FORMAX®

FD 4170
Cut Sheet Burster

OPERATOR MANUAL
FIRST EDITION

4/2010

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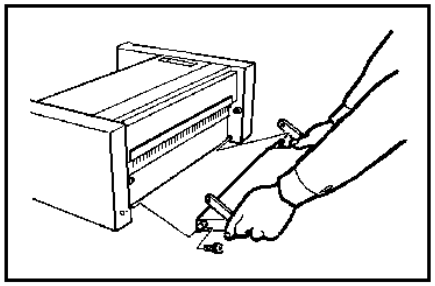
SPECIFICATIONS

Speed:	5-level speed adjustment: 42, 64, 89, 114, 140 sheets/minute
Feed Tray Capacity:	Up to 400 sheets
Paper Size:	5” - 17” H x 4” - 11” W Paper must not have staples, clips, adhesive or holes.
Paper Weight:	13# bond - 110# index (58 - 175 gsm)
Min./Max. Burst Length:	2.5” - 9.9”
Dimensions:	32” L x 9” H x 16” D
Weight:	56 lbs.
Voltage:	120V, 60 Hz

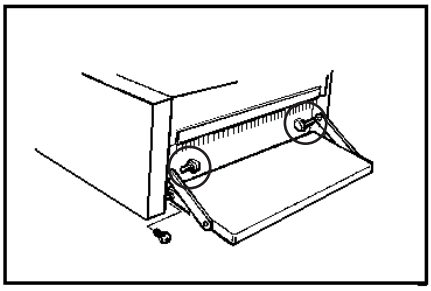
UNPACKING & SET-UP

Check package for shipping damage. If there is shipping damage, do not discard the box.

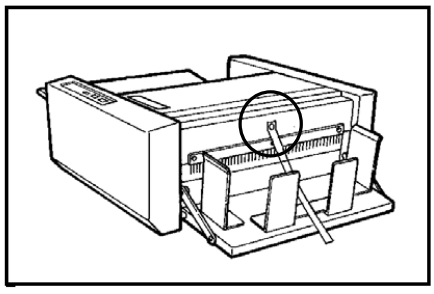
1. Facing the output side, remove the setscrew from the right side of the paper stacker, and insert the axis into the holes of the machine frame on both sides. Then install the paper stacker with the setscrew removed.



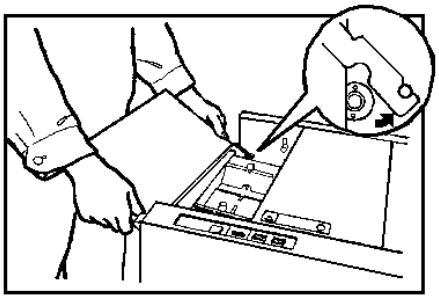
2. Remove the thumb screws (in the circles) and attach the columns on the right and left hooks, then fasten the thumb screws.



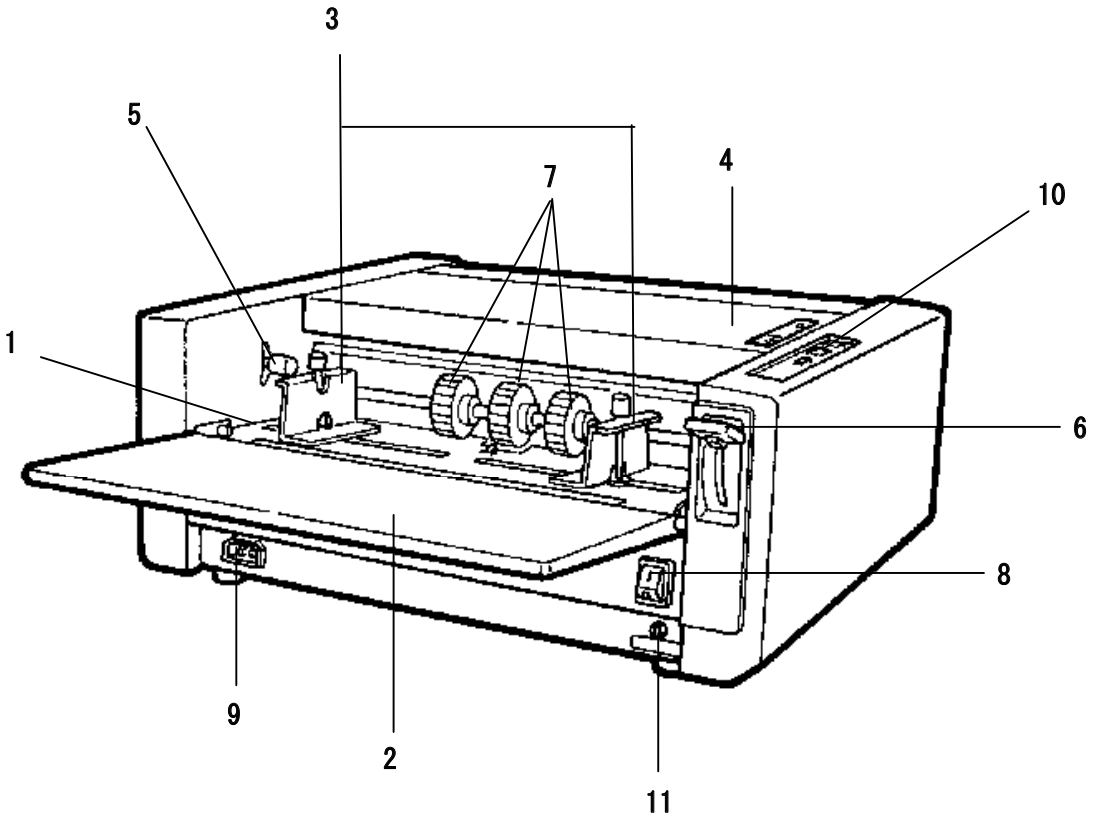
3. Remove the screw (see circled area, right) and install the paper holding plate attachment. Set the paper stopper and paper guides as shown in the picture.



4. Insert the edge of the support tray into the right and left columns of the paper infeed tray. Then set the support tray downward.

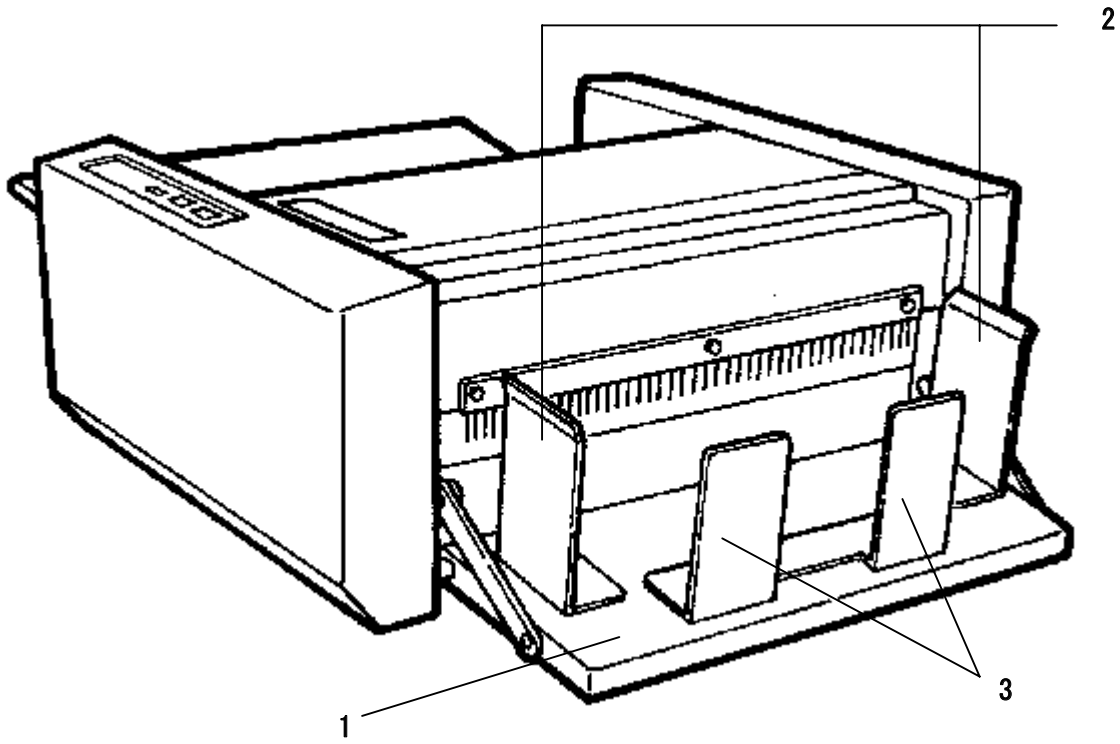


INPUT SIDE



Number	Description	Function
1	Paper Feed Tray	
2	Support Tray	Open this tray prior to operating to support paper.
3	Paper Feed Guides	Align and center paper according to width.
4	Safety Cover	Must be closed during operation. Burster will not operate with cover open.
5	Paper Feed Pressure Adjusting Lever	Adjusts paper feed pressure according to paper thickness. Standard setting is “Normal Paper.”
6	Paper Feed Tray Up/Down Lever	Moves the paper feed tray up and down.
7	Paper Feed Rubber Roller	Feeds paper into the bursting area.
8	Power Switch	Toggles between ON (I) and OFF (O).
9	Power Cord Inlet	Insert power cord here.
10	Control Panel	Refer to Control Panel on page 4.
11	Circuit Breaker	Shuts down machine in case of overload.

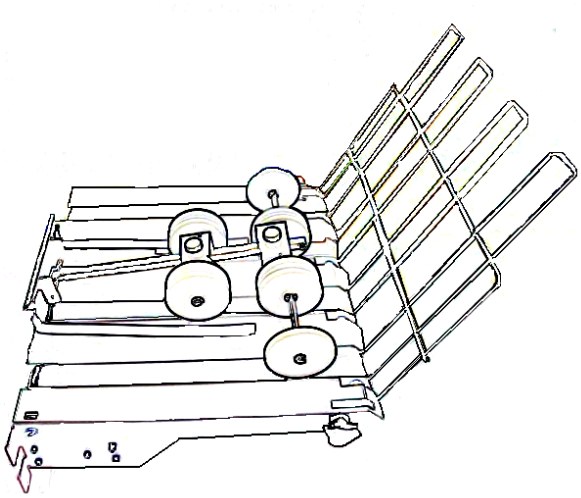
OUPUT SIDE



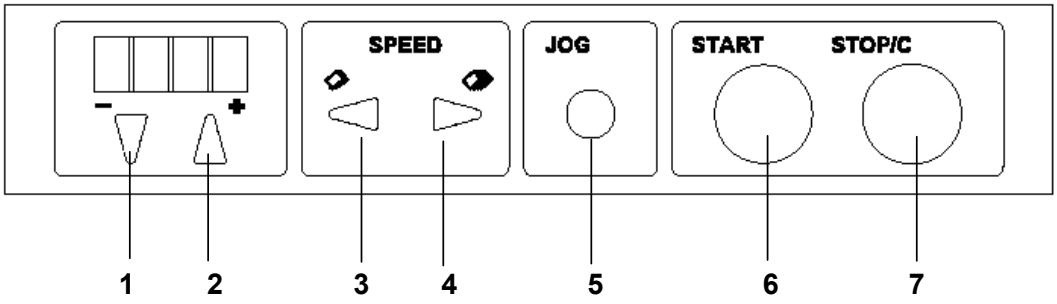
Number	Description	Function
1	Stacker	Burst forms stack here upon exiting.
2	Paper Guide	Should be set according to the width of the burst forms.
3	Paper Stopper	Should be set according to the length of the burst forms.

OUTPUT CONVEYOR (optional)

With the optional Output Conveyor, burst forms can be easily removed while the burster is still operating.



CONTROL PANEL



Number	Description	Function
1	"-" Button	Use to decrease cut size on LCD display
2	"+" Button	Use to increase cut size on LCD display
3	Decrease Speed Button	Decreases processing speed, also used to select Presets
4	Increase Speed Button	Increases processing speed, also used to select Presets
5	JOG Button	Press this to process one sheet of paper
6	START Button	Press to start operation. NOTE: This button is inoperative when an error is displayed, or no paper is in the infeed tray.
7	STOP/C Button	Press to stop operation. NOTE: When this button is pressed after a paper jam is cleared, the indicator will be reset.

POWERING UP

1. Plug power cord into inlet on Infeed Side of burster. Plug into wall outlet with appropriate power capacity.
2. Press power switch to the "I" position.
3. When the power is turned on, "HEll0" appears in the LCD area of the control panel.
4. To turn off power, press switch to "O" position.

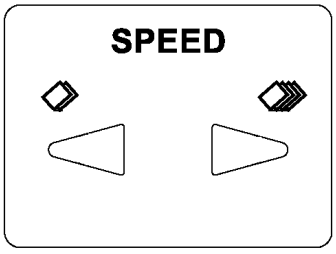
Display when the power is on

ADJUSTING PROCESSING SPEED

To adjust between speed levels, press either of the speed buttons. Speeds include 42, 64, 89, 114, or 140 sheets per minute.

To decrease speed, press the left SPEED button.

To increase speed, press the right SPEED button.



LCD DISPLAYS FOR SET-UP AND OPERATION

Display for Start

Appears when the power is turned on.

Display for Stand-by Status

Appears when Manual Setting is selected.

Appears when Preset Selection Setting is chosen (Fixed Preset Selection).
Displays pre-set fixed cut size.

Appears when Preset Selection Setting is chosen (Free Size Preset Selection).
Displays pre-set cut size.

Displays counter (appears by pressing the STOP/C button).

Displays cut speed, Speed 1 - 5 (appears by pressing one of the SPEED buttons).

Displays independent operation of optional unit (appears by pressing the
STOP/C button and JOG button simultaneously).

Display for Pre-Set Mode

Appears when preset registration/cancel is executed (Fixed Preset Registration).
Displays fixed cut size for preset registration/cancel.

Appears when preset registration/cancel is executed (Free Preset Registration).
Displays fixed cut size for preset registration/cancel.

Display for Bursting

Counter

Bursting speed: Speed 1 -5 (appears by pressing one of the SPEED buttons).

STEPS OF SETUP AND OPERATION

Unpacking & Set-up (page 1)

Turning On the Power (page 4)

(pg 7) Manual Setting: Standard mode inputting cut size on a case-by-case basis
(pg 11) Preset Selection Setting: Convenient function registering frequently used cut size in advance and easily retrieving the registered cut size

Manual Setting and Preset Selection Setting cannot be selected simultaneously.
When cut size is registered in Preset Mode (pg 10) Preset Selection Setting is automatically selected.
When you desire to return the setting to manual setting, cancel all preset registrations.
Refer to Fixed Preset Registration/Cancel or Free Size Preset Registration/Cancel on pages 12-13 for canceling preset registration.

Register desired size in Preset Mode. (pg 10)

Manual Setting (pg 7)

Preset Selection Setting (pg 11)

Loading Paper (page 8)

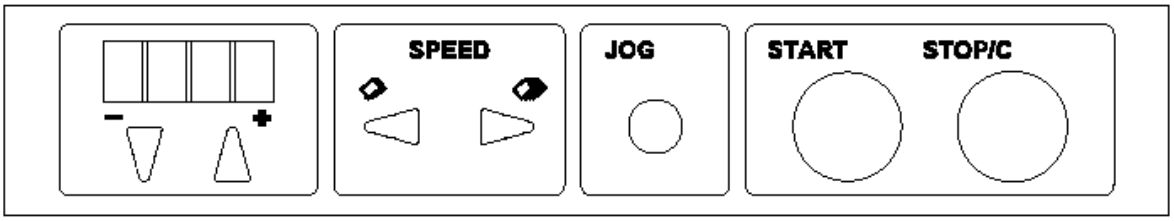
Preparation Before Operation (Setting paper stacker, Speed adjustment) (pages 1-4)

Start operation.

MANUAL SETTING

Manual Setting is a standard mode in which each cut size is input individually for each project.

NOTE: When cut size is input as Preset Setting, “Preset Selection Setting” is automatically selected. “Manual Setting” and “Preset Selection Setting” cannot be selected simultaneously. Cancel all preset inputs to change “Preset Selection Setting” to “Manual Setting.” Refer to Fixed Preset Input/Cancel or Free Size Preset Input/Cancel on pages 12-13 for more information.



1. Turn on power. Machine is in stand-by mode. Previous cut size will be shown in LCD display.
2. Input cut size.
   The value of each digit is increased by pressing the “+” button, decreased by pressing the “-” button.
   Refer to the Cut Size Chart below. Abbreviate the value for cut size to the first decimal place.
   NOTE: Setting range is 0, 2.5-9.9 inches. When cut size is set to 0, the paper is fed without bursting.
3. Refer to Preparation Before Operation on page 9.

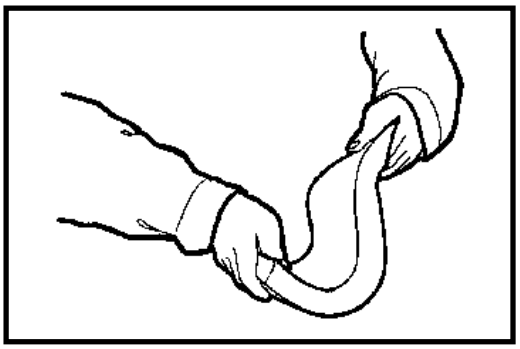
EXAMPLES OF CUT SIZES

When setting cut size, abbreviate to the first decimal place.

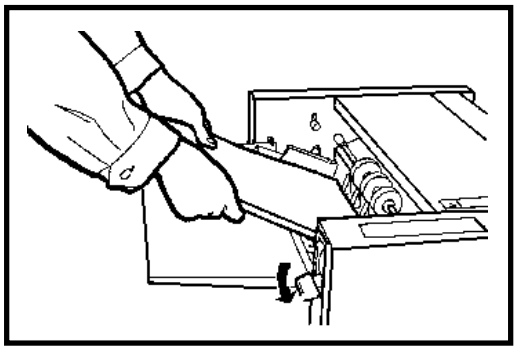
Paper size	Number of cuts	Finished size (inch)	Set value of cut size (Truncate to first decimal place)
8.5” x 11” Vertical	2	8.5” x 5.5”	5.5
	3	8.5” x 3.67”	3.6
	4	8.5” x 2.75”	2.7
8.5” x 11” Horizontal	2	11” x 4.25"	4.2
	3	11” x 2.83”	2.8
8.5” x 14” Vertical	2	8.5” x 7.0”	7.0
	3	8.5” x 4.67”	4.6
	4	8.5” x 3.5”	3.5
	5	8.5” x 2.8”	2.8
11” x 17” Horizontal	2	11” x 8.5”	8.5
	3	11” x 5.67”	5.6
	4	11” x 4.25”	4.2
	5	11” x 3.4”	3.4
	6	11” x 2.83”	2.8

LOADING PAPER

1. Fan the sheets to loosen, which will decrease static electricity and reduce the chance of a paper jam or misfeed.



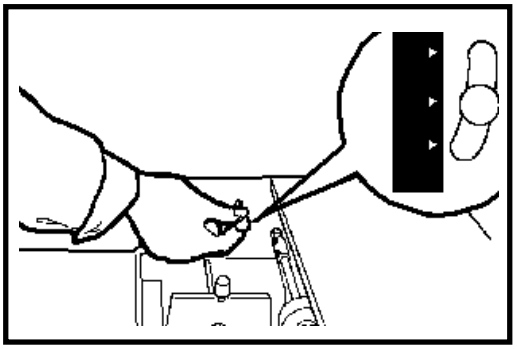
2. Lower the up/down lever on the paper feed tray and place the paper on the tray. Adjust the paper feed guides on both sides, then tighten the setscrews.



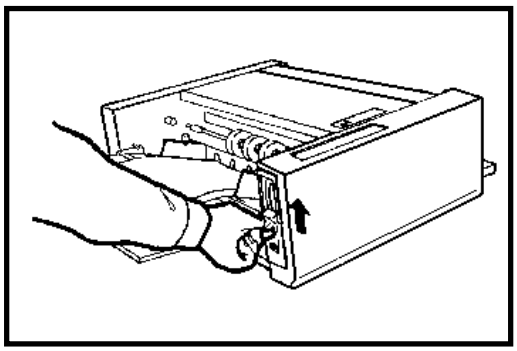
3. Adjust the paper feed pressure adjustment lever to the thickness of the paper. Usually it is set to “NORMAL.”

   If the paper cannot be fed, set the pressure adjust lever to “HEAVY.”

   If double feeding occurs, set the lever to “LIGHT.”



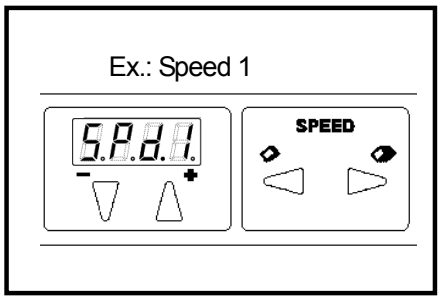
4. Raise the up/down lever.



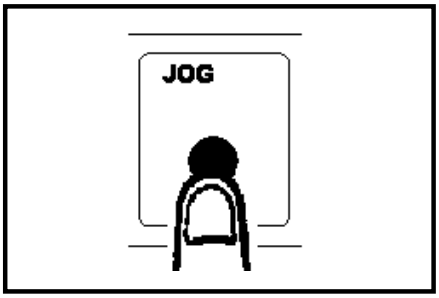
PREPARATION BEFORE OPERATION

1. Set bursting speed

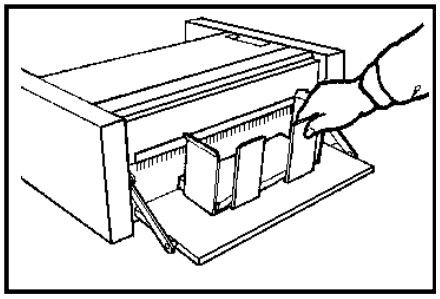
Speed	Number of sheets processed (sheets per minute)
1 / JOG	40
2	60
3	84
4	107
5	130



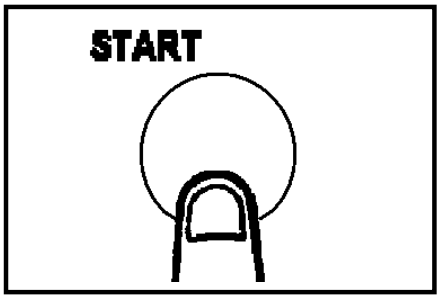
2. Feed paper by pressing the JOG button to perform a test cut. If test cut is incorrect, check cut size setting.



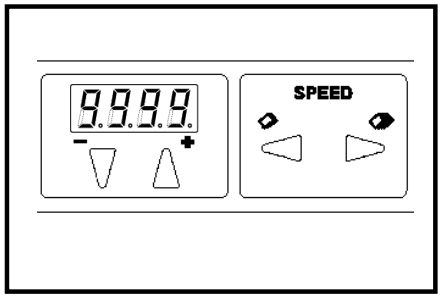
3. On output side, adjust paper stopper and paper guides to approximately 0.12 inch wider than the burst paper.



4. Start operation by pressing the START button. Machine automatically stops after processing.



5. The counter will appear in the LCD display during processing. The value of the counter is from 0 - 9999. After 9999, counter will return to 0.



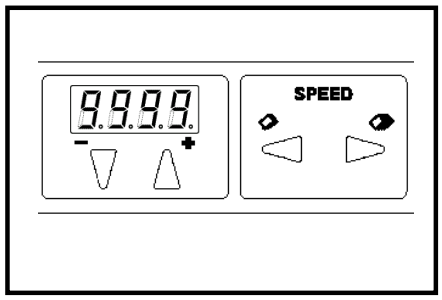
COUNTER DISPLAY AND RESET

Counter Display

1. To display the number of cut sheets after a previous reset, press and hold the STOP/C button in stand-by mode.
2. The counter display disappears by releasing the STOP/C button.

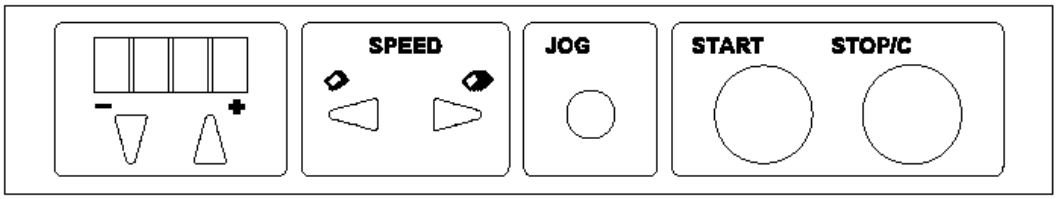
Counter Reset

To reset the counter, press both the STOP/C button and the “-” button and hold for three seconds or more.



PRESET MODE

Preset Mode is different from Standard Mode and can register cut size selected in Preset Selection Setting in advance.



Registering Preset Mode

1. Turn on power while pressing the STOP/C button on the control panel.

2. To select Preset # press either the speed up or down button. See Preset Table on the following page.
   Speed up button: Increases the value of the Preset number.
   Speed down button: Decreases the value of the Preset number.

3. Preset is saved by pressing the “+” button and cancelled by pressing the “-” button.
   Preset Setting is not available at factory setting.

4. Save/Cancel information is stored by pressing the JOG button.

5. To quit Preset Mode, turn power off and on, or press the STOP/C button for more than 3 seconds. This will make the Preset Setting available.

PRESET TABLES

- **Fixed preset list**

No.	Display	Paper size	Number of cuts	Finished size (inch)	Cut size
0	"11-2"	8.5" x 11" Vertical	2	8.5" x 5.5"	5.5
1	"11-3"		3	8.5" x 3.67"	3.6
2	"11-4"		4	8.5" x 2.75"	2.7
3	"14-2"	8.5" x 14" Vertical	2	8.5" x 7.0"	7.0
4	"14-3"		3	8.5" x 4.67"	4.6
5	"14-4"		4	8.5" x 3.5"	3.5
6	"14-5"		5	8.5" x 2.8"	2.8
7	"17-2"	11" x 17" Vertical	2	11" x 8.5"	8.5
8	"17-3"		3	11" x 5.67"	5.6
9	"17-4"		4	11" x 4.25"	4.2
10	"17-5"		5	11" x 3.4"	3.4
11	"17-6"		6	11" x 2.83"	2.8
12	"PASS"	-----	0	-----	0

- **Free size preset list**

No.	Display	Cut size input range
13	"0. *.*"	0, 2.5 - 9.9 inches When "0" is displayed, preset is cancelled.
14	"1. *.*"	
15	"2. *.*"	
16	"3. *.*"	
17	"4. *.*"	
18	"5. *.*"	
19	"6. *.*"	
20	"7. *.*"	
21	"8. *.*"	
22	"9. *.*"	

PRESET SELECTION SETTING

Frequently used cut sizes can be stored into memory and recalled easily. Preset Selection Setting is available only in Preset Mode.

NOTE: When cut size is already registered, Preset Selection Setting is automatically selected.
Manual Setting and Preset Selection Setting cannot be selected simultaneously.
Cancel all preset registrations in order to change to Manual Setting.

1. Turn on power. Machine will be in stand-by mode.

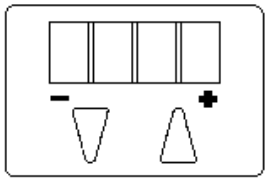
2. To choose Fixed Preset or Free Size Preset, use the "+" and "-" buttons.

   + button increases the Preset #

   - button decreases the Preset #

   (Non-preset number is not displayed.)

   When the machine is turned off and turned on again, the previous setting is displayed.



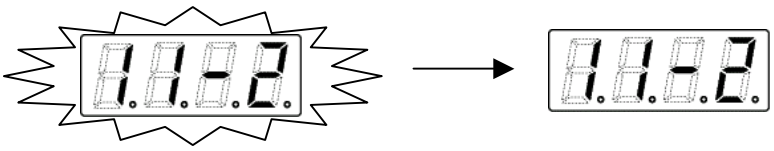
3. Select Preset cut size and follow "Preparation Before Operation" steps on page 9.

TO INPUT FIXED PRESET

Example:	No. 0	8.5” x 11”	Vertical	2-cut

1. Select preset No. 0 by pressing the speed up or speed down button.
   * The display blinks before being accepted.
2. Press the “+” button to accept the preset.
   To add more presets, repeat steps 1 and 2.

Blinking → Lights up



3. Fixed/Free Size Preset Setting is saved by pressing the JOG button.
   * The display blinks while being accepted. Do not turn off power during this stage.

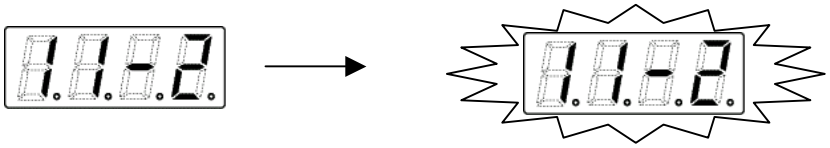
Blinking

TO CANCEL FIXED PRESET

Example:	No. 0	8.5” x 11”	Vertical	2-cut

1. Select preset No. 0 by pressing the speed up or speed down button.
2. Press the “-” button to cancel the preset.
   To cancel more presets, repeat steps 1 and 2.

Lights up → Blinking



3. Fixed/Free Size Preset Setting is cancelled all at once by pressing the JOG button.
   * The display blinks while being accepted. Do not turn off power during this stage.

Blinking

TO INPUT FREE SIZE PRESET

Example:	No. 13	5.5”

1. Select preset No. 13 by pressing the speed up or speed down button.
2. Input the cut size by pressing the “+” and the “-” buttons.
   To add more presets, repeat steps 1 and 2.

Lights up

3. Fixed/Free Size Preset Setting is saved by pressing the JOG button.
   * The display blinks while being accepted. Do not turn off power during this stage.

Blinking

TO CANCEL FREE SIZE PRESET

Example:	No. 13

1. Select preset No. 13 by pressing the speed up or speed down button.
2. Set cut size to “0”.
   To cancel more presets, repeat steps 1 and 2.

Blinking

3. Fixed/Free Size Preset Setting is cancelled all at once by pressing the JOG button.
   * The display blinks while being accepted. Do not turn off power during this stage.

Blinking

NOTES: When cut size is 2.5 - 9.9 inches: preset is available.
When cut size is 0: preset is cancelled.
To choose non-cut process (just feeding): choose “PASS” in fixed preset.

OPTIONAL CONVEYOR OPERATION

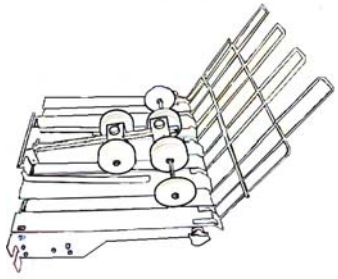
The optional Output Conveyor can be installed in the paper outfeed of the FD 4170.

The conveyor can be operated independently by following these steps:

1. Turn on power to place burster in Stand-by mode.
2. Start operation by holding down the STOP/C button and JOG button simultaneously.

LCD operation

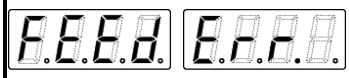
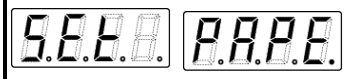
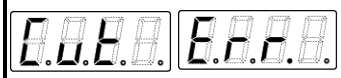
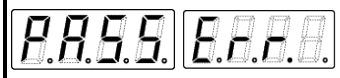
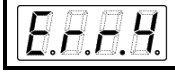
3. Independent operation mode finishes by releasing the JOG button.



TROUBLE-SHOOTING

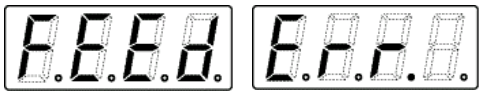
TROUBLE	REMEDY
Power will not turn on, even after pressing “I” side of power switch	Check that power cable is properly connected to the machine and an appropriate wall outlet
Machine does not operate or stops even after pressing the START button	Check the LCD display for an error message. Refer to Error Displays (on following pages), then complete the action required.

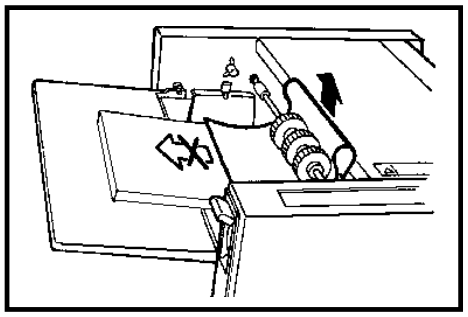
ERROR DISPLAY GUIDE

Display	Status and Solutions
[FEEd]→[Err.] 	Status: Paper jam in the paper feed part Solutions: Check the paper feed tray and remove jammed paper. After removing the jammed paper, press the STOP/C key to clear the error display. Details: Refer to the **How to deal with "[FEEd.]→[Err.]"** on page 16
[OPEn] 	Status: Safety cover is open. Solutions: Close the safety cover. Details: Refer to the **How to deal with "[OPEn]"** on page 16
[SEt]→[PAPE.] 	Status: No paper is set. Solutions: There is no paper in the paper feed tray. Place the paper in the paper feed tray or press the STOP/C key. Details: Refer to the **How to deal with "[SEt]→[PAPE.]"** on page 17
[PAPE.]→[LEFt] 	Status: Paper remains inside the machine (cut part). Solutions: Remove the paper and press the STOP/C key to clear the error display. Details: Refer to the **How to deal with "[PAPE.]→[LEFt]"** on page 18
[Cut]→[Err.] 	Status: Cut error Solutions: Remove the paper in the cut part or paper ejection part and, press the STOP/C key to clear the error display. Details: Refer to the **How to deal with "[Cut]→[Err.]"** on page 18
[PASS]→[Err.] 	Status: Paper jam in the paper ejection part Solutions: Remove the paper in the cut part or paper ejection part and, press the STOP/C key to clear error display. Details: Refer to the **How to deal with "[PASS]→[Err.]"** on page 18
[Err.1] 	Status: Main motor lock (Paper remains in the cut part or paper ejection part.) Solutions: Remove the paper and press the STOP/C key. Details: Refer to the **How to deal with "[Err.1]"** on page 19
[Err.5] 	Status: Overload Solutions: Turn off the power to the machine and leave it for over 3 hours.
Others 	Solutions: Turn off the power to the machine and then turn it on after a few seconds. If the same error message is displayed, note the error content and contact our service person.

CLEARING ERROR MESSAGES

How to deal with "[FEEd.]→[Err.]"

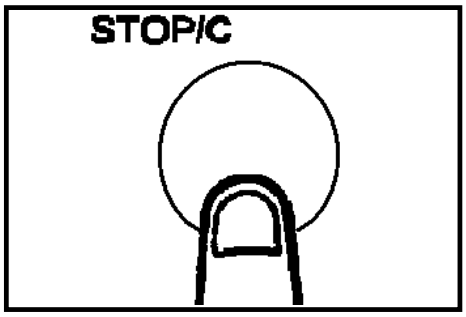




● **Paper feed part**

1. Remove the jammed paper at the entrance of the machine.

> **⚠ WARNING**
>
> **Be sure to remove the power plug from the outlet when working near movable parts due to paper jam**

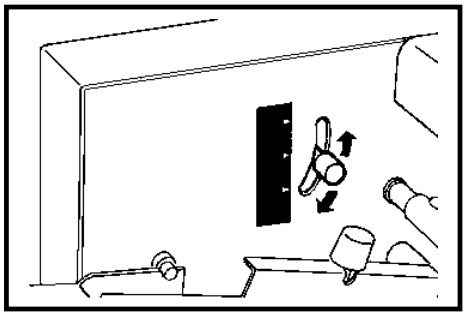


2. Press the STOP/C key to clear the error display.

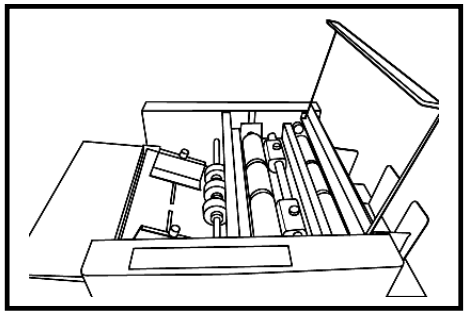
● **When misfeed has occurred:**

1. Adjust the paper feed pressure adjusting lever.

   * When double feed has occurred
     → Move the lever to "LIGHT".
   * When paper cannot be fed
     → Move the lever to "HEAVY".



How to deal with [OPEn]

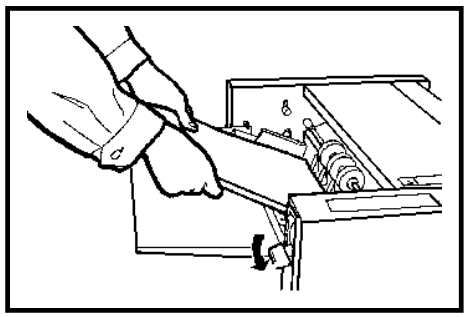


1. Close the safety cover.

   * The error display disappears by closing the safety cover.

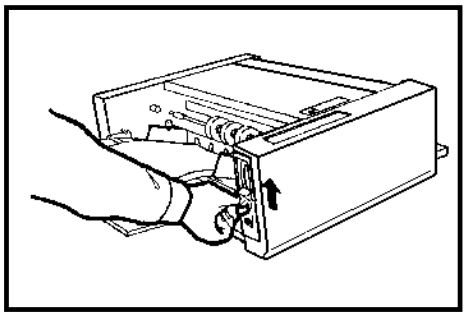
How to deal with [SEt]→[PAPE.]

1. Move the paper feed tray up/down lever downwards to place the paper on the paper feed tray.

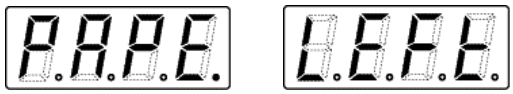


2. Move the paper feed tray up/down lever upwards.

   * The error display disappears by setting the paper or pressing the STOP/C key.

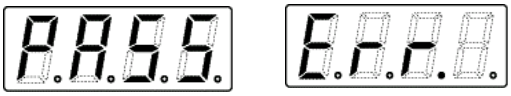


How to deal with [PAPE.]→[LEFt]

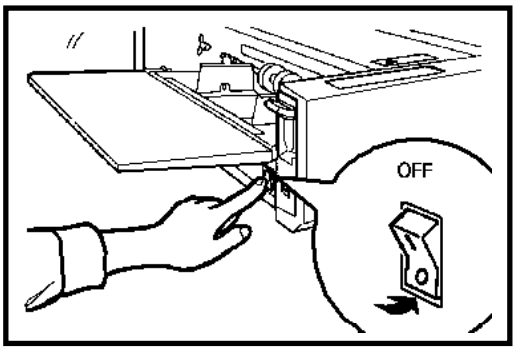


How to deal with [Cut]→[Err.]

How to deal with[PASS]→[Err.]



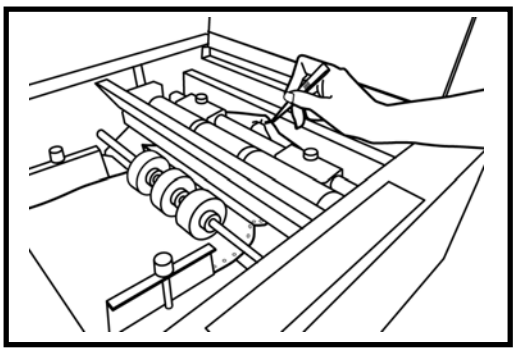
1. Press the “O” side of the power switch to turn off the power and remove the power plug from the outlet.



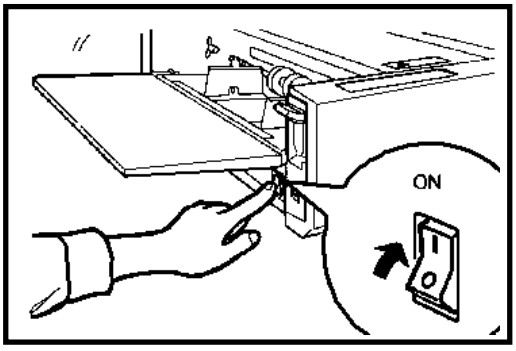
⚠ WARNING

Be sure to remove the power plug from the outlet when working near movable parts due to paper jam and so on.

2. Open the safety cover and remove the jammed paper with tweezers.
   * If the paper cannot be removed with tweezers, do not try to remove it forcefully.
   Follow the “● **Removing paper using the JOG key**“ on page 20



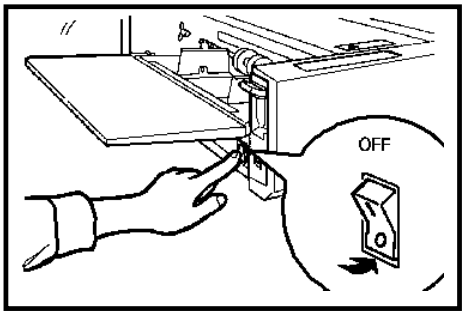
3. Close the safety cover. Connect the power plug to the outlet and press the “I” side of the power switch to turn on the power.
   * If “[PAPE.]→[LEFT]” still appears even after removing the paper, follow the “● **Cleaning sensor part**“ on page 21



How to deal with [Err.1]

If an excessive load is applied to the burster during operation due to paper jam, etc, the circuit breaker will shut down the machine. If that happens, follow the instructions below.

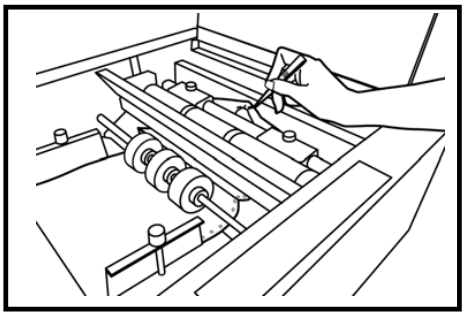
1. Press the “O” side of the power switch to turn off the power.



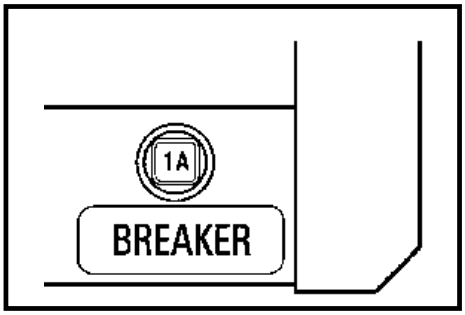
⚠ WARNING

Be sure to remove the power plug from the outlet when working near movable parts due to paper jam and so on.

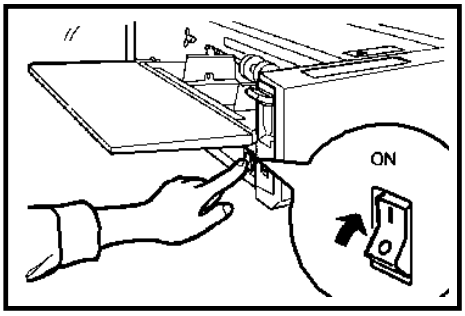
2. Remove the paper remaining inside the machine if there is any.



3. Confirm that there is no paper inside the machine and press down the breaker button sticking out.



4. Press the “I” side of the power switch to turn on the power. Now, the machine can restart.

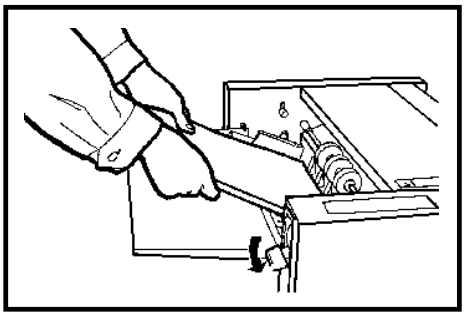


If the burster still does not start, contact your Service Technician.

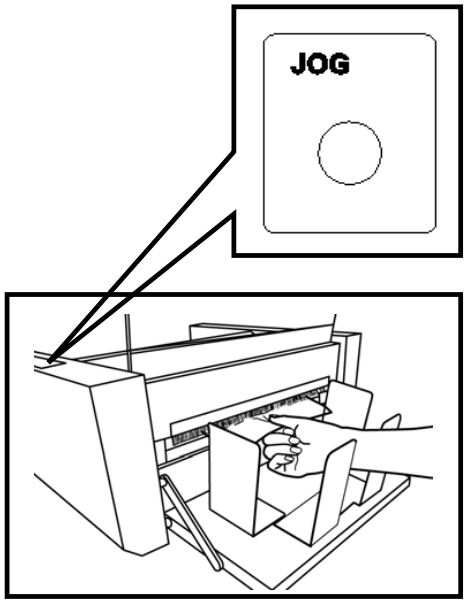
● Removing paper using the JOG key

1. Close the safety cover.

2. Remove the paper from the paper feed tray.



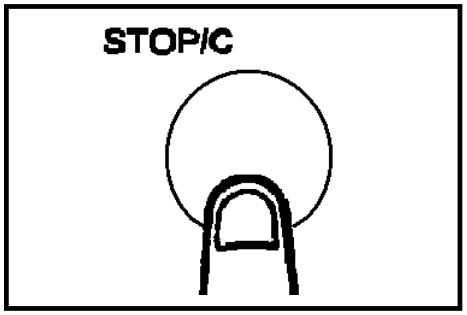
3. Pull out the paper with a hand while feeding it by holding down the JOG key.



NOTE: To use the JOG button, be sure to close the safety cover. Press the JOG button while watching the jammed paper as the jam may get worse.

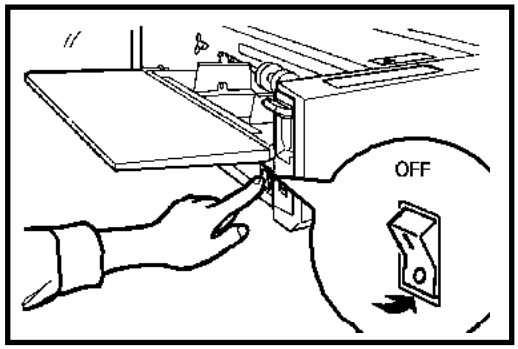
4. Set the paper again.

5. Clear the error display by pressing the STOP/C key.



● Cleaning sensor part

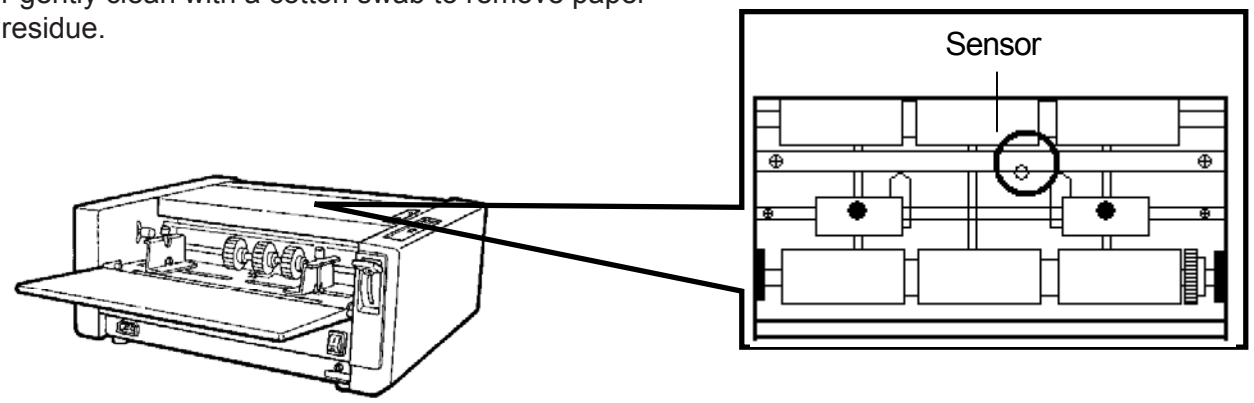
1. Press the “O” side of the power switch to turn off the power and remove the power plug from the outlet.



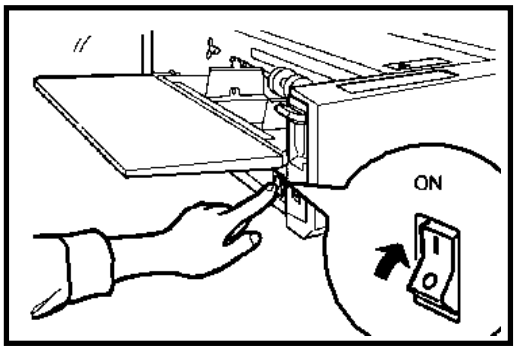
⚠WARNING

Be sure to remove the power plug from the outlet when working near movable parts due to paper jam and so on.

Open the safety cover. Spray the sensor with canned air, or gently clean with a cotton swab to remove paper dust residue.



3. Close the safety cover. Insert the power plug into the outlet and then press the “I” side of the power switch to turn on the power.



If the burster still does not start, contact your Service Technician.