED shows a steady green. When a document is entered the light flashes. No further documents may be entered until the flashing stops.

## Accordion folding – overview

### Standard accordion fold

In the standard accordion fold, all panels other than the final compensating fold are of the same width. The final or compensating fold of the standard sequence is positioned to give two equal-width panels, always narrower than the preceding ones unless the document length is an exact multiple of the selected panel width. Typical panel width selections for non-bookfolded documents are 210mm, 8½", 9", 11", 297mm and 12" (bookfolds and custom packets require different panel widths).



### **Standard accordion fold packet**

Having measured the length of the incoming document, the folder system automatically performs a compensating fold at the end of the sequence. The two final panels in the standard accordion fold are of the same width, the width being dependant on the amount of length compensation necessary.

Note that the compensating panels may be aligned with either left or right edges of the packet, depending on the combination of the selected panel width (S) and the overall length of the document. They are



always narrower than the panel width unless the length of the document - as measured automatically by the bridge and in-feed system - happens to be an exact multiple of width S.

#### Bookfolds (accordion folding with binding edge)

For bookfolding, the accordion fold sequence is designed so that the left hand edge of the bottom panel extends to the left of the pack. The “binding margin” thus formed, typically 1” wide in the US, may be punched for filing in a binder. Other binding margin selections range from ½” and 2” in ¼” increments.

Printfold Folders provide two complete sets of bookfold programs, Type F and Type B, which differ in their treatment of short documents ranging from the minimum length of approximately 16” (400 mm) through 30” (760 mm). The exact limits depend on the bookfold packet width (usually 8½” in the US), and the binding margin selected. ***The two programs give identical results with longer documents.***

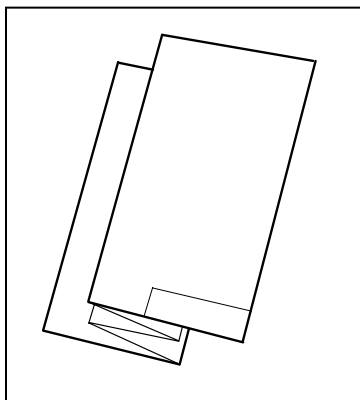
Unlike the standard accordion fold, the bookfold has compensating panels **inside** the pack. Depending on the length of the incoming print, there will be either two or four compensating panels as needed to deliver the correct direction of top and bottom panels (in all but a few special cases, the top panel points to the right and the binding panel to the left).

#### Bookfolds, Type F (Favor “F”ront)

In a Type F bookfold, priority is given to a full top panel measuring 8½” (US models) less the binding margin. The final, bottom-most panel extends to the left of the package to form the binding margin. However, the bottom panel may not necessarily be the full 8½” unless the document is of sufficient length. The top panel is always full width, usually 7½” in the US.

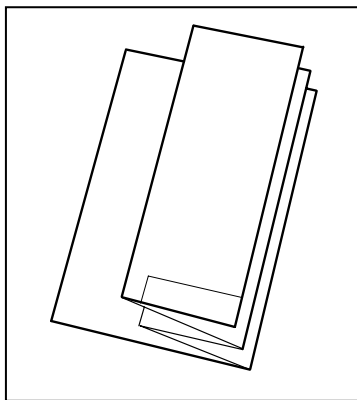
#### Bookfolds, Type B (Favor “B”ack)

In the Type B bookfold, priority is given to the final, bottom-most panel, which is always full-width (usually 8½” in the US). All other panels are narrower than the final, thus providing a binding edge. The top panel is a full panel less the binding margin, provided the document is of sufficient length for both the top and bottom panels to be full size.



##### **Type F bookfold packet**

The Type F bookfold gives priority to the top (front) panel.



##### **Type B bookfold packet**

The Type B bookfold gives priority to the bottom (back) panel.

## Crossfolding – overview

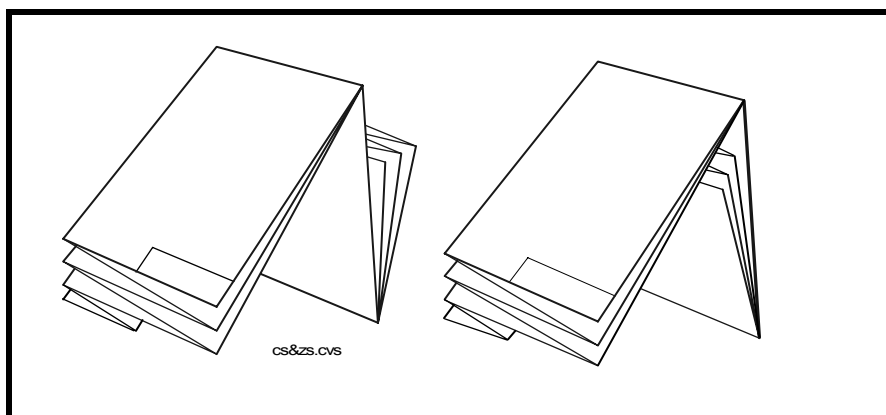
The accordion folded document is transferred to the crossfold section, which performs either one or two crossfolds depending on the media width (this being the longer dimension of the accordion fold). Crossfolded packets are delivered to a receiving tray at the side of the folder. The crossfold section may also be programmed from the operator's control panel to eject the accordion-folded document to the rear receiving tray without further folding – an automatic function for oversize drawings.

### Two packet orientations

Folded print packets come in two basic orientations, portrait and landscape. The portrait, vertical style is the more traditional, and is used almost exclusively in European and certain other non-US markets. Landscape, horizontal folding is increasingly popular, especially in the US, because the resulting packet is easier to file.

### Two fold styles

Printfold Folders are capable of folding portrait and landscape packets in either of two ways, Z-fold or C-fold, diagram below.



#### **C-folds handle easier than Z-folds**

C-fold packets can be filed with only one edge showing, and are therefore easier to sort through and retrieve. The Folder can be programmed for either Z- or C-folds, but some user surveys show a preference for the latter.

The Z-fold packet (otherwise known as a DIN-fold) is the more conventional, but it suffers from the disadvantage that it always has an outgoing flap of paper that snags on other documents. It can be awkward to retrieve from a file. Additionally, Z-folding is not possible with some document sizes and orientations.

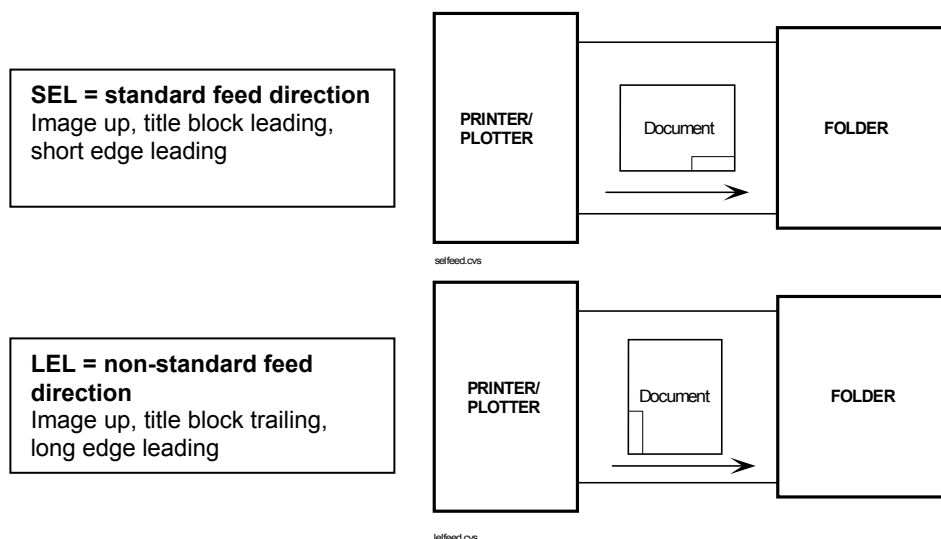
C-fold packets, a feature exclusive to Printfold folders, handle easier than Z-folds because they sit in the file with only one edge showing, and can therefore be sorted through much faster.

## Key facts about fold programs

- Orientation of the document as it enters the folder is important!
- The standard document feed orientation, **SEL**, is defined as “image up, title block leading, **Short Edge Leading**”.
- The “other” orientation, **LEL**, defined as “image up, title block trailing, **Long Edge Leading**”, is increasingly used in electronic printing installations having the ability to rotate images in software (unlike analog machines, in which the copy orientation is established by the original). This allows, for example, a D-size (22” x 34”) image to be printed on 34” wide media with a linear feed of only 22”, compared with the 34” feed necessary in the SEL orientation. LEL thus enables greater production rates. The downside of LEL, however, is in the restrictions it places on document folding programs.

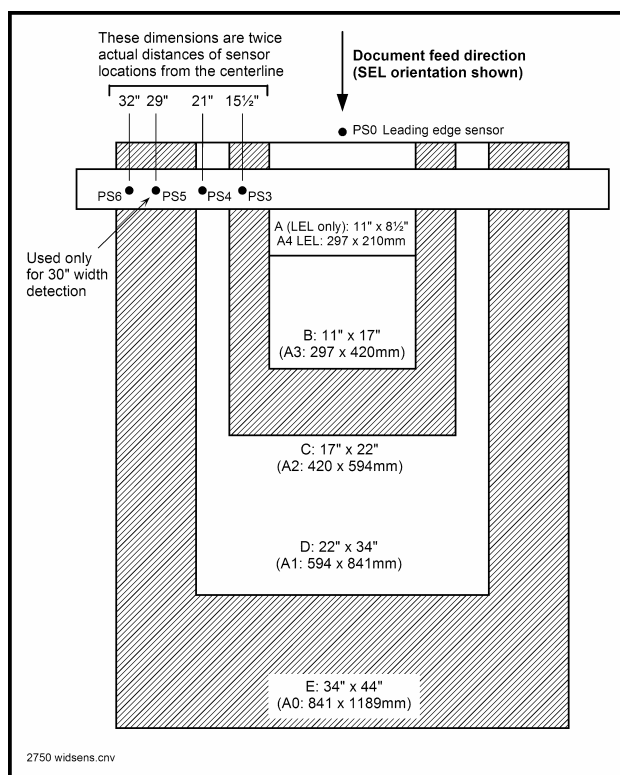
The words “Landscape” and “Portrait” are the key to understanding what happens in the folder.

*For SEL documents ... Landscape means wide accordion panels, Portrait means narrow accordion panels*  
*For LEL documents ... Landscape means narrow accordion panels, Portrait means wide accordion panels*



- The folder automatically determines orientation by first classifying media width, e.g., the D/A1 group from 22” to 24”, then measuring feed length from leading edge to trailing edge. For this example, if the feed length so measured is less than 19”, the document’s orientation is assumed to be LEL. (Standard prints whose long dimension fits the D/A1 media group have short dimensions of 17” = ANSI D, 420mm = A1, and 18” = Architectural D.). If the measured feed length exceeds 19”, the document is assumed to be SEL.
- Note that the width classifying system recognizes a media width as belonging to a particular group. It doesn’t measure it specifically. This is not an issue with SEL fold programs, which are highly flexible, and can deliver neatly folded packets from practically all combinations of length and width. LEL programs are less flexible, but are capable of equally neat folding provided the document size approximates a standard sheet in the dimensional group (ANSI, Architectural or Metric) for which the folder is programmed.
- No matter what media width, document size, or orientation, the accordion folder will pass documents without folding unless the feed length is 3¼” greater than the selected panel width for accordion folding (210mm, 8½”, 9”, 11”, 297mm or 12”).

- The accordion folder has a capacity of 20 panels of 20lb (75 gsm) bond, less with heavier media. With a panel width of 12", this allows a maximum foldable feed length of 240". Accordion folding ceases at panel number 20, and any trailing portion of the document is passed unfolded.
- The maximum number of panels of 20lb (75 gsm) bond that can be accordion folded and crossfolded is usually 12, corresponding to a document length of 144" with 12" panels.
- 
- The standard dimension of bookfolds is 8½" x 11" overall, with a 1" binding edge of 1". Other binding edge widths from ½" through 2" may be selected by the service technician.
- The maximum document length for bookfolding is 120" with 20lb (75 gsm) bond.



#### Width sensors at input end of bridge

Sensor status determines document width. For example, if sensor PS3 is activated and the others not, the width must be greater than 15½" and less than 21" (this implies 17", 18", or 420mm media widths). Note that the width classifying system is just that, no more. It recognizes a document as belonging to a particular group, but doesn't identify it specifically.

**Note:** When communications with a host is enabled the folder receives media width information directly from the controller overriding the bridge sensing system. If the printer does not accurately record a roll width, the error will be delivered to the folder and may result an improperly folded document or jam.

## **Main features of the 2750 folding system**

- A length measurement system in the bridge between printer and folder automatically allows the accordion folder to deliver equal-width compensating panels, usually aligned with the trailing edge of the document. The same system ensures that the overall width of a bookfold is always 8½", no matter what the document length. (Overall width of a metric bookfold is 210 mm.)
- A crossfold section capable of making two folds in the same direction to create a re-entrant, C-folded packet. The crossfold section can also be configured for Z folding (DIN packets). However, C-fold packets are preferred by most users because of their easier handling and neater appearance.
- An accordion folding section with built-in inverter to accommodate non-standard print orientations, such as C-size or D-size sheets exiting the printer with long edge leading (title block trailing). By flipping the accordion-folded packet upside down before it enters the crossfold module, the inverter causes the title block to appear in the normal position on the folded packet.
- A by-pass system that feeds unfolded documents to a waist-high stacking surface on top of the accordion and crossfold sections. Maximum stack height is approximately 1", equivalent to over 200 sheets of 20 lb (75 gsm) bond paper. The tower also includes a convenient hand feed slot for off-line folding, located waist-high at the rear of the diverter tower.
- Communications connectivity to a host controller/printer.

## **Options available**

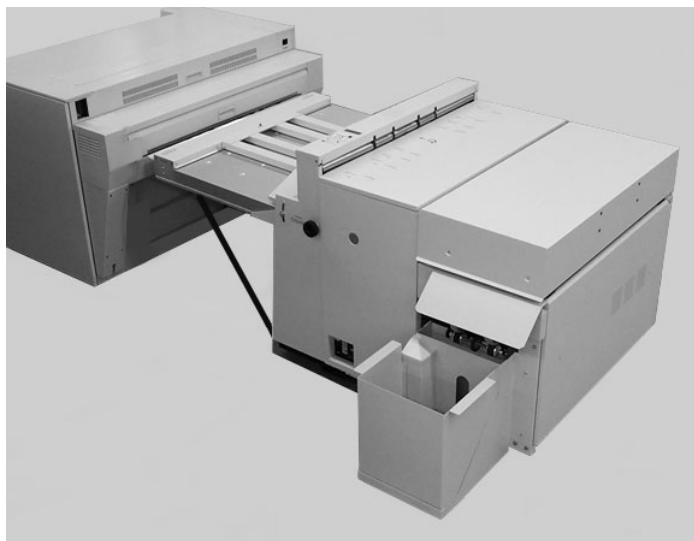
- A remote keypad option that allows the folder controls to be sited near the scanner, or other system component.
- An optional High-Capacity Folded Print Receiver that allows up to 175 E-size or A0 folded prints to be stacked on an external conveyor. Note: This feature is standard on the Fold System 40.

## Chapter 2

### OPERATING INSTRUCTIONS

#### After installation ...

Your Printfold installer will have demonstrated how the folder operates with your printer or copier, showing how the bridge can be pivoted vertically for access to the rear of the printing system, and also how, in the event of a folder jam, documents are diverted to avoid a build-up of paper at the printer exit.

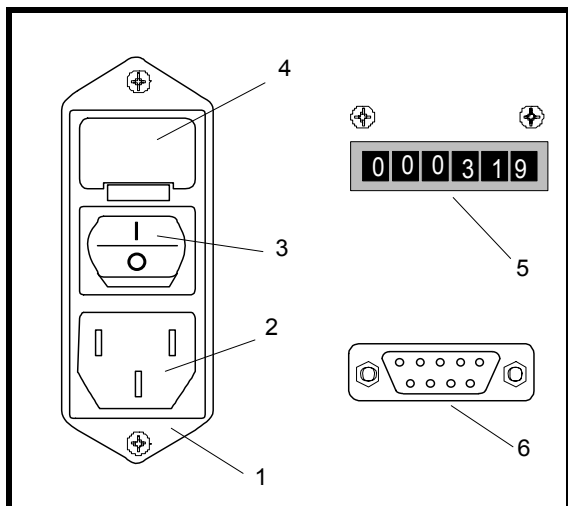


#### Model 2750 Folder (operator's side)

Features to note ... The bridge, shown here locked down in the operating position, so that documents exiting the printer/copier flow into the bridge; the tower (raised section at center) which passes unfolded documents from the bridge to the stacking surface formed by the folder lids; the operator's control panel (upper surface of tower), with push-buttons and LEDs; the removable catch-bin which receives folded packets from the crossfolder, and; the rear receiving tray for accordion folded documents exiting the folder without crossfolding (not shown in photo).

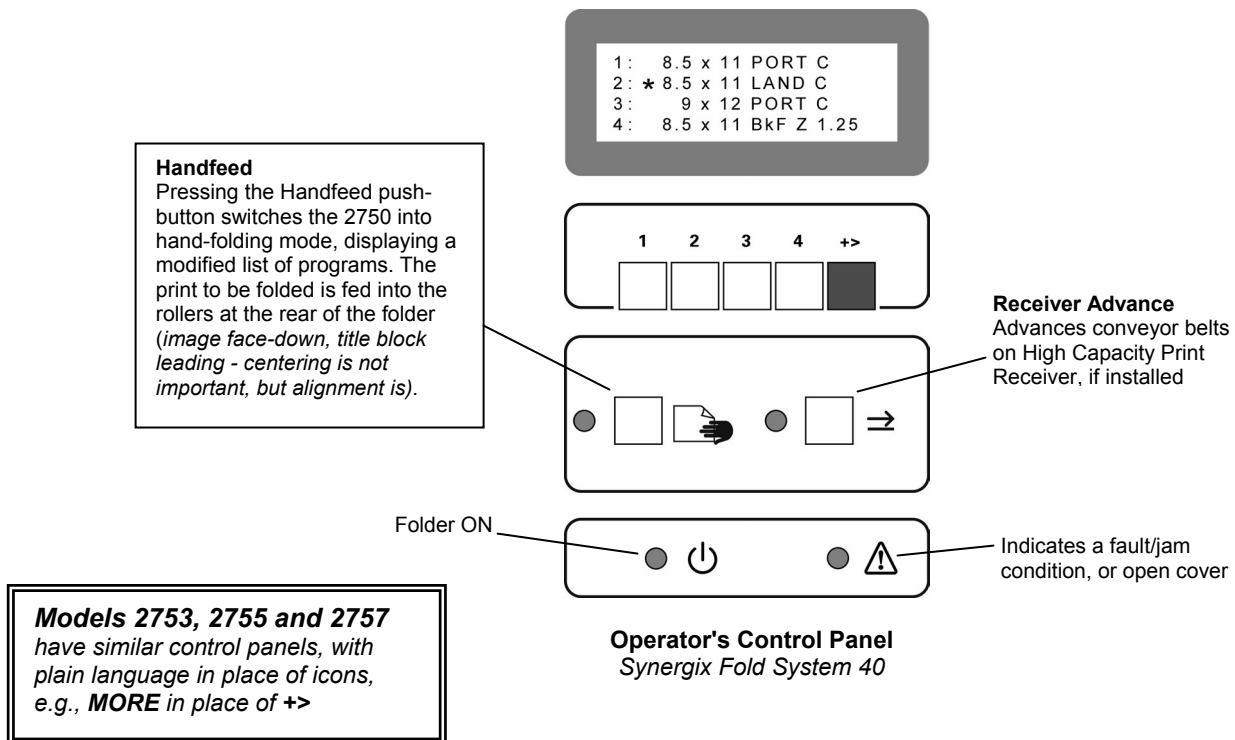
The Printfold Model 2750 Folder is self-programming, and so automatic in operation that there is really very little for the operator to do. The folder turns on automatically when a document enters the bridge, and turns off (times-out), when the flow of prints ceases. There is no need to figure the fold pattern for each document, nor is it necessary to remember which fold types and sizes are possible with a given width of media. All you have to do, as the operator, is select the desired style of fold from the control panel, and empty the catch bin from time to time.

For an overview of the folder the user is referred to Chapter 1, which introduces the various fold possibilities and illustrates the folder's key features.



#### Power entry panel

- (1) Power entry module
- (2) Line cord receptacle (IEC-320)
- (3) ON/OFF rocker switch: 1 = ON, 0 = OFF
- (4) Fuse drawer (3AG type)
- (5) Linear Feet counter
- (6) Communications port (DB9-F)



## Operator's controls

The push-buttons on the operator's control panel are "soft-programmed", which means they are used for a number of tasks including selection of the fold program to be applied to incoming prints. The folder firmware includes over 50 fold programs ("tables"), up to 20 of which may be quickly accessed by the operator using the push-buttons. (The fold programs are listed in Chapter 4, and also in the Fold Directory. A separate set of up to 20 programs for hand feeding is also provided.

In most cases the folder is connected to a host controller through its serial interface and when the folder is powered up the display will read **ONLINE**. If the folder is not connected to a host or the **Communications mode** is not set to "Normal" the control panel displays the first four fold programs selected for your folder, as in the example below:

1:	8.5 x 11 PORT C	8½" x 11" C-folded packet, portrait style
2: *	8.5 x 11 LAND C	8½" x 11" C-folded packet, landscape style
3:	9 x 12 PORT Z	9" x 12" Z-folded packet, portrait style
4:	8.5 x 11 BkaZ	8½" x 11" book-folded packet (Z fold only)

In this sample display, fold program #2 is active, which means the folder will fold every incoming print (other than A-size sheets) into 8½" x 11" landscape packets.

If more than four fold programs have been selected for your installation, press the MORE button to display.

If you inadvertently leave the fold display mode, as in the above example, you will be in one of several password-protected modes not normally accessible to the operator. **To return to the fold display mode, press MORE as many times as it takes to present “Quit” as one of the display options, then press the appropriate button.**

## Start-up

1. Turn on the Power switch on the power entry panel (press I). You should immediately hear the sound of motors and rollers running - these are the bridge rollers, accordion/tower infeed/exit rollers, and the fold rollers in the crossfolder.

- *If not, there is no ac power connected to the folder, or there is a jam condition, in which case the location of the jam should be indicated on the control panel.*
- *If there is a jam condition, clear it as described on pages 2-6 and following, then reset the system to restore power (see below).*
- *If the folder remains inoperative, and ac power is connected, check the fuse(s) in the power entry module.*
- *If the problem lies elsewhere, request service technician assistance; or, if you are a specially trained operator, remove the crossfolder rear panel and check the fuses on the power printed circuit board located on the floor of the accordion folder.*

2. Select the desired packet style. See **Fold Selection** below.

3. If you wish prints to exit the folder as flat sheets, select STACK to divert prints up through the tower onto the stacking surface formed by the accordion folder lid.

## WARNING

The manual infeed rollers and the stacker outfeed rollers at the rear of the tower rotate continuously when the folder is running. In the stacking mode, with unfolded prints accumulating on top of the accordion folder, take care not to allow prints to be backed up into the infeed roller. This will cause a serious jam condition. Prevent it by making sure the accessory plate closes off the in-feed slot when you are not hand feeding prints.

## Fold Selection – Host controller

The fold selection methods available depend on the level of integration between folder, printer and printer controller. In most cases the folder will be part of an integrated system and the desired fold program will be selected at the host controller (See the operator's guide(s) for the host system). This method of fold selection can be overridden by changing the **Communications mode**.

Choices are listed in the **Communications mode** sub-menu on the control panel (first select **System Menu**, then **Communications mode**).

### NORMAL mode – integrated system

In the NORMAL mode, the folder operates under the control of a host computer, typically the Printer Controller. Any of the supported communications protocols may be used to select fold programs, and control the folder in shutdown and job recovery functions. The folder uses sheet size information provided by the controller to minimize the number of compensating panels in bookfold-style programs. With the Generic Folder Interface (GFI) the folder control panel displays the message **ONLINE**. With the FX interface the control panel displays **ONLINE** followed by the fold programs assigned to P1, P2 and P3. Except for **Handfeed** and **Receiver Advance** → (optional, except Fold System 40)), local 2750 controls are disabled in NORMAL mode.



The communications protocol in effect is determined by the firmware installed in the folder, and by the **Host** parameter in the Parameters menu.

#### USE KEYPAD FOLDS mode – integrated system

In this mode the control panel on the folder is used to select the fold program, overriding fold selections made elsewhere. All other communications features remain in effect, including shutdown and job recovery functions, and sheet size transmission.

In the USE KEYPAD FOLDS mode, the control panel displays up to four fold choices, the current selection being marked with an asterisk (in the diagram above: \*8.5 x 11 LAND C = an 8½" x 11" packet, landscape format, with C-style crossfold). The fold choices are factory-assigned to specific fold banks from a set of over 100 programs resident in the 2750 firmware (fold bank examples: 0 = USA, 1 = DIN, 3 = France). Fold banks may be edited on-site at any time by trained service technicians.

To change the fold program selection press the button number indicated on the display. If the desired program is not visible, press the +> button as necessary to scroll through the list. If the operator selects something other than the fold display mode, password protection ensures that the folder settings cannot be altered inadvertently.

#### **On-line programs**

##### ***Page 1***

- 1: STACK
- 2: 8.5x11 LAND C
- 3: 8.5x11 PORT C
- 4: 9x12 LAND C

##### ***Page 2***

- 1: 9x12 PORT C
- 2: 8.5x11 BkF1.00
- 3: 8.5x11 BkB1.00
- 4: 8.5x11 MIXED C

##### ***Page 3***

- 1: 9x12 MIXED C
- 2: 8.5 FANFOLD
- 3: 7080/85 8.5x11
- 4: System Menu

#### **Hand feed programs**

##### ***Page 1***

- 1: 8.5x11 LAND C
- 2: 8.5x11 PORT C
- 3: 9x12 LAND C
- 4: 9x12 PORT C

##### ***Page 2***

- 1: 8.5 FANFOLD
- 2: 9.0 FANFOLD
- 3: 11.0 FANFOLD
- 4: 12.0 FANFOLD

##### ***Page 3***

- 1: System Menu

***NOTE: Hand feed prints face down, with title block leading***

#### NONE mode – communications inoperative

The NONE mode applies to stand-alone folders, or to integrated systems in which the serial connection to the folder is not functioning. Fold program selection is identical to that described above in USE KEYPAD FOLDS.

#### **Fold Selection – Standalone**

When the folder is not connected to a host, the fold selection is made through the folder control panel with an asterisk (in the diagram above: \*8.5 x 11 LAND C = an 8½" x 11" packet, landscape format, with C-style crossfold).

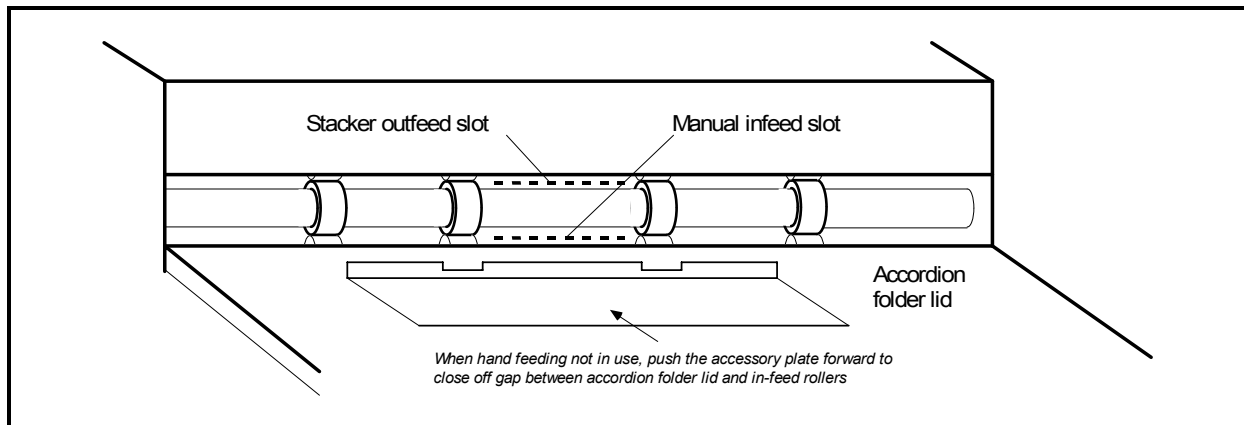
#### **Reset procedure**

The 2750 folder automatically resets itself once a jam or other fault condition has been corrected, and the covers have all been replaced to complete the interlock circuit. When the last cover is replaced you will hear the sound of motors and rollers running, provided a fault condition is no longer present, in which case the control panel will indicate the fault location.

## Manual document feeding

In its normal “on-line” mode of operation the 2750 automatically processes documents passed from the printer. The 2750 also allows off-line operation, accepting hand-fed documents for folding. Because the width measuring system in the bridge is inactive when the folder is off-line, hand folding has limitations which do not apply to on-line operation:

- *Bookfolding is not possible.*
- *The final fold in the on-line process delivers two equal-width panels. In the manual mode the last panel is simply the surplus resulting from accordion folding, ranging in width from 3½” (90mm) to the selected accordion panel width.*
- *All documents are treated as “SEL” (Short Edge Leading), and should be entered that way: for example, a 22” x 34” print should be hand-fed with the 22” edge leading. There is nothing to stop you feeding it long edge first, but this gives unpredictable results and should be avoided.*
- *Neatness of the folded packet depends on the operator. If the document is skewed as it enters the infeed slot, the skew will multiply with each accordion fold to give an undesirable fan effect. This means that care must be taken, particularly with documents over 50” (1.25m), to square up the leading edge of the document.*



**Rear of diverter tower, showing stacker/off-line components**

Handfeed Mode is invoked by pressing the HANDFEED Button on the Operator Control panel sending a signal to the host controller that the folder is off-line and unavailable for processing a job. The user will not be allowed to enter Handfeed Mode while the folder is processing a job or if the folder has received a sheet coming command from the host signaling the start of a new job. Attempts to invoke Handfeed Mode under these circumstances will result in an audible beep.

*If the folder is not connected to a host controller be sure the printer is inactive and the last print has exited the folder before invoking Handfeed Mode. When the Handfeed Mode is active, the bridge diverter will disengage, creating a barrier to incoming prints. Prints exiting the printer will fall to the floor below the bridge. Be sure to deselect hand feeding when the handfeed operation is completed.*

Once the folder has entered Handfeed Mode, the display will show the available fold programs with an asterisk indicating the active program. *Note that the button-to-program assignments may vary from those available on-line. This is a key operator or technician setup.*

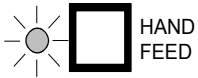
**If an attempt is made to handfeed and the HANDFEED push-button is not depressed, a warning beep will sound.**



HANDFEED light off - hand feed program not initiated



HANDFEED light on steady - folder is ready to accept a print



HANDFEED light flashes - folder is currently folding a print

### To begin hand feeding ...

1. If applicable to your system, check the printer controller/host computer to make sure no prints are queued to the folder.
2. Press the HANDFEED button. If a fold is in process or a sheet coming command has been set by the controller an audible beep will sound and the HANDFEED button must be pressed again when the system is clear. At this point the LED is a steady green and the folder is ready for hand feeding.
3. On the operator's control panel, press the appropriate push-button to select the desired packet size and style.
4. Slide the accessory plate back from the infeed slot.
5. Turn the document face down, positioned so that the title block is nearest to the infeed slot.
6. Keeping the document square to the infeed rollers, slide it gently forward until the infeed sensor energizes the drive system.

*During the folding process, the HANDFEED green LED on the operator's control panel flashes, indicating that the system is busy. Do not try to hand feed another document until the light stops flashing.*



#### **Hand feeding a document**

Center the document in the infeed slot, then feed it slowly forward until engaged by the rollers.

There are two parameters available to the service technician to customize the hand feeding process to suit individual operator preferences:

- **Handfeed delay:** Determines the amount of time that the infeed sensor is covered before the tower rollers pull the document in. The delay is selectable from 0 through 10 seconds (2 seconds is the default condition). Some users prefer a longer delay to allow more time to square up the document.
- **Handfeed ramping time:** This is the “oops” provision. It determines the time the operator has available, after the tower rollers begin to turn, to pull the print out without causing an error condition.

#### **Exiting Handfeed Mode ...**

Once hand feeding jobs are completed, press the HANDFEED button to return the folder to online operation. The LED will go out and the display will return to its previous state – normally ONLINE. Any print jobs sent to the controller while the folder is in Handfeed Mode are stored and begin automatically.

#### **Notes:**

- 1) While the folder is in Handfeed Mode, it will appear as a “Finisher Error” to the print controller.
- 2) If the folder is left idle in Handfeed Mode for 10 minutes it will automatically return to Online Mode.
- 3) If power is cycled while the folder is in Handfeed Mode, it will return to Online Mode on power-up.

## Jam conditions

If a paper jam occurs in the folder, the folder attempts to process sheets within the folding system before stopping. The diverter at the front of the bridge then flips up, closing the bridge entrance, and diverting documents to the floor under the bridge.

A jam condition is signaled by an audible alert (beep), and by the **ERROR** LED on the operator's control panel.

## Clearing a jam

### General note

*When any door or other chassis cover is opened or removed, all electric motors and mechanical components capable of causing injury are immediately disabled, whether or not a jam condition exists. Power will be restored only when the jam condition (if any) is cleared, and all doors/covers are replaced.*

### **WARNING**

The interlock system is designed to prevent access to components capable of causing injury. Do not try to defeat any interlock by taping or otherwise artificially holding it closed. In the event that the service interlock override switch is left on, the folder will emit a **beep every 30 seconds**.

### **WARNING**

Line voltage (115 or 230Vac) is present at exposed points on the accordion folder base frame (back of the power entry module, and at fuses on the power supply board). This applies whether or not the interlock circuit is intact. Access to these danger points is prevented by a plastic panel at the rear of the accordion folder, which must not be removed by other than a qualified service technician.

The following sections deal with jam clearing in specific locations signaled by the display on the operator's control panel.

## BRIDGE and BRIDGE EXIT



### Raising the bridge lid

Release the lid by rotating the center catch counter clockwise.

Raise the bridge lid.

1. **If the document is visible ...**
2. ... **and** has not entered the accordion folder, open the bridge lid by disengaging the catch in the center of the forward rail, then pull the document clear in the normal direction of print flow. Close and lock the bridge lid.  
  
... **and** is partially within the accordion folder, open the bridge lid then pull the document back out of the accordion folder. Close and lock the bridge lid. (If the folding process had begun before the jam occurred, it may be necessary to clear the paper from the accordion folder, see "Accordion Fold" below.)
3. If the document is not visible, close and lock the bridge lid, then raise the bridge to the vertical position.



### Unlocking the bridge

A knurled knob on the right side of the tower, adjacent to the operator's control panel, holds the bridge in the down position. Rotate the knob clockwise two or three turns to release the bridge, then gently raise the bridge as shown.



#### **Raising the bridge**

The bridge is a precisely manufactured assembly. DO NOT use it as a seat or step, and DO NOT slam the bridge into its down or up positions! When returning the bridge to the down position, allow the bridge to engage gently the fixed stops inside the tower, then turn the knurled knob to lock the bridge in place.

4. Remove the document from the accordion folder in-feed rollers. If that isn't possible, see "Accordion Folder" below. Lower and lock the bridge.

### **TOWER**

To clear jams in the tower, use the recessed center handle to open the tower cover, then swing the inner sheet metal components GENTLY up to expose the hand feed and stacking paper paths. Clear all paths of paper, then close the tower to restart the folder.

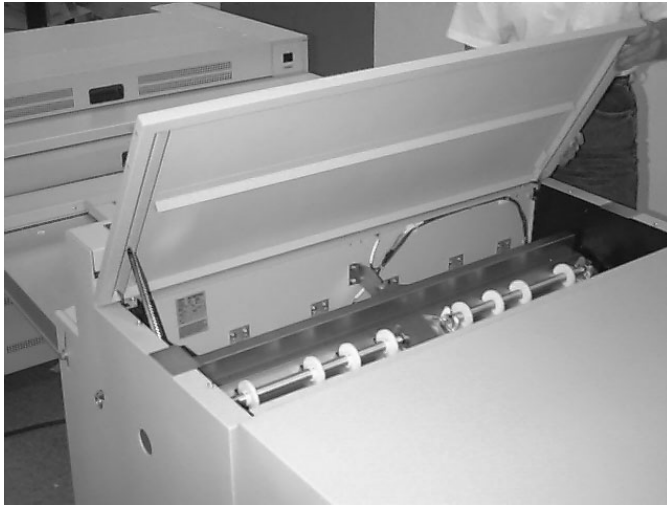


#### **Access to the tower**

The entire upper section of the tower hinges open for access. Please handle it with care. DO NOT allow it to slam open or closed!

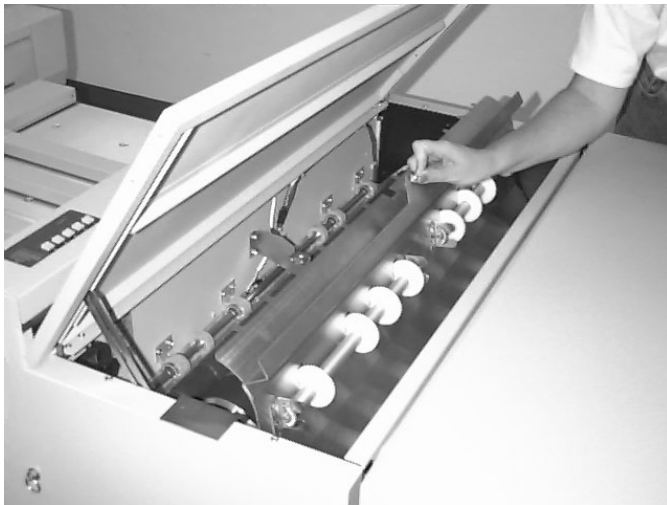
## ACCORDION FOLDER

1. Raise the accordion folder lid.



**Accordion folder lid in raised position**

2. Raise the upper drum guide shell (clam shell), exposing the folding drum.



### **Use the “jog” feature ...**

You can clear paper through the infeed rollers under power. Press the **MORE** button on the control panel to display **System Menu**, then press **1**. Select **Infeed Jog**, forward or reverse as necessary.

### **Opening the upper “clam shell”**

The clam shell is released by rotating the butterfly knob at center one quarter turn.

3. If the document is visible, and one end is free, pull it clear of the drum. Close and lock the clam shell, then close the accordion folder lid.
4. If the document is not visible, or if it cannot be grasped easily, engage the crank handle provided in the drum faceplate.



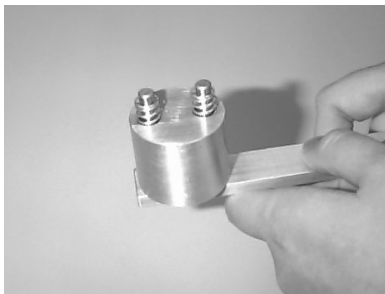


#### **Raising the drum faceplate shutter**

The drum faceplate is mounted on the drum shaft at the end nearest to the operator's control panel.



The crank handle could cause serious injury if engaged in the drum faceplate while the folder is operating. Springs on the crank hand pins and shutters over the drum ends are designed to prevent this. Do not try to defeat these safety features.



**Ejector springs on crank handle**



#### **Use the “jog” feature ...**

You can clear paper through the infeed rollers under power. Press the **MORE** button on the control panel to display **System Menu**, then press **1**. Select **Infeed Jog**, forward or reverse as necessary.

#### **Using the crank handle to rotate the drum**

Open the faceplate shutter, then engage the crank handle. Because the crank handle is spring loaded, constant pressure is required to hold it in place.

5. Rotate the drum in either direction to free one end of the document. Grasp and remove the document. Close and lock the clam shell, then close the accordion folder lid.
6. If the document cannot be removed as described above, it may be caught beneath the folding drum. This will require trained assistance. If you are qualified to perform this service, proceed as follows:
  - ☐ Switch off the folder at the power entry panel, then **remove the power cord**.
  - ☐ Raise the upper section of the crossfolder.
  - ☐ Remove the rear panel of the crossfold section.
  - ☐ Remove the hitch pin from the locating tongue between accordion and crossfold sections.



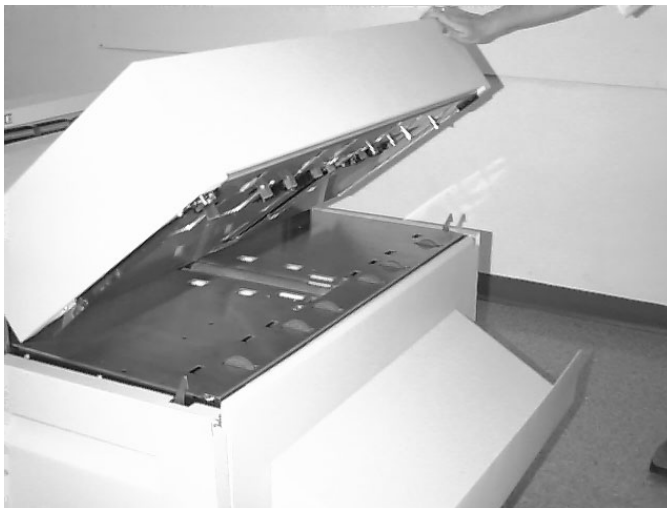
You are about to enter an area where line voltage (115 or 230Vac) is present unless you have REMOVED THE POWER CORD.

## CROSSFOLDER



### Crossfolder latches

The upper section of the crossfolder is locked in place by latches on either side of the chassis. To release the upper section, press gently down on one corner at the rear of the unit, then press the plunger as shown. Release the other latch in the same way.



Gas springs weaken with age. Prop up the upper section of the crossfolder **safely** by other means if you feel that the gas springs do not support it adequately.

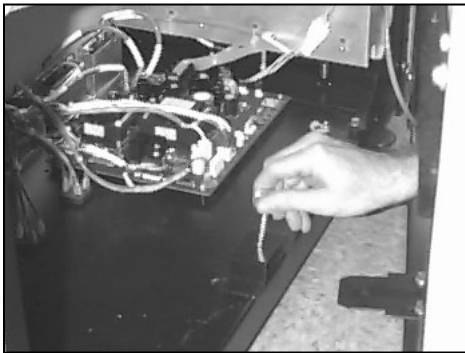
**Upper section of the crossfolder in raised position**



When replacing the rear panel, take care not to damage the interlock switch.

#### **Crossfolder rear panel**

Remove the rear panel for access to the lower section of the crossfolder, including the hub for the crank handle used to clear jams.



Unplug the power cord before unhitching the crossfolder.

#### **Unhitching the accordion and cross folder**

Once the hitch pin has been removed, the crossfolder may be detached from the accordion folder. The lower clam shell is then accessible through the rear of the accordion folder. The lower clam shell, and its center lock, is identical to the upper.

4. Open the lower clam shell and remove the document.
5. Close and lock the lower clam shell, then reattach the crossfold section to the accordion folder.
6. Replace the hitch pin to lock the crossfold and accordion fold sections, then lower and lock the upper section of the crossfolder, and replace the rear cover.

### **CROSSFOLD TRANSFER**

*NOTE: It is normally not necessary to remove the cover from the upper section of the crossfolder. This is for service access only.*

Press the two crossfolder latches, then raise the upper crossfold section. **Observe the safety precaution.** Remove the document, then close and lock the upper section.

### **CROSSFOLD POCKET and CROSSFOLD EXIT**

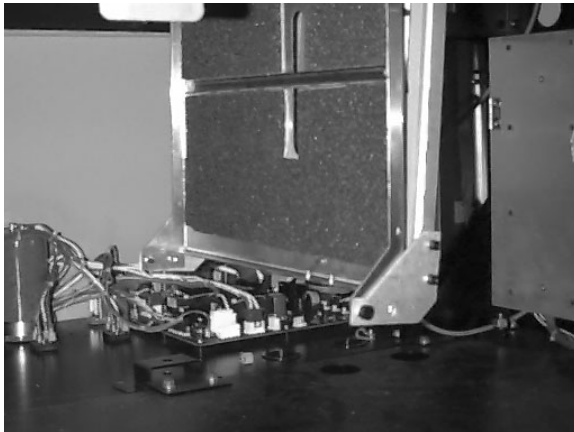
1. Open the upper crossfold section.
2. Remove the rear panel.
3. If the fold packet is caught in the upper nip rolls, and enough of it is exposed, grasp it and pull upward to remove. You may need to use the crank handle, turning it clockwise. Be sure there are no torn pieces of paper remaining in the upper nip rolls.



When replacing the rear panel, take care not to damage the interlock switch.

**Crank handle engaged in crossfold roll**

4. After clearing the jam, remove and stow the crank handle, close and lock the upper section, then replace the rear panel.
5. If the document is not caught in either pair of nip rolls, it should be possible to ease the document down through the open slot at the bottom of the crossfold pocket, or, using the crank handle, out into the catch bin. Be sure there are no torn pieces of paper remaining in the crossfold pocket. After clearing the jam, close and lock the upper section, then replace the rear panel.



**Crossfold pocket**

## **INTERLOCK OPEN**

This indicates that one or more of the interlock switches (circuit breakers) is not engaged, a condition caused by doors, lids, etc., not being fully closed. The display on the operator's control panel indicates where the problem lies.

## SYSTEM ERROR

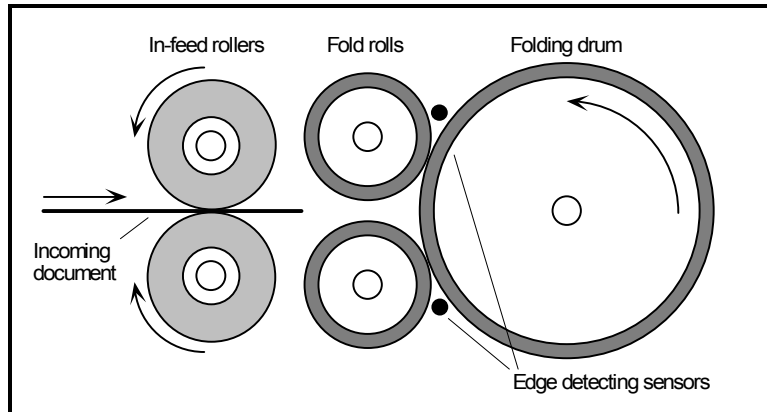
The operator's display indicates which type of system error has occurred. *If calling for service, note for the technician the four-digit error code. If the error code is no longer shown on the keypad, use the recent error list under the system menu. SYSTEM MENU → MORE → RECENT ERRORS*

**But first ...** repeat the jam clearing procedure, checking for objects that may be causing any of the paper sensors in the folder to be in the "on" condition (meaning that some fragment of a document may still be present). Close all covers. Powering the machine off and on does not clear a fault condition. Note that the display maintains a log of the previous 21 error conditions.

## Chapter 3

### OUTLINE OF FOLDING MECHANISM

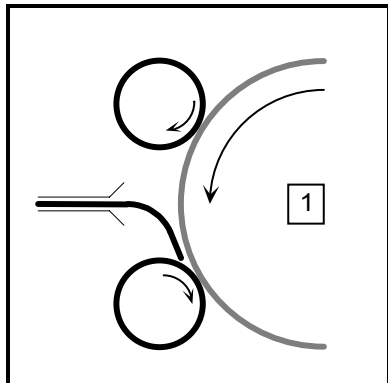
#### Section 1: The Accordion Folder



##### **In-feed and accordion folding components**

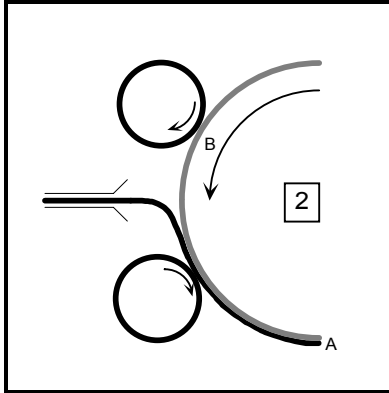
Paper gates ("flippers"), and other items have been removed for clarity.

The accordion folder comprises a pair of in-feed rolls, and a folding drum that works together with two fold rolls. A document entering the folder passes through the bridge and into the in-feed rolls, which push the document into contact with the folding drum. Sensors located at the fold rolls detect the leading edge of the document and this information is used to control the folding drum in the first phase of the folding program.



##### **[1] Initial phase of the folding program**

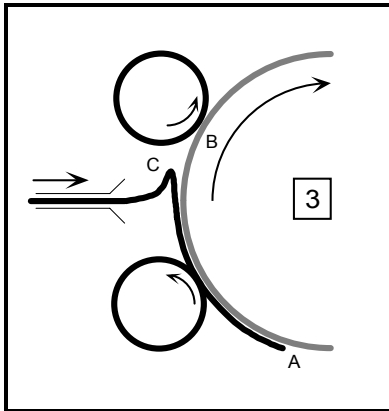
The incoming document is pushed forward by the in-feed document and is captured by the lower fold roll.



**[2] Panel measuring phase**

A measured length of the document is taken up by the folding drum.

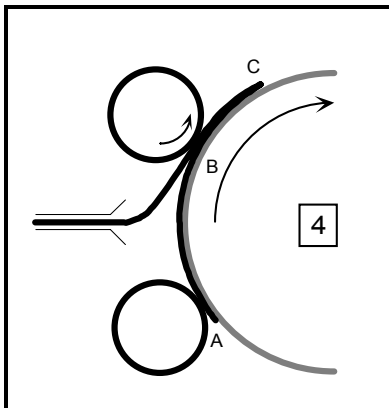
At the start of the process the drum turns counter-clockwise [1], taking the document through the lower fold roll, then stopping at the point [2], where the distance between the leading edge of the document (A) and the upper fold roll (B) equals the accordion panel width chosen by the operator. At this point the drum reverses [3].



**[3] Drum reversal develops a loop**

The document continues to be advanced by the in-feed rolls at the same time as it is being driven backward by the drum

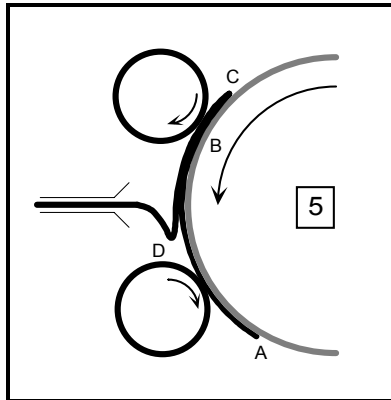
The loop (C) caused by the in-feed rolls and drum driving in opposite directions expands to the point where it is trapped by the upper fold roll, thus making the first fold.



**[4] Completion of the first fold**

Pressure of the fold roll on the drum makes a sharp crease at point C.

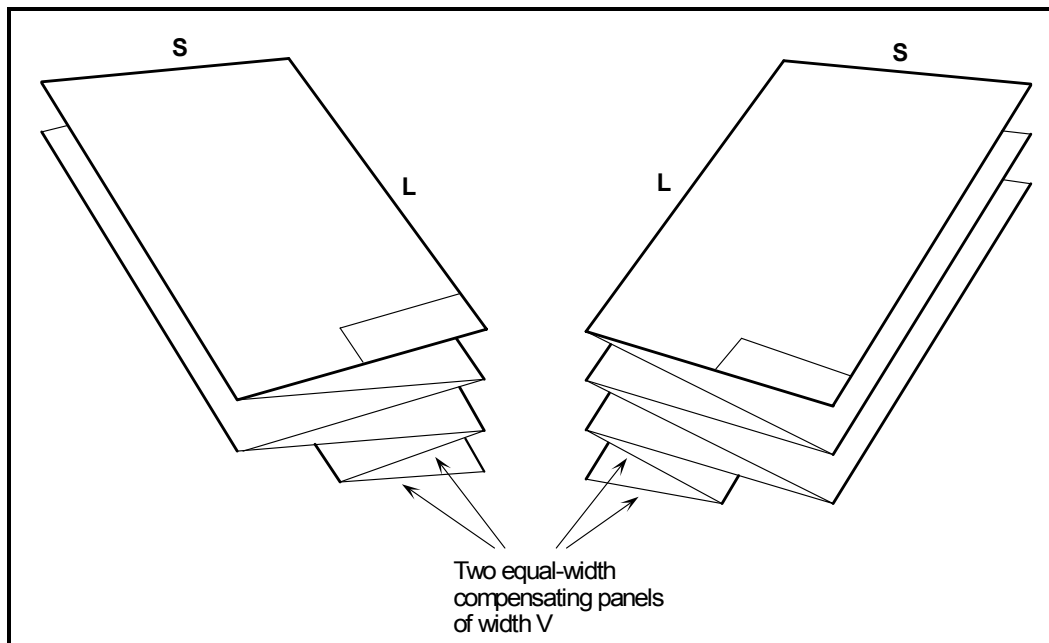
The drum continues to rotate clockwise, stopping at the point [4], where the distance between the folded edge (C) and the lower fold roll again equals the selected accordion panel width. At this point the drum reverses [5], this time developing a down-going loop (D) which in turn becomes trapped by the lower fold roll to make the second fold.



**[5] Starting the second fold**

Again, the opposing drives of drum and in-feed rolls cause a loop, this time in the other direction.

The clockwise/counter-clockwise sequence then repeats until the entire document is folded, the last fold being positioned (in the standard accordion fold program) to deliver two equal-width compensating panels.



**Accordion fold compensating panels**

These may be aligned with either the left or right edges of the packet, depending on the combination of panel width, S, and the overall length of the document.

The end panels of the accordion fold are narrower than the selected panel width (S), unless the length of the document - as measured automatically by the bridge and in-feed system - happens to be an exact multiple of width S.



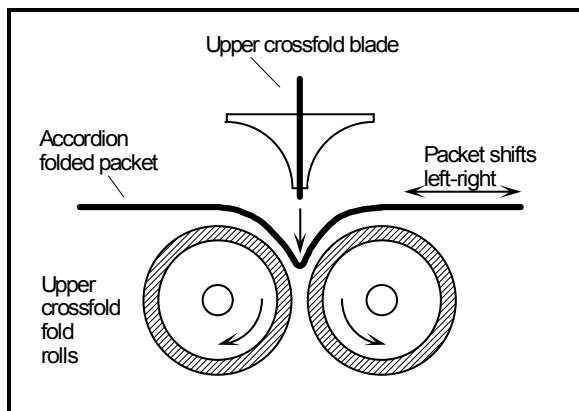
## Document inversion

For most documents the accordion folding procedure is exactly as described above. (Bookfolds require a modified form of accordion folding.) In the first phase of the standard procedure [1], the leading edge of the document is deflected downward to make contact with the folding drum. Certain document types require the document to be deflected upward in the first phase, this being necessary to present the packet with title block in the correct orientation relative to the crossfold blades. Inversion of the leading edge in this way applies to certain documents, such as those with title block trailing and long edge leading ("LEL" orientation, Chapter 4).

Other document types require another form of inversion in which the entire accordion folded packet is flipped upside down before entering the crossfold section. This procedure, again necessary for title block positioning, is accomplished at the end of the folding sequence by reversing the drum through one almost complete revolution, thus inverting the packet as it exits the accordion folder.

## Section 2: The Crossfolder

Once the accordion sequence is completed, the folded packet exits to the rear of the accordion fold section and then enters the crossfold section. If no crossfold has been called for, the accordion folded packet is propelled to the rear of the crossfold section and is then ejected into the rear receiving tray. If crossfolds are required, the packet is arrested at the rear of the crossfold section by a guide fence which maintains the packet at right angles to the upper crossfold blade.

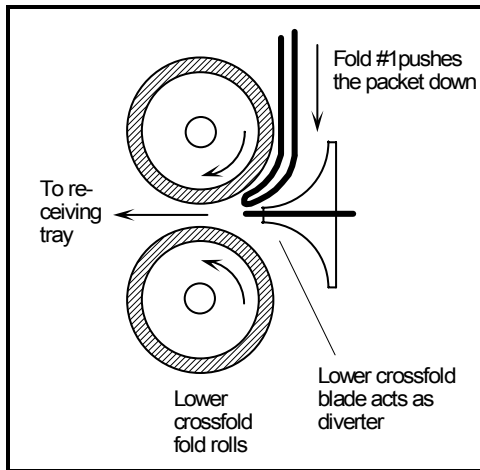


### [1] First crossfold action

The accordion-folded packet is precisely located under the crossfold blade, which is then "fired" downward by solenoid action. Some fold programs call for the upper blade to act as a diverter, like the lower blade in [2].

When stopped by the guide fence, the accordion folded packet is driven from left to right to position it under the blade, which then makes the first crossfold by driving the packet downward into the upper crossfold fold rolls [1].

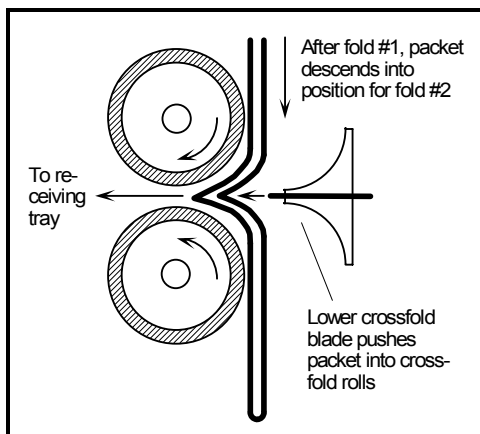
If only one crossfold is called for [2], the lower crossfold blade acts simply as a diverter, pushing the descending packet through the lower crossfold fold rolls, and then out to the crossfold receiving tray at left (viewed from the rear of the crossfold section).



## [2] Single crossfold mode

The lower crossfold blade remains stationary, deflecting the cross-folded packet out to the receiving tray.

If a second crossfold is required [3], the packet descends a calculated distance past the fold rolls, and is then pushed into the rolls by forward motion of the crossfold blade. The double folded packet then exits to the crossfold receiving tray.



## [3] Double crossfold mode

The lower crossfold blade fires to the left by solenoid action, pushing the packet into the fold rolls, thus making the second fold.

## Chapter 4

### System Menu and Key Operator Functions

#### Operator's control panel

The operator's control panel displays which fold tables the folder is currently configured to perform and also will display an error code in the event of an error. There are also many diagnostic tools available from the control panel. The last item always displayed along with the operator selectable folds is called the **System Menu**.

When the display reads **ONLINE**, press any of the keys directly below the display to access the **System Menu**.

When selecting System Menu, 9 additional choices are available:

**Communications** – Sets the communications port mode: 1 = on line (folder accepts fold commands from the host controller); 2 = use keypad (folder overrides commands from elsewhere); 3 = none (comms port disabled); 4 = loop back test (used to test the comms port). *Selecting 3 or 4 on a Max 200 system will result in the need to cycle power on the Max 200.*

**Infeed Jog Fwd** (forward) – Drives the accordion infeed motor forward about ½ revolution to assist in clearing infeed jams.\*

**Infeed Jog Rev** (reverse) – Reverses the accordion infeed motor about ½ revolution to assist in clearing infeed jams.\*

**Parameters** – Displays the operating parameters of the folder. Changes can only be made by a technician entering the appropriate password.

**Device Test** – Allows the Key Operator the ability to energize all of the solenoids and some of the motors for diagnostics. Up to two items can be energized for up to 15 seconds before the folder automatically shuts that item off, except for motors, which won't automatically be shut off. **WARNING: Repeated on cycles of certain solenoids without allowing for cooling time may lead to failure of the solenoid and/or the circuit board.** This setting is only available when the Key Operator password is active.

**Assign Folds** – Assigns a fold table from the master fold table list to a location on the keypad for the operator to access for online folding. Changes can only be made if the **Key Operator** password is active.

**Assign Handfeeds** – Assigns a fold table from the master fold table list to a location on the keypad for the operator to access for offline folding (hand feeding). This list is limited as not all fold tables are available when hand feeding. Changes can only be made if the **Key Operator** password is active.

**Recent Errors** – Displays the error codes of the last 21 errors recorded, with an indication of how many prints had successfully been processed by the folder between errors. The list can be cleared if the keypad password is active.

**Stack Sensor** – Displays the state of stack exit sensor, 0 = blocked and 1 = clear.

**Quit** – Returns the display back to the operator fold selections or **ONLINE**.

\* Jog functions are only available when the error light is on and the interlocked doors are closed.

## Passwords

Certain menu items displayed on the control panel are **password protected for the KEY OPERATORS and TECHNICIAN ONLY**. Untrained persons adjusting parameters can cause a great deal of damage to the folder. For each of these, the user will be prompted to enter the password. Use the number **1** button (**up**) until the appropriate number is reached, then press the number **3** button (**set/enter**). You now have access until either of two events occurs: Power to the folder is cycled on/off; or, a 10 minute interval passes with the keypad in the operators fold selection (default) mode. In either event, the keypad will return to a locked state requiring re-entry of the password.

**The Key Operator Password can be obtained from your service technician.**

## System Menu

### Page 1

- 1: Communications mode
- 2: Infeed jog Fwd                      *Jam clearance – drives infeed motor forward*
- 3: Infeed Jog Rev                      *Jam clearance – drives infeed motor in reverse*
- 4: Parameters

### Page 2

- 1: Device Test
- 2: Assign folds
- 3: Assign handfeeds
- 4: Recent errors

### Page 3

- 1: Stack sensor                      \_\_\_\_\_
- 2: Quit

Substitutes for an LED. Displays the status of the photosensor at the tower exit: **1** = open (no paper present), **0** = covered (paper detected).

## Communications mode

### Page 1

- 1: NORMAL = Normal printer/folder communications
- 2: USE KEYPAD FOLDS = Overrides Controller fold selections, but maintains communications (e.g., for job recovery)
- 3: NONE = Serial port disconnected (comms OFF)
- 4: LOOPBACK TEST = *Communications test*

### Page 2

- 1: Quit

## Jog functions

These are accessible to the operator - no password required.

## Parameter viewing and modification

Viewing - unrestricted access

Modification - technician only

## Device test

*Accessible only to the Key Operator and technician*

Device Test allows the Key Operator or technician to exercise independently several of the folder's key functions.

### Page 1

- |                  |                                             |
|------------------|---------------------------------------------|
| 1: BRIDGE DIVERT | <i>Diverter solenoid at front of bridge</i> |
| 2: STACK DIVERT  | <i>Diverter solenoid at back of bridge</i>  |
| 3: UPPER FLIPPER | <i>Upper flipper solenoid</i>               |
| 4: LOWER FLIPPER | <i>Lower flipper solenoid</i>               |

### Page 2

- |                 |                                          |
|-----------------|------------------------------------------|
| 1: PULLBACKS    | <i>Pullback solenoid</i>                 |
| 2: SHIFT WHEELS | <i>Both shift solenoids at same time</i> |
| 3: BACKSTOP     | <i>Backstop solenoid</i>                 |
| 4: VERT. BLADE  | <i>Vertical blade solenoid</i>           |

### Page 3

- |                     |                                                                    |
|---------------------|--------------------------------------------------------------------|
| 1: HORIZ. BLADE - H | <i>Lower crossfold (pocket) blade clutch</i>                       |
| 2: HORIZ. BLADE - L | <i>Non-functional</i>                                              |
| 3: AC MOTOR         | <i>Crossfold roller drive</i>                                      |
| 4: STP SHIFT (L)    | <i>Drives crossfold shift system to left (viewed from printer)</i> |

### Page 4

- |                  |                                                                     |
|------------------|---------------------------------------------------------------------|
| 1: STP SHIFT (R) | <i>Drives crossfold shift system to right (viewed from printer)</i> |
| 2: STP PULLBACKS | <i>Drives both pullback stepper motors</i>                          |
| 3: COUNTER       | <i>Press to increment mechanical counter</i>                        |
| 4: Quit          | <i>Return to the main display</i>                                   |

The crossfold stepper motors may be run at the same time as their related solenoids are energized. For example, select **STP-Shift (L)** to run the shift stepper motor in the left-hand shift direction, then press **+>** as needed to display **Shift Wheels**. Now press the indicated button to energize the shift solenoids with the stepper motor still running. Press **+>** again to return to **STP-Shift (L)**. In a similar way, the pullback stepper motors can also be run at the same time as the pullback solenoid is energized.

**NOTE:** Only two solenoids can be energized at any one time. Solenoids automatically time-out after 15 seconds to prevent over-heating – which can also be caused by repeatedly re-energizing them without a pause to allow cooling.

## Fold Selection and Editing (Assign folds, Assign handfeeds)

*Accessible to the Key Operator and technician*

These functions allow the Key Operator to add/delete fold programs, and to modify bookfold binding margins, etc.

Although there are approximately 70 different fold programs stored in the folder firmware, a given user will be interested in only a few of them. The most popular programs have been collected into groups, called **Fold Banks**, each containing up to 10 programs, see Section 9. The programs included in each Fold Bank are targeted to the local conventions of a specific geographic market.

Select the appropriate Fold Bank number from the Parameters list under the System Menu. This action loads the set of programs contained in the Fold Bank to NVRAM, which in turn provides a program list to the operator's control panel, and also makes the same list available to the Host Controller. **NOTE:** This action loads the handfeed menu as well as the on-line folding menu. Fold banks can only be changed by the technician.

Once the Fold Bank has been selected, the NVRAM program list available at the operator's control panel and the host controller may be edited. This allows programs to be added, or deleted by the Key Operator to simplify the selections available to the user. **But note** that the Fold Bank itself is in firmware and **cannot be changed**. Editing is confined to the list in NVRAM.

To edit the operator's program list, select **Assign Folds** from the **SYSTEM MENU**. The control panel displays:

Fold Menu: #2  
Fold Table: **Number**  
**Description**  
1: Change 4: Quit

**NOTE:** "Table" = Program number in the folder firmware, see Section 9.  
The #2 menu selection is the first one available for editing because the first selection is always STACK, which cannot be changed. To change or delete the selection press **1**. The control panel displays:

1: Set By Fold Table #  
2: Choose from List  
3: Remove from Menu  
4: Quit

If you do not know the "table" (fold program), or do not have Section 9 available, press the **2** button to enter the list, then scroll through to select (press **1** to "Add"). To delete the current fold program from the Fold Bank, press the **3** button (this does not erase the program from the firmware). Press **4** to return to the previous display.

*The maximum number of fold programs that can be included in the operator's program list (NVRAM) is 20.*

### Recent errors

Displays the last 21 fault conditions, and the number of prints successfully passed between events. Event #1 is the most recent. Example:

Event #	Error code	Quantity
1.	0042 (occurred after)	1957 (prints passed since previous event)
2.	0010	4350
3.	F142	5128

### Activity counters

#### 1. Mechanical counter

The mechanical (electromagnetic) counter situated below the power switch records linear feet.

#### 2. Software sheet counter

In addition to linear feet displayed by the mechanical counter, the folder also keeps track in software of the number of sheets ("clicks") processed. This is displayed in the Parameters menu as follows (two lines due to display limitations):

<b>SHEETS (Ks)</b>	1 4 8 7	= 1,487,000
<b>SHEETS (1s)</b>	3 0 5	<u>305</u>
	Total	1,487,305

## 721p (Synergix) Fold System 40 & XES 2750 Series fold tables

Table No.	Display	Hand Feed?	Description
0	STACK		No fold, flat sheet stack on top of accordion folder cabinet
1	8.5 X 11 LAND C	Yes	8½" x 11" landscape packet with C style crossfold
2	8.5 X 11 PORT C	Yes	8½" x 11" portrait packet with C style crossfold
3	8.5 X 11 PORT Z	Yes	8½" x 11" portrait packet with Z style crossfold
4			Reserved
5	8.5 X 11 MIXED C	Yes	8 ½" x 11" Mixed, SEL - Portrait, LEL - Landscape
6	8.5 x 11 MIXED C	Yes	8½" x 11" packet, C-style crossfold, portrait or landscape depending on size and orientation "B", "D" size - portrait "C" , "E" size - landscape
7			Reserved
8	9 X 11 LAND C	Yes	9" x 11" landscape packet with C style crossfold
9	9 X 12 LAND C	Yes	9" x 12" landscape packet with C style crossfold
10	9 X 12 PORT C	Yes	9" x 12" portrait packet with C style crossfold
11	9 x 12 PORT Z	Yes	9" x 12" portrait packet with Z style
12	9 X 12 MIXED C	Yes	9" x 12" mixed, SEL - Portrait, LEL - Landscape
13	9 x 12 MIXED C	Yes	9" x 12" packet, C style crossfold, portrait or landscape depending on print size and orientation "B", "D" size - portrait "C" , "E" size - landscape
14	7.5 x 10 PORT C	Yes	7½" x 10" portrait packet with C style crossfold, for insertion in mailers
15	7080/7085 FOLDS - 8.5 X 11	No	Emulation of 7080/7085 Z folds for ANSI B and ANSIC, others to bookfold Type F, 7 ½" panels, 1" binding margin, Z crossfold
16	7080/85 FOLDS – 9 X 12	No	Emulation of 7080/7085 Z folds for ARCH B and ARCH C, others to bookfold Type F, 8 ½" panels, 1" binding margin, Z crossfold
17	7.5 FANFOLD	Yes	7½" panels, accordion fold only
18	10.0 FANFOLD	Yes	10" panels, accordion fold only
19	8.5 FANFOLD	Yes	8½" panels, accordion fold only
20	9.0 FANFOLD	Yes	9" panels, accordion fold only
21	11.0 FANFOLD	Yes	11" panels, accordion fold only
22	12.0 FANFOLD	Yes	12" panels, accordion fold only
23			Reserved
24	8.5 x 11 BkF Z 0	No	Bookfold Style F, 8 ½" panels, 0" binding margin, Z crossfold
25	8.5 x 11 BkF Z 0.50	No	Bookfold Style F, 8" panels, ½" binding margin, Z crossfold
26	8.5 x 11 BkF Z 0.75	No	Bookfold Style F, 7¾" panels, ¾" binding margin, Z crossfold
27	8.5 x 11 BkF 1.0	No	Bookfold Style F, 7 ½" panels, 1" binding margin, Z crossfold
28	8.5 x 11 BkF Z 1.25	No	Bookfold Style F, 7¼" panels, 1¼" binding margin, Z crossfold
29	8.5 x 11 BkF Z 1.50	No	Bookfold Style F, 7" panels, 1½" binding margin, Z crossfold
30	8.5 x 11 BkF Z 1.75	No	Bookfold Style F, 6¾" panels, 1¾" binding margin, Z crossfold
31	8.5 x 11 BkF Z 2.00	No	Bookfold Style F, 6½" panels, 2" binding margin, Z crossfold
32	8.5 x 11 BkB Z 0.50	No	Bookfold Style B, 8" panels, ½" binding margin, Z crossfold
33	8.5 x 11 BkB Z 0.75	No	Bookfold Style B, 7¾" panels, ¾" binding margin, Z crossfold

34	8.5 x 11 BkB 1.0	No	Bookfold Style B, 7 ½" panels, 1" binding margin, Z crossfold
35	8.5 x 11 BkB Z 1.25	No	Bookfold Style B, 7¼" panels, 1¼" binding margin, Z crossfold
36	8.5 x 11 BkB Z 1.50	No	Bookfold Style B, 7" panels, 1½" binding margin, Z crossfold
37	8.5 x 11 BkB Z 1.75	No	Bookfold Style B, 6¾" panels, 1¾" binding margin, Z crossfold
38	8.5 x 11 BkB Z 2.00	No	Bookfold Style B, 6½" panels, 2" binding margin, Z crossfold
39			Reserved
40			Reserved
41	210 x 297 PORT C	Yes	210 x 297mm portrait packet with C style crossfold
42	210 x 297 LAND C	Yes	210 x 297mm landscape packet with C style crossfold
43	DIN 824 TYPE B	No	Bookfold Style F, 190mm panels, 0mm binding margin, tab, Z crossfold, 297 mm, title block leading
44	DIN 824 TYPE C	Yes	Endless fold style 210mm panels, Z crossfold, 297mm, title block leading
45			Reserved
46	210 x 297 BkF Z 0mm	No	Bookfold Style F, 210mm panels, 0mm binding margin, Z crossfold, title block leading
47	DIN 824 TYPE A	Yes	Bookfold Style F, 190mm panels, 20mm binding margin, Z crossfold
48	210 x 297 BkF Z 30mm	No	Bookfold Style F, 180mm panels, 30mm binding margin, Z crossfold
49	210 x 297 BkF Z 40mm	No	Bookfold Style F, 170mm panels, 40mm binding margin, Z crossfold
50	7080/85 FOLDS – 210 x 298mm	No	Emulation of 7080/7085 Z folds for DIN sizes, 190mm panels, 20mm binding margin, Z crossfold
51	AFNOR	No	AFNOR fold program
52			Reserved
53	ERICSSON	No	Special fold program to Ericsson specifications, title block leading
54			Reserved
55	190 FANFOLD	Yes	190mm panels, accordion fold only
56	210 FANFOLD	Yes	210mm panels, accordion fold only
57	297 FANFOLD	Yes	297mm panels, accordion fold only
58	INV DIN 210 x 297	No	210 x 297mm portrait packet for Inverse DIN drawing format, Z crossfold
59			Reserved
60	ANSI-ARCH MIX	No	Special mixed fold table
61	INV AFNOR	No	210 x 297mm portrait packet for Inverse AFNOR drawing format
62	7.5 x 10 LAND C	No	7½" x 10" portrait packet, C crossfold
63			Reserved
64	8.5 x 11 LAND C	No	8½" x 11" landscape packet, special for AZ Public Service
65	9 x 6 / 9 x 12 MIX	No	Special 9" fan fold with either 6" or 12" crossfold depending on roll size, for insertion in mailers, etc.
66			Reserved
67	210 x 297 BkF Z 0mm #2	No	Bookfold Style F, 210mm panels, 0mm binding margin, Z crossfold, title block trailing
68	DIN 824 TYPE A #2	No	Bookfold Style F, 190mm panels, 20mm binding margin, Z crossfold, title block trailing
69	ERICSSON #2	No	Special fold program to Ericsson specifications, title block trailing
70	INV DIN 20mm	No	Bookfold fold program for Inverse DIN drawing format, 20mm binding margin, title block leading
71	INV DIN 190 x 297	No	190 x 297mm portrait packet for Inverse DIN drawing format



72	DIN 824 TYPE B #2	No	Bookfold Style F, 190mm panels, 0mm binding margin, tab, Z crossfold 297 mm, title block trailing
73	DIN 824 TYPE C #2	Yes	Endless fold style 210mm panels, Z crossfold 297mm, title block trailing
74			Reserved
75			Reserved
76			Reserved
77	8.5 BkB FAN 1.00	No	Bookfold Style B, 7½" panels, 1" binding margin, accordion fold only
78			Reserved
79			Reserved
80	8.5 BkF FAN 1.50	No	Bookfold Style F, 7" panels, 1½" binding margin, accordion fold only
81			Reserved
82			Reserved
83	8.5 x 11 LAND (ALP)	No	8½" x 11" landscape packet, special for Air Liquid Products
84	8.5 x 11 BkB 1.50 AP	No	Bookfold Style B, 7" panels, 1½" binding margin, special for Alabama Power
85			Reserved
86	PECO FOLD MIX	No	Special program for PECO
87			Reserved
88			Reserved
89			Reserved
90			Reserved
91	8.5 x 11 MIX (PGE)	No	Special program for PGE
92	9 x 12 Bk CUST (92)	No	Reserved

## Fold Banks

### *FOLD BANK 0 (common US sizes)*

Position	Fold Table	Display	Description
1	0	STACK	No fold, flat sheet stack on top of folder cabinet
2	1	8.5 x 11 LAND C	8½" x 11" landscape packet with C style crossfold
3	2	8.5 x 11 PORT C	8½" x 11" portrait packet with C style crossfold
4	9	9 x 12 LAND C	9" x 12" landscape packet with C style crossfold
5	10	9 x 12 PORT C	9" x 12" portrait packet with C style crossfold
6	27	8.5 x 11 BkF 1.0	Bookfold Style 1 (F = Favors Front), 7 ½" panels, 1" binding margin, Z crossfold
7	34	8.5 x 11 BkB 1.0	Bookfold Style 2 (B = Favors Back), 7 ½" panels, 1" binding margin, Z crossfold
8	5	8.5 X 11 MIXED C #1	8 ½" x 11" Mixed, SEL - Portrait, LEL – Landscape
9	12	9 x 12 MIXED C #1	9" x 12" Mixed, SEL - Portrait, LEL – Landscape
10	19	8.5 FANFOLD	8½" panels, accordion fold only
11	15	7080/7085 FOLDS - 8.5 X 11	Emulation of 7080/7085 Z folds for ANSI B and ANSI C, others to bookfold Type A, 7 ½" panels, 1" binding margin, Z crossfold

### ***FOLD BANK 1 (common European sizes)***

<b>Position</b>	<b>Fold Table</b>	<b>Display</b>	<b>Description</b>
1	0	STACK	No fold, flat sheet stack on top of folder cabinet
2	47	DIN 824 TYPE A	Bookfold Style 1 (F = Favors Front), 190mm panels, 20mm binding margin, Z crossfold
3	43	DIN 824 TYPE B	Bookfold Style 1 (F = Favors Front), 190mm panels, 0mm binding margin, tab, Z crossfold 297mm
4	44	DIN 824 TYPE C	Endless fold style 210mm panels, Z crossfold 297mm
5	46	210 x 297 BkF Z 0mm	Bookfold Style 1 (F = Favors Front), 210mm panels, 0mm binding margin, Z crossfold
6	53	ERICSSON	Special fold program to Ericsson specification
7	56	210 FANFOLD	210mm panels, accordion fold only
8	57	297 FANFOLD	297mm panels, accordion fold only

### ***FOLD BANK 2 (special French/European sizes)***

<b>Position</b>	<b>Fold Table</b>	<b>Display</b>	<b>Description</b>
1	0	STACK	No fold, flat sheet stack on top of folder cabinet
2	73	DIN 824 TYPE C #2	Endless fold style 210mm panels, Z crossfold 297mm, title block trailing
3	58	INV DIN 210 x 297	Special AFNOR LIKE fold program, title block leading
4	51	AFNOR	Special AFNOR fold program
5	68	DIN 824 TYPE A #2	Bookfold Style 1 (F = Favors Front), 190mm panels, 20mm binding margin, Z crossfold, title block trailing
6	72	DIN 824 TYPE B #2	Bookfold Style 1 (F = Favors Front), 190mm panels, 0mm binding margin, tab, Z crossfold 297 mm, title block trailing
7	56	210 FANFOLD	210mm panels, accordion fold only
8	57	297 FANFOLD	297mm panels, accordion fold only
9	69	ERICSSON #2	Special fold program to Ericsson specification, title block trailing
10	67	210 x 297 BkF Z 0mm #2	Bookfold Style 1 (F = Favors Front), 210mm panels, 0mm binding margin, Z crossfold, title block trailing
11	48	210 x 297 BkF Z 30mm	Bookfold Style 1 (F = Favors Front), 180mm panels, 30mm binding margin, Z crossfold
12	55	190 FANFOLD	190mm panels, accordion fold only
13	41	210 x 297 PORT C	210 x 297mm portrait packet with C style crossfold
14	42	210 x 297 LAND C	210 x 297mm landscape packet with C style crossfold
15	49	210 x 297 BkF Z 40mm	Bookfold Style 1 (F = Favors Front), 170mm panels, 40mm binding margin, Z crossfold
16	70	INV DIN 20mm	Special AFNOR LIKE Bookfold fold program, 20mm binding margin, title block leading
17	71	INV DIN 190x 297	Special AFNOR LIKE fold program
18	61	INV AFNOR	210 X 297 mm packet, inverse AFNOR drawing format

## Folder Error Messages

Message	Definition	Location or type of error
0010	Interlock open. (On model 2750, location unidentified)	A door or panel is open. If no specific item is listed on the display, then the electronics cannot detect the interlock, possibly due to a faulty interlock or an open circuit in the interlock cable.
0011	Bridge lid open (2750 only)	
0012	Tower door open (2750 only)	
0014	Accordion lid open (2750 only)	
0015	Crossfold left latch open (2750 only)	
0016	Crossfold right latch open (2750 only)	
0017	Rear door open (2750 only)	
001F	Crossfold infeed interlock (2750 only)	
0020	Unexpected sheet at PS7.	
0021	Sheet arrival overdue at PS7.	
0022	Bad sheet width at PS1.	Bridge exit jam.
0023	Sheet arrival overdue from printer; missing sheet detected. (2750 only)	Bridge jam.
		Bridge infeed jam.
0024	Unexpected sheet at PS1.	GFI- Trailing edge did not reach bridge input sensor (PS0) in time.
		FX- Leading edge did not reach bridge exit sensor (PS7) in time.
0025	Sheet arrival overdue at PS1.	Sheet may have fallen on the floor or the be stuck in the printer.
0031	Sheet arrival overdue at PS16.	Bridge infeed jam.
0042	Unexpected sheet at PS8.	Bridge infeed jam.
0043	Sheet arrival overdue at PS8.	Bridge exit jam.
0044	Sheet arrival overdue at PS16.	Stack exit jam.
0050	Unexpected sheet at PS19.	Stack exit jam.
0051	Sheet arrival overdue at PS19.	Hand feed jam.
0052	Unexpected sheet at PS16.	Accordion exit jam.
		Accordion drum/exit jam.
		Accordion infeed jam.