

# OPERATION MANUAL

For

## Paper Folders MBM 306A & F-45N



A PRODUCT OF

# **MBM**

CORPORATION

The Leader in Paper Handling Equipment

1-800-223-2508

[www.mbmcorp.com](http://www.mbmcorp.com)

# Safety Instructions

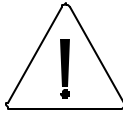
## Definition of Symbols and Notes

In this manual following names and signs stand for possible dangers.



### Danger

This Symbol stands for immediate danger threatening the life and health of persons. Disregarding these instructions may cause severe damage to health and even serious injuries.



### Caution

This symbol stands for an endangering situation that may occur. Disregarding these instructions may lead to slight injuries or damage to property.



### Note

This symbol stands for notes, operational hints and other useful information. They are convenient for exploiting the machine's functional abilities.

## Danger

	<p>Make sure that the machine is electrically grounded. This prevents an electric shock when there is a leak of electricity.</p> <p>Use the machine at 110 VAC with a frequency of 60Hz. A fire may start or the machine may break down if a higher or lower voltage is used, or if an electric current with a frequency that is not within the range of frequency stated above.</p> <p>Do not place any object on this machine. A fire may start or electricity may leak if water or a foreign object enters inside the machine.</p> <p>Handle the power cord with care. A fire may start or an electric shock may be caused if the cord is damaged, broken, or processed, if a heavy object is placed on the cord, or if the cord is bent forcibly.</p> <p>Do not pull the power plug out of or put it in the electric outlet using a wet hand. Otherwise, an electric shock may be caused.</p> <p>Do not remove the cover of this machine. Otherwise, an electric shock or injury may be caused.</p> <p>Do not remodel this machine. Otherwise, a fire may break out or an electric shock may be caused.</p> <p>If the machine is used when it is in an abnormal condition, such as generating heat, emitting smoke, and giving out a strange smell, a fire may break out or an electric shock may be caused. Turn off the power switch immediately and then pull the Power plug out of the electric outlet. Afterward, consult with your dealer.</p> <p>If abnormalities such as the power cord generating heat and giving out a strange smell are found, turn off the power switch immediately and then pull the power plug out of the electric outlet. Afterward, consult your dealer.</p> <p>If a foreign object enters into the machine, turn off the power switch first and then pull the power plug out of the electric outlet. Afterward, consult your dealer.</p> <p>If thunder approaches, pull the power cord out of the electric outlet to prevent a fire or breakdown caused by the falling of a thunderbolt.</p>
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## Caution



Do not let hairs, a necktie, or necklace hang above the drive of the machine. Doing so may cause an injury.

Do not put the machine on an unstable place such as a shaky stand and a slant floor. Doing so may cause the machine to drop or fall down, causing an injury.

Do not put the machine in a moist or dusty place. Doing so may start a fire or cause an electric shock.

Be sure to pull out the power cord while holding the plug. If the power plug is pulled out while holding the cord, a fire may break out or an electric shock may be caused.

Be sure to pull the power plug out of the electric outlet first when moving this machine. Otherwise, the cord may be damaged, causing a fire or an electric shock.

Be sure to pull the power plug out of the electric outlet for safety purposes when this machine is not used for consecutive holidays or for other reasons.

# Introduction

Thank you very much for purchasing the Paper Folder 306A/F-45N. This machine enables users to achieve greater efficiency in clerical work by releasing them from paper-folding work that has manually been performed in the past. Please read this Operation Manual carefully before using this machine.

This Operation Manual is good for both 306A/F-45N.

The explanation for functions of 306A is mentioned using *italic type* letters.

## Contents







Safety Instructions .....	1
Introduction.....	3
Contents .....	3
(1) Specification.....	4
(2) Accessories.....	5
(3) Part Names .....	6
(4) Designation and Functions of Operation Panel.....	7
(5) Indication of the Counter .....	8
(A) Addition Counting.....	8
(B) Batch Counting .....	8
(6) Set -Up .....	9
(7) Directions on Use .....	11
(A) Standard Folding of Standard-size Paper .....	11
(B) Manually Setting Standard Folding of Non-Standard-size Paper .....	13
(C) Cross Folding .....	15
(8) Adjustments.....	16
(A) Skew Adjustments.....	16
(B) Fine Adjustments .....	16
Fine Adjustment s for Table 1.....	17
Fine Adjustment s for Table 2.....	18
(9) Storage.....	19
(A) Memory.....	19
(B) Cancellation of Memory.....	20
(C) Cancellation of Total Memory.....	20

## (1) Specifications

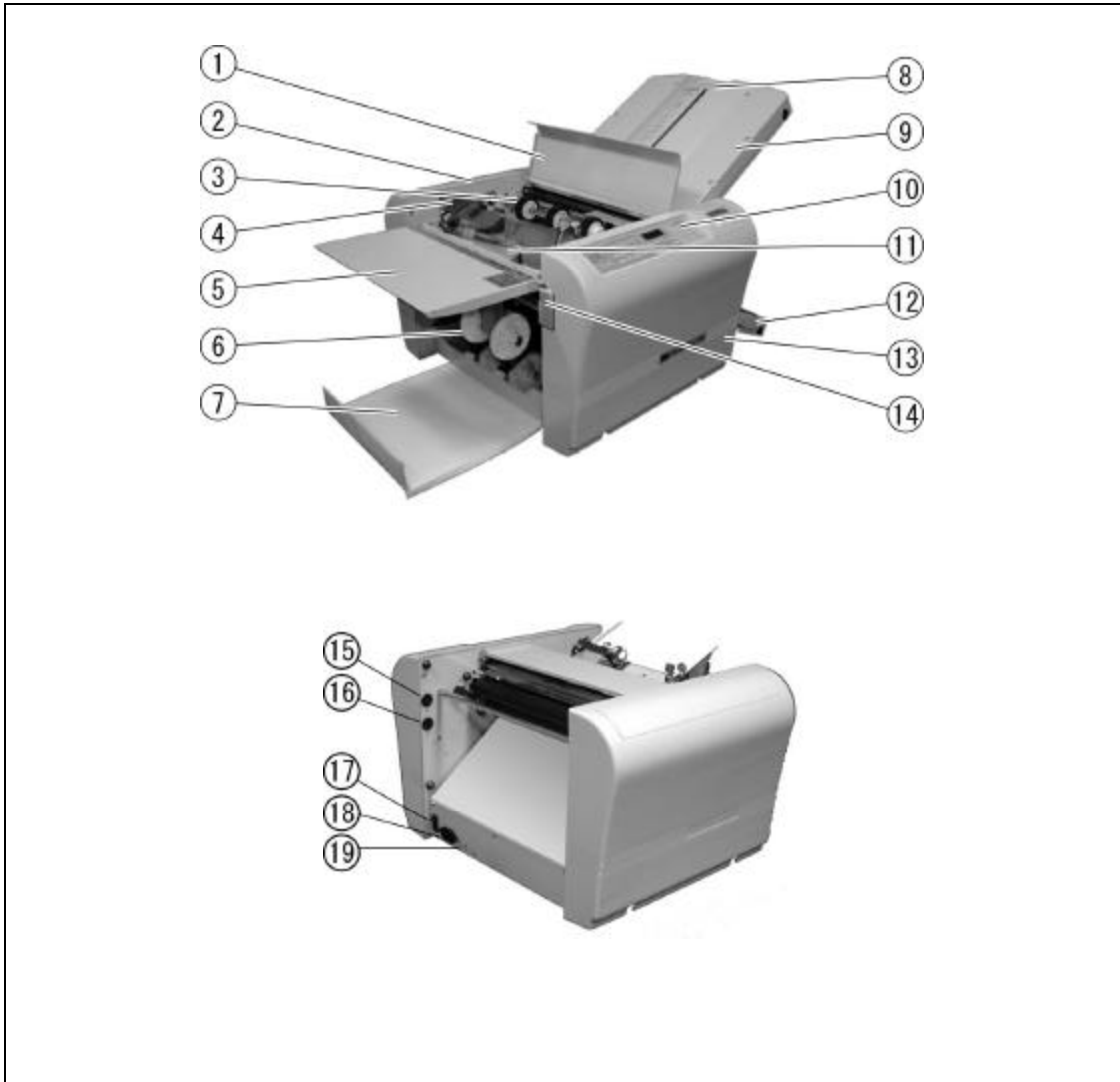
Model:	306A/F-45N
Paper sizes:	3.5" x 5.0" to 11" x 17" 3.5" X 5.0" size is for SINGLE fold only. 5" x 7.2" size cannot be folded into GATE.
Paper weight:	45 to 105g/m <sup>2</sup> (up to 152g/m <sup>2</sup> for single fold) 14 to 70 lb bond
Paper quality:	Woody paper, high-quality paper, high-quality paper for stencil printing, medium-quality paper
Fold types:	Single, gate, letter, zigzag, double parallel, and fold-out. In addition, irregular folding and cross folding using double fold are available.
Fold dimensions:	Maximum fold dimensions Table 1: 12.6" (zigzag, double parallel, and fold-out) Table 2: 8.5" (single, gate, and letter)
	Minimum fold dimensions Table 1: 2.0" (gate and letter) Table 2: 1.6" (single, zigzag, double parallel, and fold-out)
Paper feed system:	Three-roller friction feed system
Maximum capacity:	500 sheets (20 lb bond)
Folding speed:	3700 to 11520 sheets per hour (single fold using Letter size paper)
Control system:	Automatic setting by a built-in microcomputer
Additional functions:	Skew correction device Paper jam detector Four-digit counter with addition/subtraction modes Automatic paper size detector (Letter, Legal & Ledger sizes) Memory function : 6 kinds Auxiliary paper guide for cross fold Perforating Option
Noise	80dB
Power consumption:	75W, 0.7A
Power source:	110-120 VAC/60Hz
Dimensions:	34.25" x 20.9" x 20.5" (during use) 26" x 20.9" x 20.5" (during storage)
Net weight:	74 lb      Shipping Weight: 86 lb
Option:	Perforator table assembly with a 2-mm or 4-mm perforation cutter

## (2) Accessories

Make sure that the following accessories are included in the package after opening it. Contact your dealer immediately if there are missing accessories.

Accessories	Number	Figure
Table 1	1	
Table 2	1	
Power cord	1	
Paper support feed guide (right and left)	Right 1 Left 1	
Machine cover	1	
Operation Manual	1	
Paper Eject Roller	1	

### (3) Part Names



Number	Name	Number	Name
1	Roller cover	11	Paper feed table
2	Left side cover	12	Table 2
3	Paper feed roller	13	Right side cover
4	Paper guide	14	Paper feed table lever (306A only)
5	Auxiliary feed table	15	Table 1 socket
6	Paper eject roller	16	Table 2 socket
7	Paper ejection table	17	Power switch
8	Stopper fine adjustment knob	18	Inlet
9	Table 1	19	Circuit breaker
10	Control panel		

## (4) Operation Panel And Functions

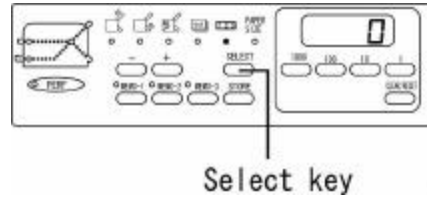
No.	Designation/Indication	Function
1	Fold type key	Six folding types can be input and stored.
2	Test key	Test folds two sheets without counting.
3	Start/Stop key	Operation, if pushed again the machine stops.
4	Clear/Reset key	Clears counter indication and resets error.
5	Store key	Fold position after adjustment is stored.
6	Memory 1/2/3 key	Three special folding types are stored. (Only for F-45N)
7	Select key	Used for selecting the indication of the counter, the position of the stopper stud of Table 1 and 2, the position of paper eject roller, paper length.
8	Perforation mode lamp	It lights when the optional perforating unit is installed.
9	+ /? key	Used for adjusting the position of the stopper of Table 1 and 2, the position of paper ejection roller, paper length
10	Speed adjustment key	Used for adjusting the speed.
11	Numerical key	Used for inputting a number of sheets to be folded and the length of non-standard-size paper
12	Counter	Shows the number of sheets, the position of the stopper pin of Table 1 and 2, and paper size.
13	Check lamp	It lights when paper stock runs short, or indicates the location where paper feed trouble occurs.
14	Table 1 stopper move mode lamp	It lights when the position of stopper of Table 1 is adjusted.
15	Table 2 stopper move mode lamp	It lights when the position of stopper of Table 2 is adjusted.
16	Paper ejection roller move lamp	It lights when the position of the paper ejection roller is adjusted. (Only for F-45N)
17	Paper length input mode lamp	It is on when paper length is input (only for F-45N)
18	Counter input mode lamp	It lights when reduction is indicated on the counter.
19	Paper size input mode lamp	It lights when paper size is indicated.



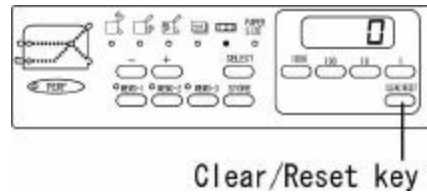
## (5) Indication of the Counter (A) Addition Counter

The number indicated on the counter increases by one each time a sheet of paper is folded.

Press the Select key and select the Counter Input Mode Lamp 123



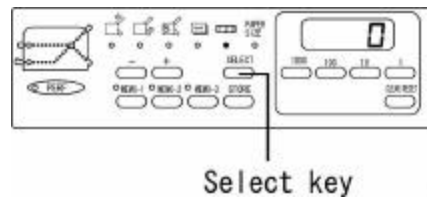
Press the Clear/Reset key and reset the number to zero (0).



## (B) Subtraction Counter

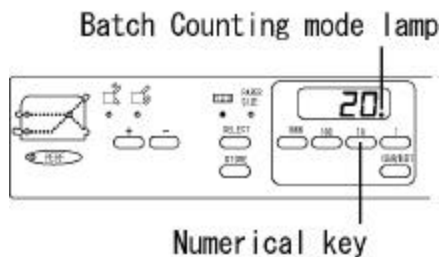
The number indicated on the counter decrease by one each time a sheet of paper is folded.

Press the Select key and select the Counter Input Mode Lamp 123



Input the desired number using the Numerical keys.  
(20 is input in this case)

Subtraction Mode Lamp will light.



## (6) Set-Up

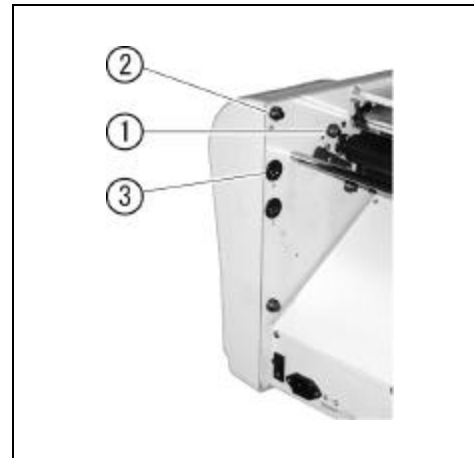
Install Table 1 and 2 at the machine.

Insert the front notched part of Table 1 into the stud 1 of the machine and drop its rear notched part on the stud 2. Insert the plug into the connector 3.

**Caution:**

The connector has its direction.

Insertion by force may cause trouble.

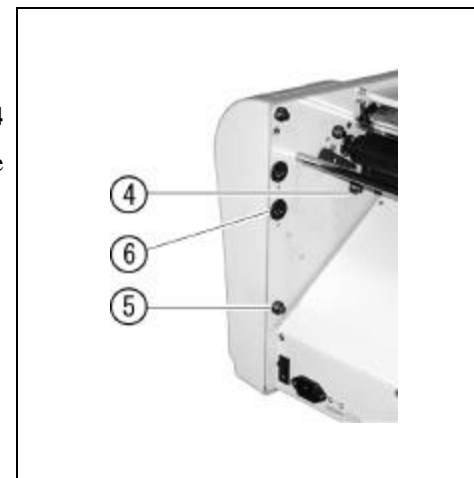


Insert the front notched part of Table 2 into the stud 4 of the machine and drop its rear notched part on the stud 5. Insert the plug into the connector 6.

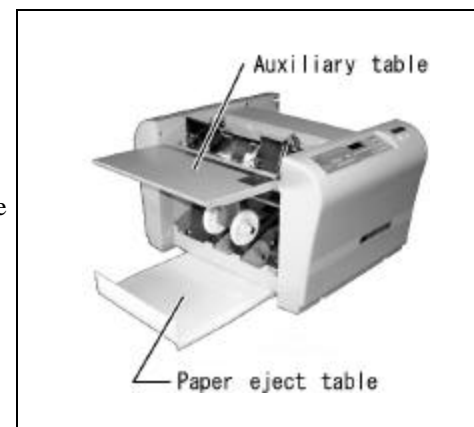
**Caution:**

The connector has its direction.

Insertion by force may cause trouble.



Pull the papereject table out and set it while lifting the auxiliary table to set it in position.

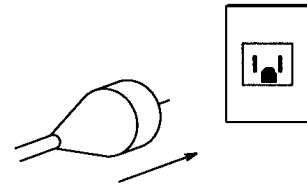


Insert the power cord into the outlet.

**Caution:**

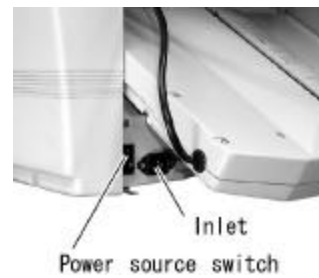
Do not use any power cord other than provided as an accessory.

The shape of outlet differs according to the country.



Insert the power cord into the inlet.

When the power switch is on, the stoppers of Table 1 and 2 move to the origin . (zero position)



## (7) Directions for Use

### (A) Standard folding of standard-size paper

#### •F45N

How to perform standard folding of standard-paper

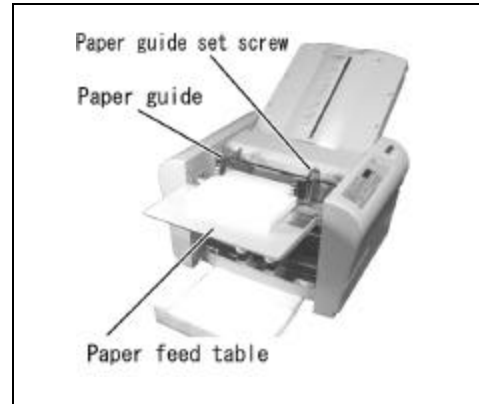
After the power switch is on...

Set the standard-size paper. Loosen the paper guide setscrew and set the paper guide to fit the width of the paper.

Place the paper on the paper feed table with its printed side facing up (its printed side down in case of fold-out) after neatly arranging it.

Make the paper guide closely contact the paper, and tighten the setscrew.

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#### •306A

How to perform standard folding of standard-paper

After the power is on ...

Raise the paper feed table lever.

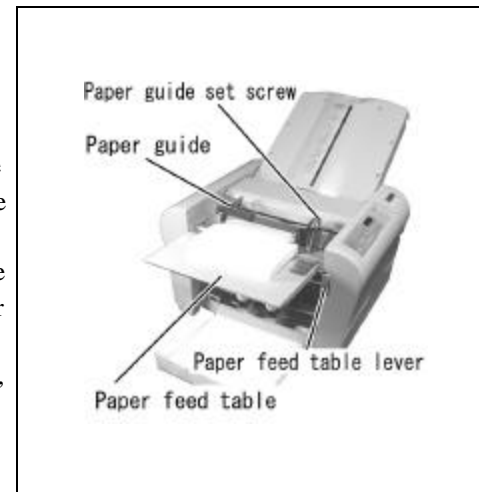
Set the standard-size paper. Loosen the paper guide setscrew and set the paper guide to fit the width of the paper.

Stack the paper on the paper feed table with its printed side facing up (its printed side down in case of fold-out) after neatly arranging it.

Make sure the paper guide closely contact the paper, and tighten the setscrew.

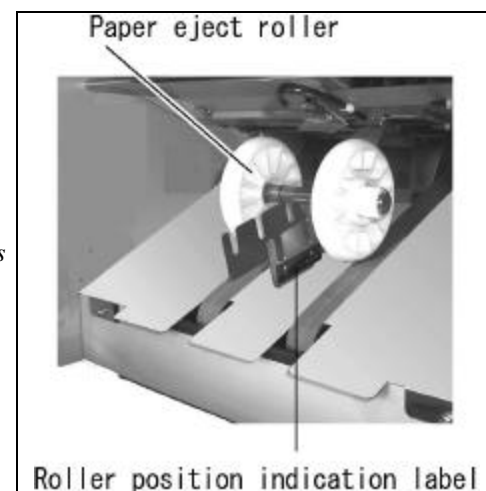
Lower the paper feed table lever.

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#### ***Setting the paper ejection roller (306A only):***

*Move the paper ejection roller to the position that fits the size of paper being used.*



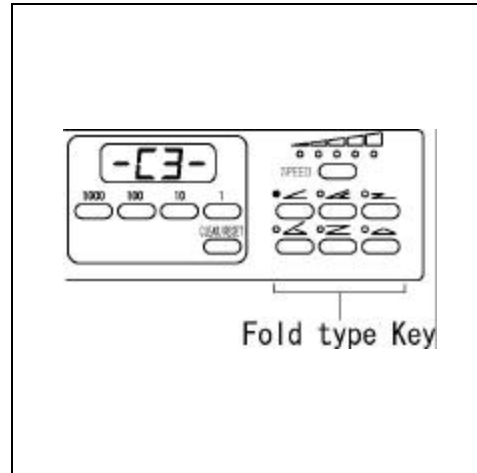
**Selecting a folding type:**

One of the six folding types (Single, Gate, Letter, Zigzag, Double Parallel, and Fold-out) can be selected. Press the desired fold type key.

**Example:**

Single folding using letter size paper.

- Letter size (11" length) – C1
- Legal size (14" length) – C2
- Ledger size (17" length) – C3



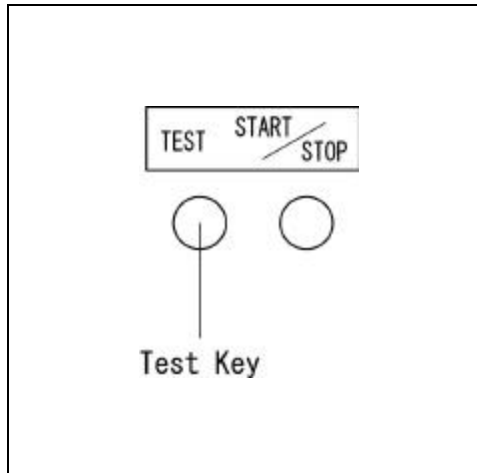
**Test folding:**

If the Test key is pressed, two sheets will be folded while not affecting the indication of the counter. Check if the second sheet of paper has been folded correctly.

To correct skews refer to Adjustment on page 16

Caution:

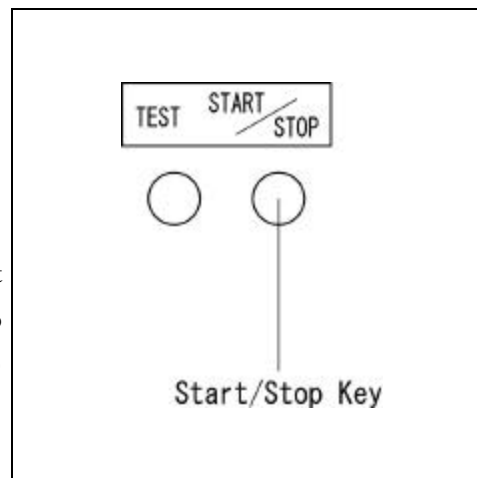
In case the stopper fine adjustment knob is moved, make sure to press TEST key for confirmation before START key is pressed. Otherwise, fine adjustment will not be recognized.



**Continuous folding:**

When the Start/Stop key is pressed, the machine will continuously fold the paper.

When the Start/Stop key is pressed while the machine is in operation, the machine will stop the operation, but addition on the counter will continue. If you wish to fold only the number of sheet desired, refer to subtraction counter function.

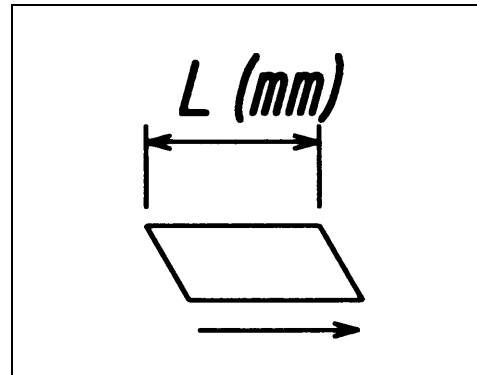



## (B) Standard Folding of Non-standard-size Paper

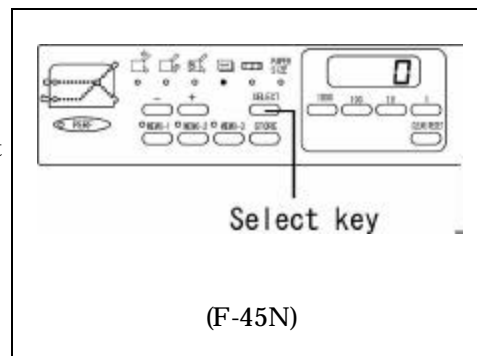
### Determine the Paper Length

Measure the paper length.

The arrow indicates the direction of paper feeding.

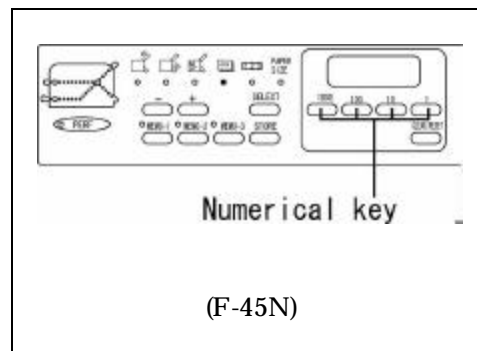


Press the Select key and select the Paper Length Input Mode. 



(F-45N)

Input the paper length using the Numerical keys.

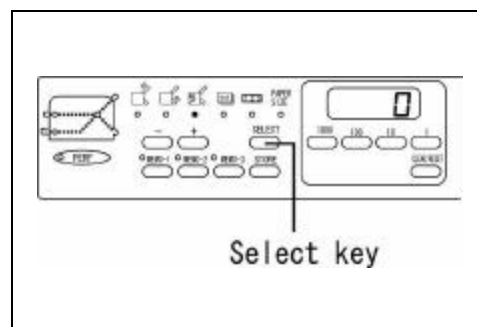


(F-45N)

Setting the paper eject roller.

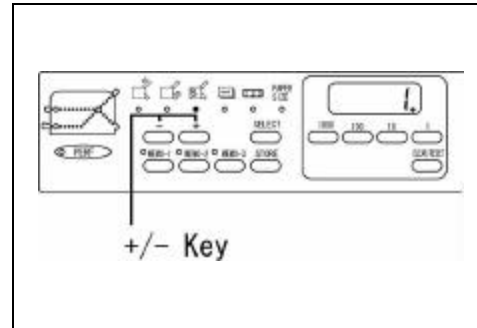
### •F-45N

Select the paper ejection roller move mode using the Select key.



Set the designated position using the +/- key.

Indication	1	2	3
Standard-size paper	C1	C2	C3
Non-standard-size paper	Setting the designated position		



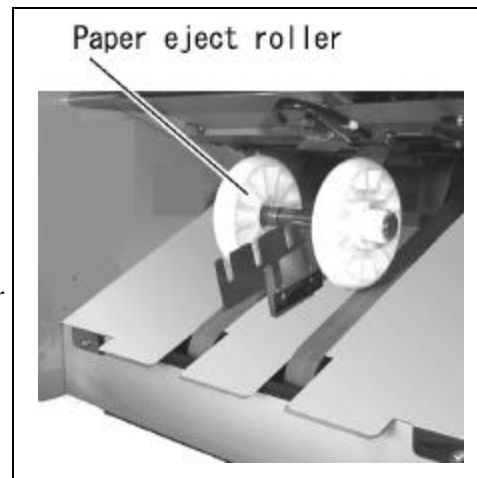
**Setting the paper ejection roller:**

•306A

It moves to the position to fit the paper size.

**Advice:**

Concerning positioning of the paper size and the paper ejection roller, refer to “Roller position indication” seal. If ejection is not performed properly, set at a different position.



**Note:**

Calculate the position of the table 1 and table 2 stopper in relation to the measurement value L on page 13.

**Example:**

In the case of performing the zigzag fold using sheets of paper 300mm in length:

Table 1 =  $300 \times (2 / 3) = 200\text{mm}$

Table 2 =  $300 \times (1 / 3) = 100\text{mm}$

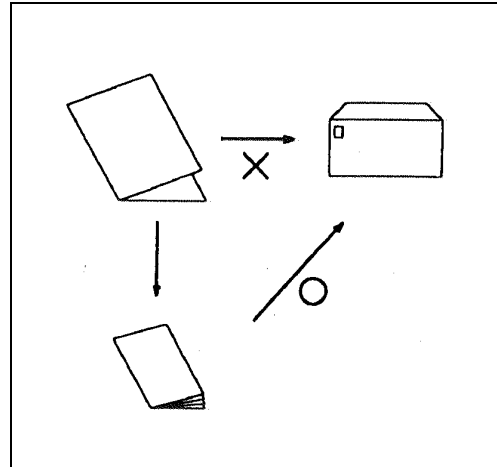
**Fold-Stopper Position Chart**

	Table 1	Table 2
SINGLE	Original position	1/2
GATE	1/4	1/2
LETTER	1/3	1/3
ZIGZAG	2/3	1/3
DOUBLE	1/2	1/4
PARALLEL FOLD-OUT	3/4	1/4

## (C) Cross Folding

Cross folding refers to performing the double parallel, letter, or other types of folds for the sheets of paper already folded in the single fold.

Cross folding can be used if, for example, a sheet of ledger size paper folded using the double parallel folding method is still too large to be enclosed in envelope.



### **Note:**

The maximum weight of paper that can be used for cross folding is 28lb bond.

This requirement, however, varies according to the following conditions:

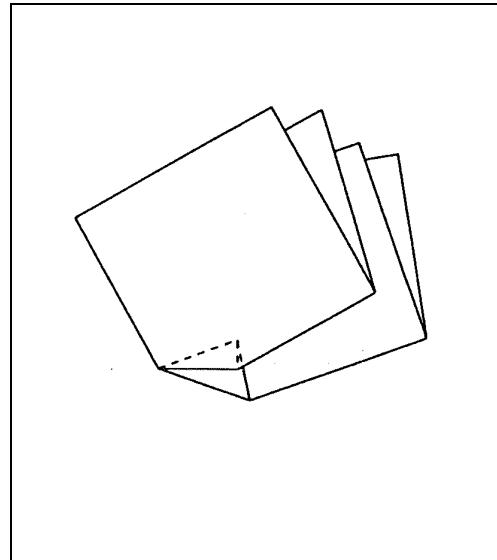
Paper type; Paper size;

Whether grains run lengthways or sideways;

Temperature and relative humidity;

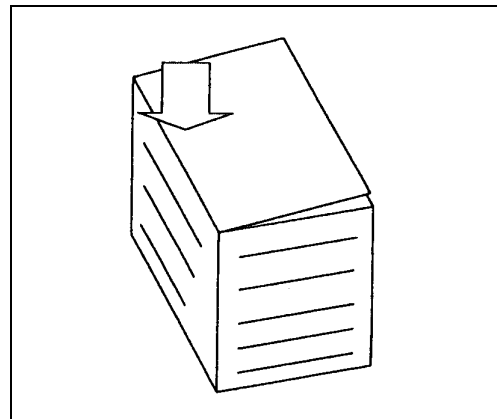
Printing condition.

The folding position may be displaced to a greater extent than when the paper is folded using a regular fold method, or a corner of the folded paper may be folded inside as indicated in the figure. These, however, do not mean that the machine has malfunctioned.



### **Note:**

- 1.) Move the paper feed rollers on both sides to proper position in advance so that all of the rollers can feed paper stock.
- 2.) Flatten the crease hard using the hand. Do not stack too many sheets of paper on the feed table.
- 3.) Use paper support guide(s) to help hold paper down

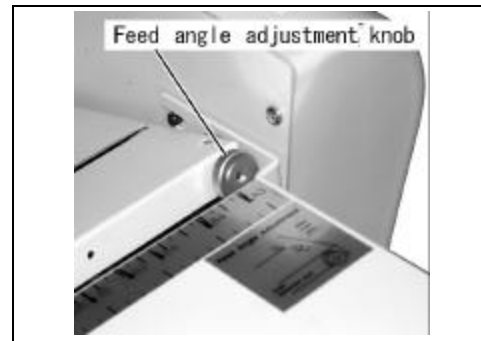




## (8) Adjustment

### (A) Skew Adjustment

If the folding position is slanted because the edges of the paper are slanted or for other reasons, it can be adjusted using the skew adjustment knob.



### (B) Fine Adjustment

Move the stopper using the stopper fine adjustment knob.

Caution: In case the fine adjustment knob is moved, when the Test key is pressed, the machine will continue to fold, when the Start/Stop key is pressed, the machine will start to fold after the stopper is returned to the previous position



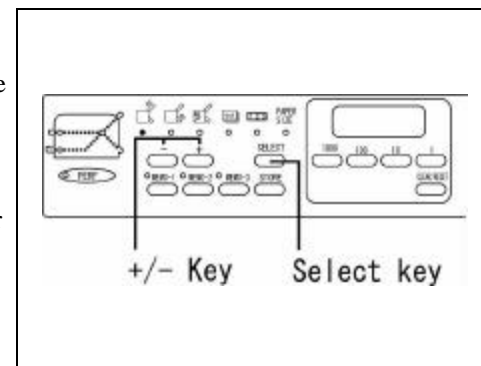
#### Note:

When the stopper is moved largely, it will be convenient to use the + /- key.

Adjusting Table 1

Press the Select key and select the Table 1 Stopper Move Mode.

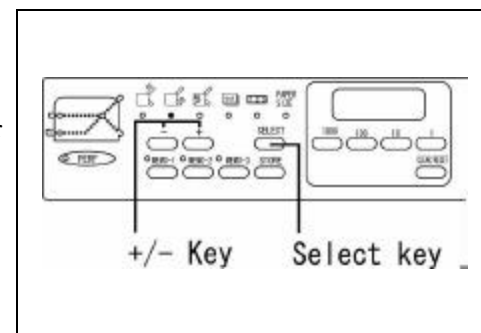
Press the + /- key and move the stopper to the desired position.















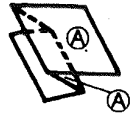


Adjusting table 2

Press the Select key and select the Table 2 Stopper Move Mode.

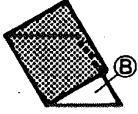


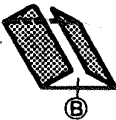


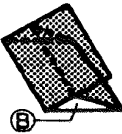








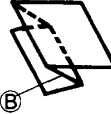


Press the + /- key and move the stopper to the desired position.



## Fine Adjustment for Table 1

Fold type		Folded (A)	Direction to turn the Table 1 fine adjustment knob
Single fold	Table 1 is not used		
Gate fold		Long	
		Short	
Letter fold		Long	
		Short	
Zigzag fold		Long	
		Short	
Double parallel fold		Long	
		Short	
Fold-out Fold		Long	
		Short	

## Fine Adjustment for Table 2

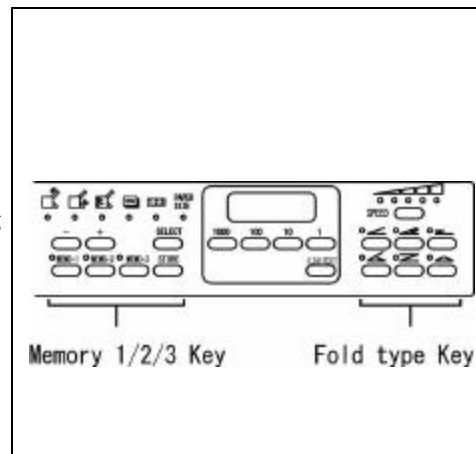
Fold type		Folded (B)	Direction to turn the Table 2 fine adjustment knob
Single fold		Long	
		Short	
Gate fold		Long	
		Short	
Letter fold		Long	
		Short	
Zigzag fold		Long	
		Short	
Double parallel fold		Long	
		Short	
Fold-out fold		Long	
		Short	

## (9) Memory (A) Storage

### •F-45N

Storage of Non-standard folds can be input in the Memory 1/2/3 keys and the Fold type keys.

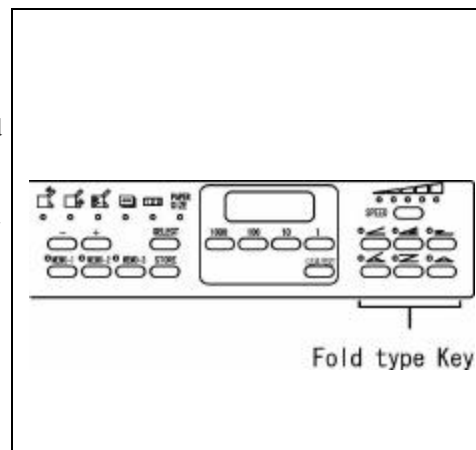
What is stored is the positions of the Table 1 and 2 stoppers, the position of the ejection roller and folding speed.



### •306A

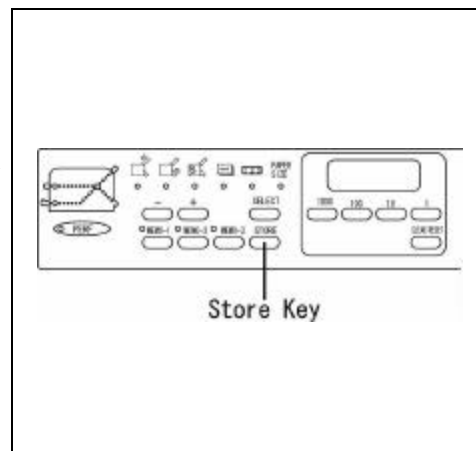
Storage of Non-standard folds can be input in the Fold type keys.

What can be stored is the position of the Table 1 and 2 stoppers and folding speed.



Select the key in which the storage will be input.  
Keep pressing the Store key and release immediately when the alarm rings once.

The lamp of the key in which the storage has been input will flash.



## (B) Cancellation of Memory

Cancel the storage input in the memory 1/2/3 keys and the fold type keys

**Important:**

The machine will be enabled to perform standard folding set by the manufacturer.

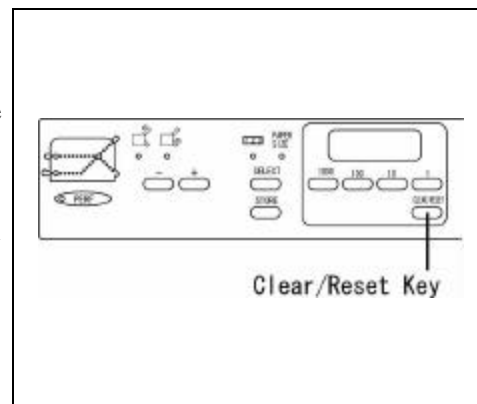
Select the key in which the memory is to be cancelled.

**Important:**

The lamp of the key in which the storage is input flashes.

Keep pressing the Clear/Reset key and release immediately when the alarm rings once.

The lamp of the key in which the storage has been cancelled will light.



## (C) Cancellation of total memory

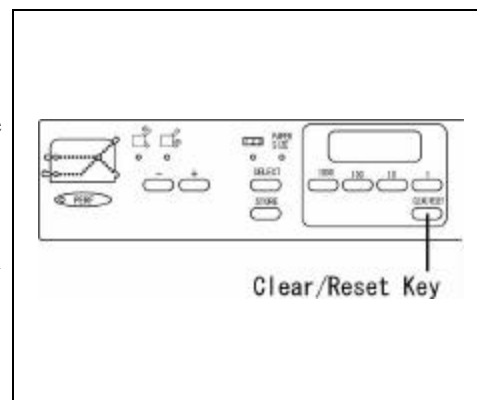
Cancel all storage input in all the keys.

**Important:**

The machine will be enabled to perform standard folding set by the manufacturer.

Keep pressing the Clear/Reset key and release immediately when the alarm rings twice.

The lamp for the key of which the storage has been cancelled will light.



**MBM Corporation**