

FORMAX[®]

7100 Series

High-Volume Modular Inserter

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1 INTRODUCTION

With this inserter you have an advanced, medium-volume folding and inserting machine. Its modular construction allows up to 8 feed units to be fitted, with a maximum of 17 feed trays. Sophisticated software control optimises the order and flow of documents for collating at the insert head before insertion into the envelope. All fold and adjustments take place automatically according to the requirements programmed in by the operator.



In order to ensure the long usage of this machine and its components, and above all the safe use of the machine, you must read and adhere to the operating instructions and safety notes. Always be aware of all warnings and notes that are mounted or noted on the machine itself.

All persons entrusted with the handling of this machine must also be familiar with the operating manual.
Save this handbook carefully, so that the information it contains may be available at all times.

1.1 Pictograms



General Warnings



Warning of danger from electricity or electrical shock



Information / Note indicating important information regarding the handling of the machine.

1.2 Notes on the Use of this Handbook

This document contains all general information and explanatory text necessary in order to be able to carry out the operation of the machine.

When some action is expected from the operator, this will always be explicitly stated, and where relevant, accompanied by an illustration or graphic.

Always read through each step, so that you will obtain all of the necessary information. Do not anticipate what you believe will follow in the handbook: It will prevent you from making mistakes!

Chronology and Reference

This handbook is structured chronologically, and therefore ordered sequentially for the operationally ready machine. It assumes that the machine has been installed in the correct environment by an Authorised Service Engineer and that the operator or his or her supervisor has had a degree of operator training.

When you are unfamiliar with the machine, it is best to read through the handbook from beginning to end. You will be guided step by step, and in this way you can easily and quickly have the machine in operation.

If you are already familiar with the machine, it will make thing easy if you use this handbook as a reference work.

2 SAFETY NOTES

For your own safety and the operating safety of the machine, read the following notes carefully before starting your machine. Always be aware of all warnings and notes that are mounted or noted on the machine itself. Save this handbook carefully, so that the information it contains may be available at all times.

The machine is of advanced construction and reliable in operation. Nevertheless, the device does present hazards when operated by untrained personnel. The same applies to use that is inappropriate and not in keeping with its intended purpose.

In not adhering to this handbook, there is the danger of

- an electrical shock,
- injuries from the intake at the rotating rollers,
- damage to the machine.

2.1 General safety notes



Caution!

Please, read these notes with care.
Save these instructions for later use.
All notes and warnings found on the machine are to be followed.

Installing the machine

Important! The machine must be installed only by an Authorised Service Engineer. A safe, level position is necessary, when installing the machine, with sufficient space all round to operate it. The machine is to be protected from moisture. If moving the machine, ensure that the castor brakes are **off**, and push on the stand, not the machine.

Ensure there is at least 1 metre of free space between the operator side of the machine and a wall or barrier. To provide access to the mains switch, the opposite side of the machine must be at least 150mm from a wall or barrier. Do not place surrounding furniture or other objects where your path may be obstructed.

Electrical danger

The machine may only be connected to a voltage of 230V/50Hz or 115V/60 Hz, depending upon model. The mains plug may only be connected with a socket having an installed protective contact! The protective effect will be compromised by the use of an extension line without a protective grounding conductor. All interruptions of the protective grounding conductor, within or outside of the machine, are prohibited. The device is double pole fused! When fuse failure occurs, electrical machine parts can still carry voltage. When making the connection to the mains power, be aware of the connection values on the nameplate. Inspect the voltage setting on the device's power input module. Run the supply lines in such a way, that no-one may trip over them. Do not place any objects upon the supply line. When the machine is not in use over a long period of time, it should be disconnected from the power supply. In this way, damage would be prevented in the event of excess voltage. Protect the device from moisture. When moisture enters the machine, there is the danger of electrical shock. Never open the machine except the top cover. For reasons of electrical safety, the machine may only be opened by authorized Service Agents.

Operating safety

Never reach into the machine when it is running! This could only occur if a safety interlock were to fail. The danger of injuries exists, through pulling in and crushing on the rotating rollers. In addition, keep long hair and parts of loose clothing far from the machine in operation. **If a safety interlock fails, your Service Agent must be contacted immediately!** In order to prevent damage to the machine, only factory authorized accessory parts should be used.

Cleaning the machine

Prior to cleaning the exterior of the machine, it should be disconnected from the power supply. When cleaning the machine, do not use liquid or spray cleaners, but only a cloth dampened with water.

Cleaning sensors

When cleaning sensors use **only** non-flammable airdusters, eg. part number E0070A. Other types may use flammable propellants, which could result in fire or explosion.

Allow machine to be checked by the Service Agent

In the following cases, the mains plug must be unplugged and the device left for the authorized Service Agents:

- When the mains cable or plug is worn or damaged.
- When water or other liquid has entered the device.
- When the device does not function properly, in spite of following the instructions provided.
- When the device has fallen down or the housing is damaged.
- When there are noticeable differences in the normal operation of the machine.

Spare Parts

When repair work is carried out, only original spare parts or spare parts corresponding to the original parts may be used.

Repairs

Do not disassemble the machine any further than is described in this handbook. Other than the top cover, the opening of the machine by unauthorized personnel is not permitted. Repairs may only be carried out by an authorized Service Agent.

Modification is not permitted:

For safety reasons, your own reworking and modifications are not permitted.



Please contact your Service Agent, for all questions relating to service and repair. In this way, you ensure the operational safety of your machine.

3. TECHNICAL SPECIFICATION

3.1 Machine rating sheet

1. **CAUTION:** In order to ensure correct safety and operation, this machine must only be installed and maintained by an authorized Service Engineer.
2. **CAUTION:** Should any cover or safety interlock be damaged, the machine must not be used until service repairs have been completed.
3. **CAUTION:** **This machine must be earthed.** The wire colours in the mains power cord are:
(Green 115v) which must be connected to Earth (Ground).
(White 115v) which must be connected to Neutral.
(Black 115v) which must be connected to Live (Line).
4. **CAUTION:** This machine must not be used if the power cord becomes damaged. It must be replaced with a similar power cord:
(Part No. 162-321 US).
5. **CAUTION:** For continued protection against risk of fire, replace with same type and rating of fuse. The fuse rating/type for this machine is :

6. **Model Details:** T 10 A Amps 115Volts (Part No. 135-110).

Model Name: 7100 series

Input Voltage: 115 Volts @ 60 Hz

Input current: 7 Amps

Sound Reading: 75dBA

(measured at a distance of 1 meter from the nearest cover and a height of 1.6 meters from the ground)

7. The use for this machine is for collating, folding and inserting documents into an envelope.

8. The weight of this machine is: 290 kgs (unpackaged)
400 kgs (packaged, with accessories)
Based on a configuration 3 x Feeders and a Tower Folder

Lifting or handling must only be carried out by competent persons using appropriate means.

4 MACHINE LAYOUT GUIDE

4.1 Description of machine

The function of the machine is to feed forms from a number of hoppers, fold them in either 'C', 'Z', 'V' or double forward fold and insert them into an envelope which is then sealed and ejected. Further form(s) may optionally be collated with the first form, either by folding together or collating on the track. Inserts (cards, cheques etc.) may also be collated on the track before inserting. The machine is OMR/Barcode compatible, allowing a group of forms to be collated in the accumulator prior to folding. Forms may be inserted without sealing the envelope for subsequent hand insertion of card, gift etc. Multiple insertions may also be used, ie. a preset number of forms (or combination of forms) are separately inserted into the collation pocket in the inserter head. There is a batch processing facility, allowing a preset number of cycles to be completed before the machine automatically stops.

The machine consists of a number of modules, depending upon the build ordered - these modules are briefly described below:

- a) **Inserter head** - Collates all documents in a pocket before insertion, feeds the envelope, inserts the pack and seals the flap.
- b) **Insert Feeder** - Feeds shortform inserts (cards, cheques, booklets etc.) onto the track for subsequent insertion. Available as a single feeder with one feed hopper, or tower feeder with two feed hoppers. An OMR/Barcode version (with one feed hopper) is also available.
- c) **Feeder Folder** - Mounts on the track, either in conjunction with a tower folder (see below) or as the last station. Feeds and folds same size stationery as a tower folder, but using a 2-plate folding mechanism. An OMR/Barcode version (with one feed hopper) is also available.
- d) **Tower Folder** - Mounts in the last station position and fitted with either one or three trays depending upon option. Includes a 3-plate folding mechanism, handfeed tray and an optional accumulator and/or single divert bin.

The machine has a capacity for 20 programs which allow combinations of settings to be retained in memory. Any program can then be recalled later and immediately run, and can also be changed or renamed by the operator. *Select & Go*, a self-programming facility is also fitted. This allows a temporary program with reduced settings to be rapidly set up by an untrained operator, who need only load the stationery into any suitable hopper. For full programs, the machine's software decides which hoppers to use, according to the job parameters - the display then tells the operator where to load the stationery for optimum efficiency and speed.

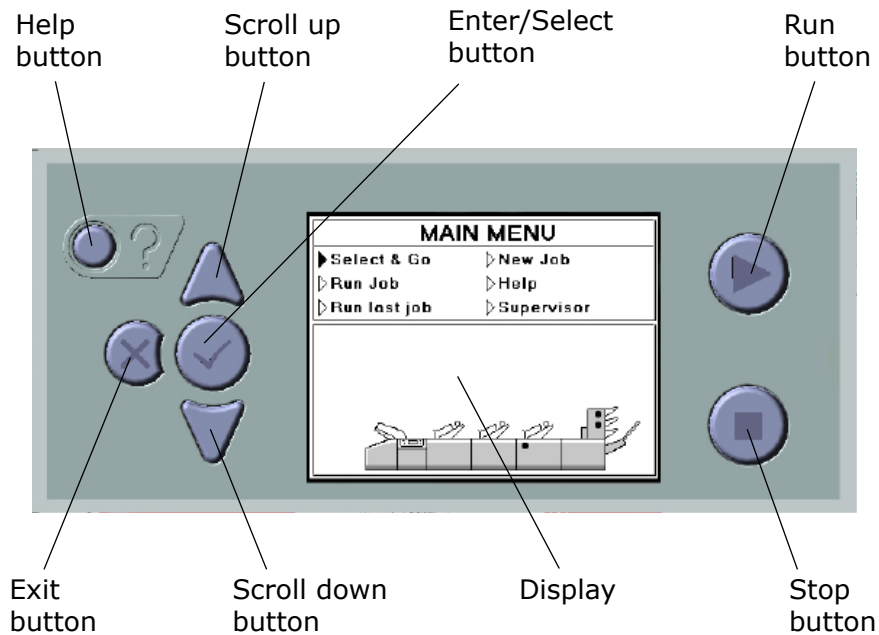
A daily post function can be used on the handfeed tray built into a tower folder, or as an option on a feeder folder. This allows groups of documents, stapled or loose, to be hand-fed; they will then be folded and inserted into an envelope. If other hoppers are loaded, further forms can be collated.

No manual setting of the fold plates or envelope closer is required, these being adjusted automatically according to the settings in the selected program.

A Graphical User Interface is fitted to the control panel from which all functions and programming operations are performed and which also provides advice messages should errors occur.

An optional output conveyor can be specified, to replace the standard receiving tray. This is available in two lengths

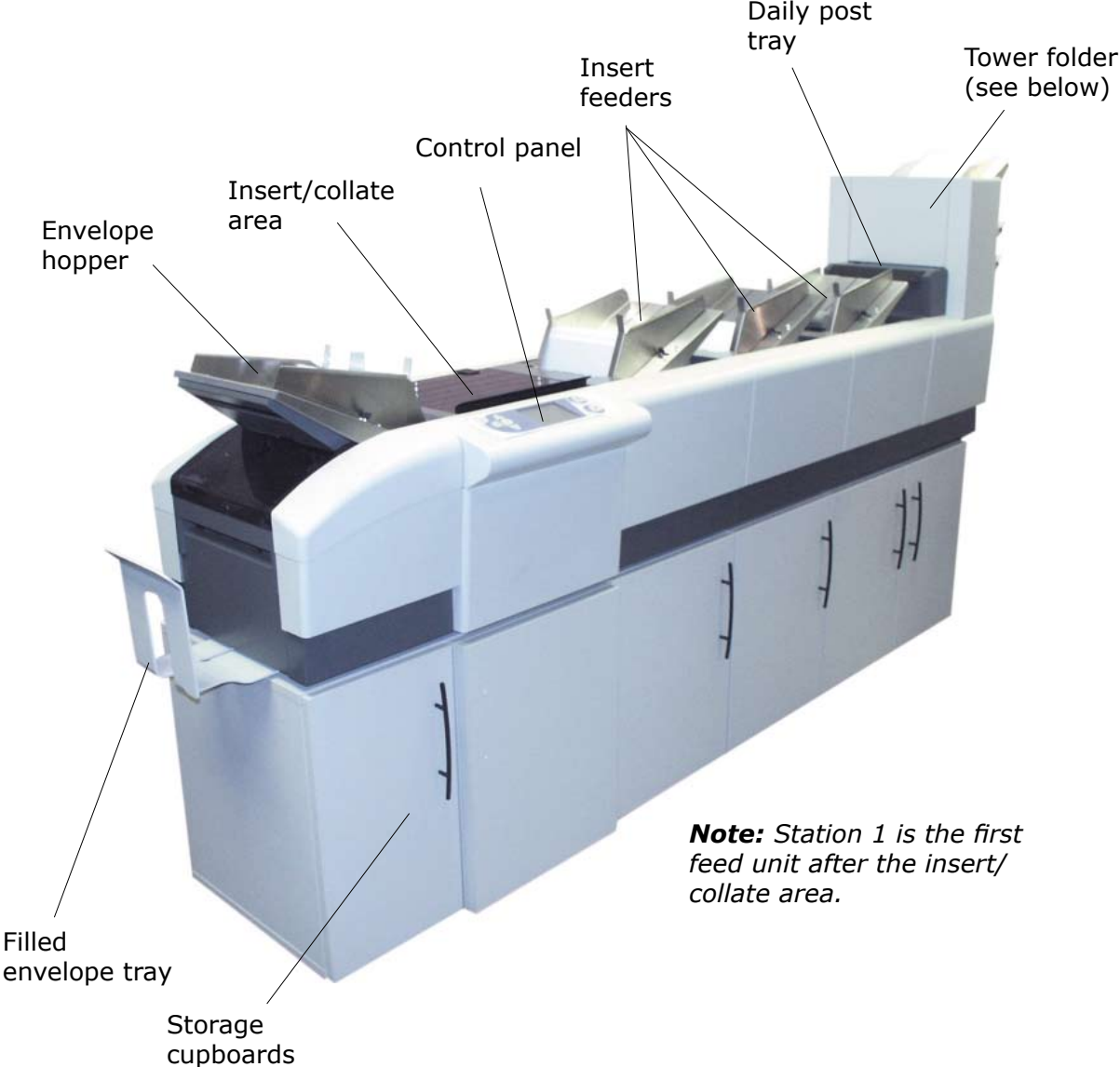
4.2 Control panel layout



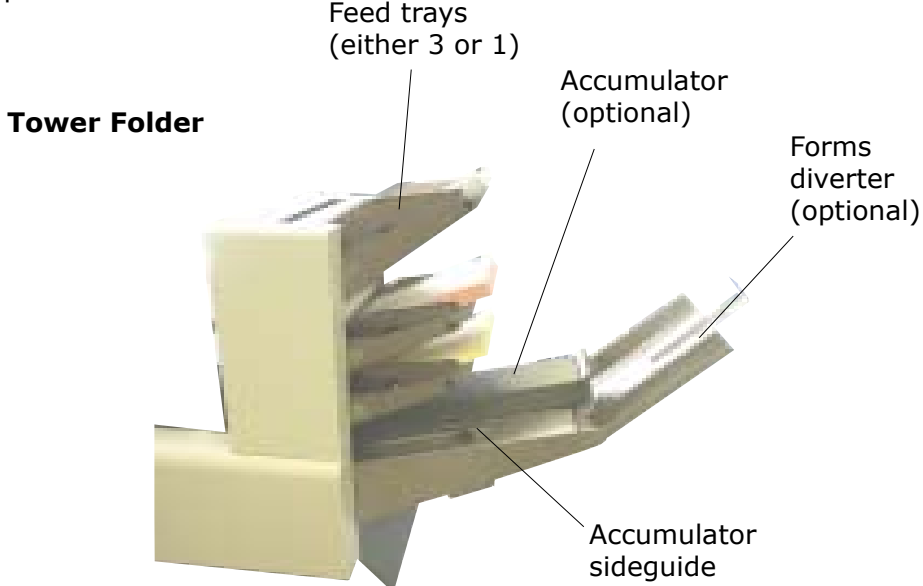
EXPLANATION OF BUTTONS

- Help button:** Provides context-sensitive Help at any time. Help information displayed will match what you are doing when you press the button.
- Scroll up/down buttons:** Scrolls display up or down on the screen, and adjusts speed when running. To accept or modify settings, press the Enter button (see below). Some settings provide a list of options - use the Scroll buttons to select your choice and press Enter again.
- Enter button:** Selects a setting when highlighted on the display.
- Run button:** Starts the machine operating when in 'Run' mode.
- Exit button:** Steps back to the previous display. Also use it to take you back if you make a mistake.
- Stop button:** Stops the machine operating after completing the insertion currently in progress.
- Display:** The graphic on the display will reflect the action that the machine is performing, either in operating or editing mode.

4.3 Parts identification



Note: Station 1 is the first feed unit after the insert/collate area.



5 OPERATING THE MACHINE

5.1 Operating overview

Shown below is a brief summary of the operating procedure of the machine. Full details of the functions referred to can be found in the section numbers indicated.

1. Load document and/or insert hoppers (page 33).
2. Load envelope hopper (page 34).
3. To run a pre-programmed job, see page 15.
4. To quickly set up a one-off program using Select & Go, see page 14.
5. To fully program a new job, see page 21, or to modify an existing job, see page 16.

Other functions

Further additional features include:

- i) Daily post (to fold and insert documents or groups of documents which may vary in size or type) - see page 32.

Menu Explanations

There are a number of screens on the machine, showing either menus or lists. These are described in on the pages shown below:

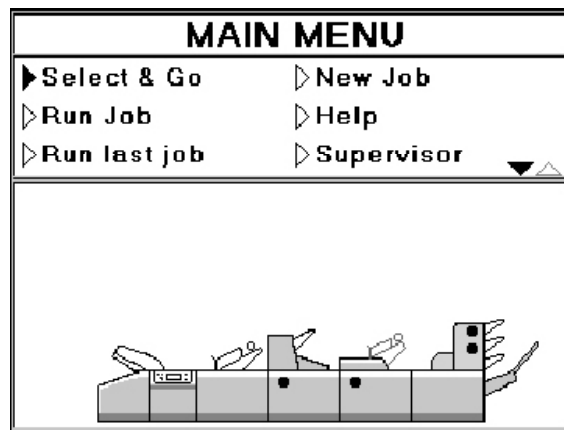
Main menu	see page 13
Select & Go screen	see page 14
Run screen	see page 15
Create Job menu	see page 21
Save screen	see page 26
OMR menu	see page 27
Barcode menu	see page 29
Supervisor menu	see page 30

Read this first:

Throughout this section, selections are made using the ✓ button after using the Scroll Up/Down buttons to reach the option. Options that have a scroll box are changed by first pressing ✓ to highlight the box, then using the Scroll Up/Down buttons to change the setting. Press ✓ again to finish. The x button aborts the changes in any menu and returns you back one step.

5.2 Main menu

When the machine first starts, the Main Menu is displayed as shown*



For full details of each menu option, see the following sections:

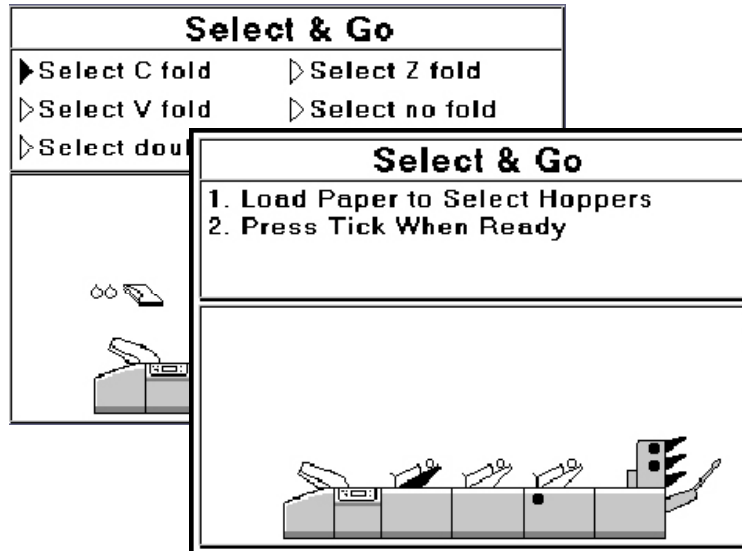
Select & Go	see page 14
Run Job	see page 15
New Job	see page 21
Supervisor	see page 30

Note that on-screen help is available at any time by pressing the ? button, or by selecting 'Help' from the menu above. This will be specific to what you are doing when the button is pressed.

* Main Menu is the default startup mode. It is possible to change this in Supervisor menu (see page 30) so that the machine starts up in other modes.

5.3 Select & Go

Select & Go is a rapid method of setting up a job without the need for full programming. You as the user decide which hoppers to load - the machine's software then automatically creates a simplified programme. First select the fold type and press ✓. Load the hoppers and press ✓ again. This takes you to the Run screen - press the Start button to calibrate the machine and begin running. **See section 5.4 on the following page for details of calibrating the machine.**

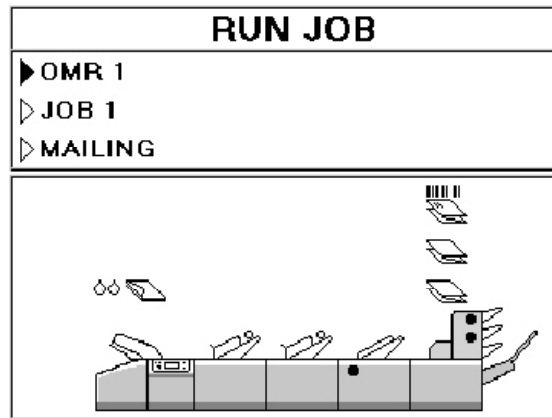



Points to note:

1. You must load each hopper with the default size form set for that hopper (see Supervisor menu on page 30 for details on setting defaults).
2. For folded documents, the fold type will be the default setting for that hopper.
3. The prime (address) document must be in the hopper furthest from the insert head, eg. if the lower and middle hoppers are loaded on a tower folder module, the prime document must be the middle hopper. The prime document must be loaded address side down and leading for all fold types.
4. There is no OMR or Barcode facility for Select & Go - for this, full programming by authorised personnel must be used.

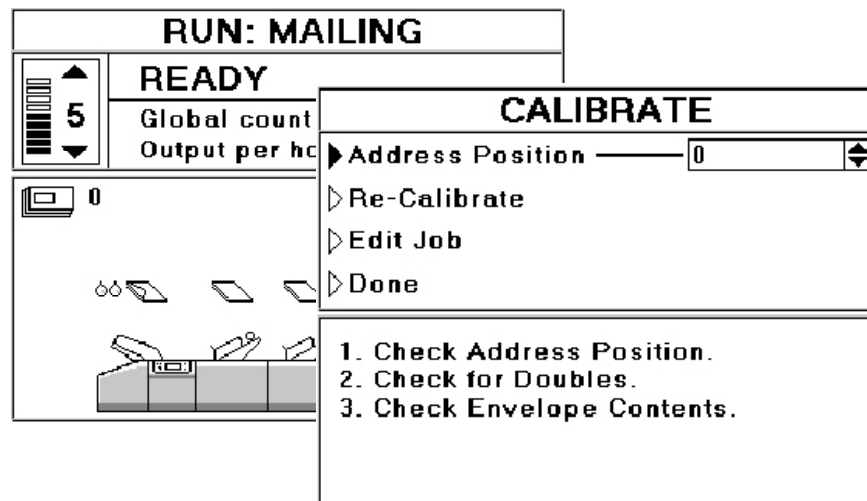
5.4 Running a job

The Run Job menu shows the currently available jobs that have previously been programmed (or you can run the last job from the Main menu).



 The graphic indicates which hoppers are active, and whether a folded document or an insert.

Highlight the required job and press \checkmark to reach the status box, showing the machine is currently stopped. If using Select & Go, just press \checkmark , otherwise press the Start button and the machine will perform a double document calibration cycle and then stop, displaying the screen shown below.



As the calibration is performed on each loaded hopper, check the filled envelope to confirm that only one document per hopper has been fed. If in doubt, select 'Recalibrate'. Also check the address position in the envelope - if it is too far up or down, this can be adjusted to suit. Positive numbers move the address upwards. If you adjust the position, select 'Recalibrate' to check it is now correct.

If required, the job can also be edited from this screen (see page 16 for full details of editing a job).

When you are satisfied, select 'Done'. Press the Start button and the machine will begin running. Use the Up / Down buttons to adjust the speed if required.

5.5 Other Run Job menu functions

From the Run Job menu, select the job you wish to edit and press ✓. This displays the Run screen, as shown below, which will be in 'Ready' mode. Now press x and a list of options will be shown, described below:

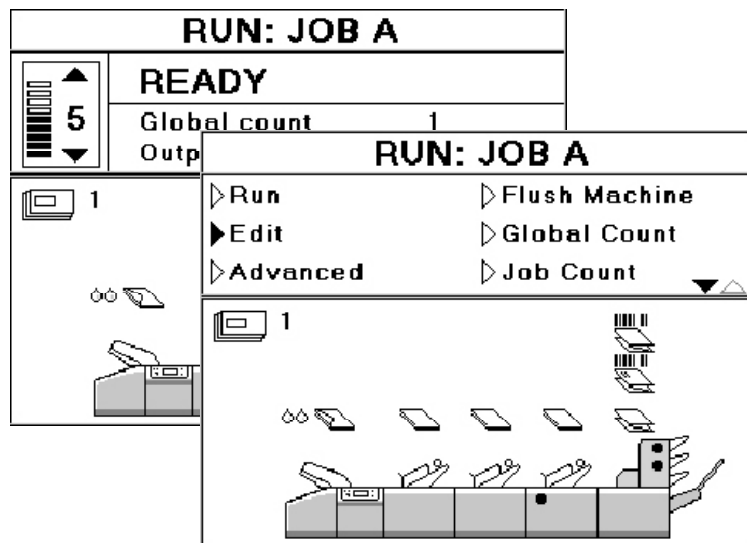
Edit: Enters the same edit mode as described on page 21.

Advanced: Allows adjustments to various machine functions as described on page 19.

Flush Machine: Continues the current cycle until all inserts are in the collate area, then stops the machine. **Note:** the machine flushes by default when the Stop button is pressed in normal running. Using the function in this screen simply forces a flush manually.

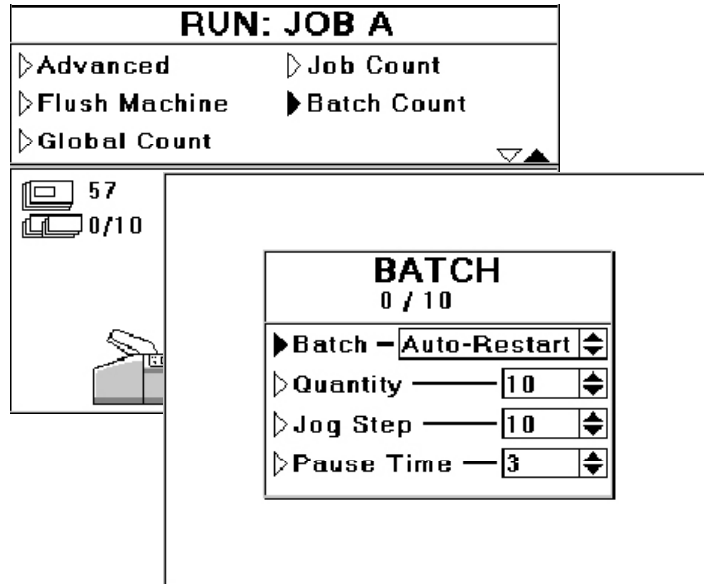
Global / Job Count: Explains the count displays, described on page 18.


Batch Count: This is part of the batching function, described on page 17.



5.5.1 Batching

Batching allows a preset number of filled envelopes to be processed before the machine automatically stops. From the Run Job menu, select the job you wish to set a batch for, and press ✓. This displays the Status screen, which will be in 'Ready' mode. Now press x and a list of options will be shown. Select 'Batch Count', and you will enter the batch screen, as shown below.



 *Batch settings apply only to the job you are in when settings are made, not to the machine itself.*

For 'Batch', select 'Auto-restart' (machine will pause for a set length of time and then restart - see below for 'Pause time') or 'Pause' (machine will stop and will only restart when the Run button is pressed).

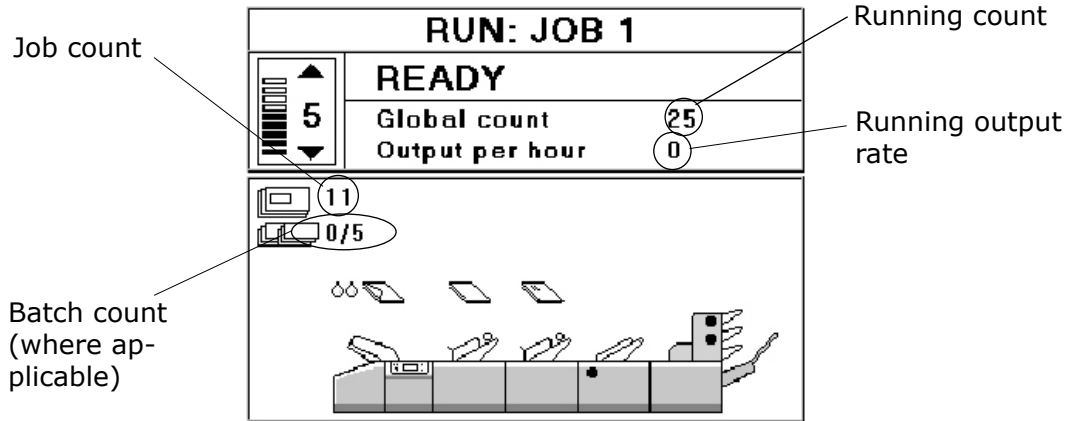
Enter the required quantity in the batch.

'Jog Step' allows a gap between envelope batches to be set on the conveyor. The units shown are multiples of the envelope overlap, as adjusted by the knob on the conveyor. This means a suitable gap can be set without disturbing the knob.

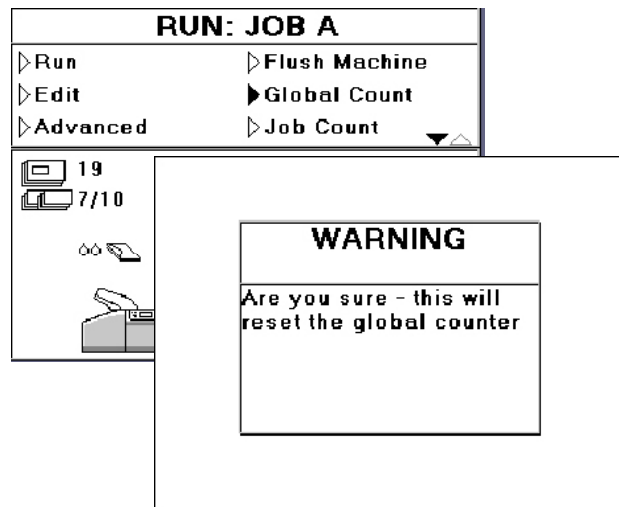
'Pause Time' is the number of seconds before the machine auto-restarts.

5.5.2 Count

The 'Count' function allows the global or job counts shown on the display to be set to zero. The global count continues to accrue even if you switch to another job; the job count applies only to the job you are running. To zero either count, stop the job you are running by pressing the Stop button. This will display the status screen in 'Ready' mode, as shown below.



Now press x and a list of options will be shown. Select 'Global Count' or 'Job Count', and you will enter the count reset screen:



If you are sure you want to zero the count, press ✓. This will reset the appropriate count shown above. Note that the machine's internal count is **not** reset. This count can be seen in Supervisor mode (see page 30).

Note: If you zero either either global or job count, this does not affect the batch count. This will reset at the end of each batch.

5.5.3 Advanced settings

Advanced settings allow adjustments to be made to various machine functions. It is specific only to the job you are in when you make changes, and will be saved with the job, even when the machine is switched off. Note that this function is password protected.

Warning: Changes made in this function may adversely affect the machine. Use it only if you know what you are doing!

CHANGE SETTINGS	
▶ Collate Pkt. Adj (0.1mm)	0
▷ Fingers Adj (0.1mm)	0
▷ Start Speed	5
▷ Seal Time (ms)	40
▷ Adjust wetter start	0
▷ Adjust wetter stop	0
▷ Adjust env seal pos	0
▷ Adjust envelope stop	0

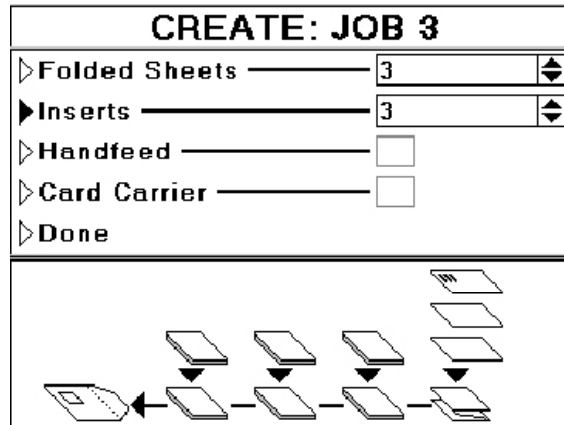
- | | |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Collate Pocket Adj. | Adjusts the width of the insert head collate pocket. In steps of 0.1mm. |
| Fingers Adj. | Adjusts the width of the insert fingers. In steps of 0.1mm. |
| Start Speed | Speed at calibration and first running. Default = 1. |
| Seal Time | Adjusts time that the filled envelope is held in the closer for sealing. Note that increasing will slow the machine. In steps of milliseconds. |
| Adjust wetter | Adjusts the point at which the wetter beam drops to wet the flap (+ve = more wetting). In steps of 1mm. |
| Adjust wetter start | Adjustment of the point at which the wetter beam lifts (+ve = more flap length is wetted). In steps of 1mm. |
| Adjust env seal stop | Adjusts how far into the closer rollers the envelope is fed (+ve = more infeed). In steps of 1mm. |
| Adjust env stop pos | Adjusts the envelope stop position at insert (+ve = further forward). In steps of 1mm. |
| Insert in env pos. | Adjusts the amount of insertion of the insert pack into the envelopes (+ve = further in to envelope). In steps of 1mm. |
| Adjust env rev pos | Adjustment of the amount of envelope forward travel after flap wetting, before reversing to enter the sealing rollers. +ve = further forward into the output rollers, towards the exit direction. |


- Maximum folds** Adjusts up or down the maximum number of forms that can be folded together in a tower folder. If multiples are set to greater than this number, the multiple will be split into sections. Default for C, Z or V = 5, max. = 8. Default for double-V = 4. max. = 6.
- Addr. on every page** Gives software greater flexibility by allowing, for example, a group to be split over more than one envelope, or swapping prime document.

When all changes have been made, select 'Done' to return to the Run screen.

5.6 Creating a new job

Select 'New Job' from the main menu to display the Create screen as shown:



 The graphic indicates where the inserts and folded documents should be placed. Note that it may be different to that shown, depending upon machine configuration

Enter the total number of folded sheets (max. 6), the number of inserts (max. 6), whether handfeeding is to be used and whether the document is a card carrier (only available if a Cardfolder is fitted). **Note:** the possible settings will depend upon the hardware configuration of the machine - if you attempt to create an 'illegal' setup, an error message will be displayed.

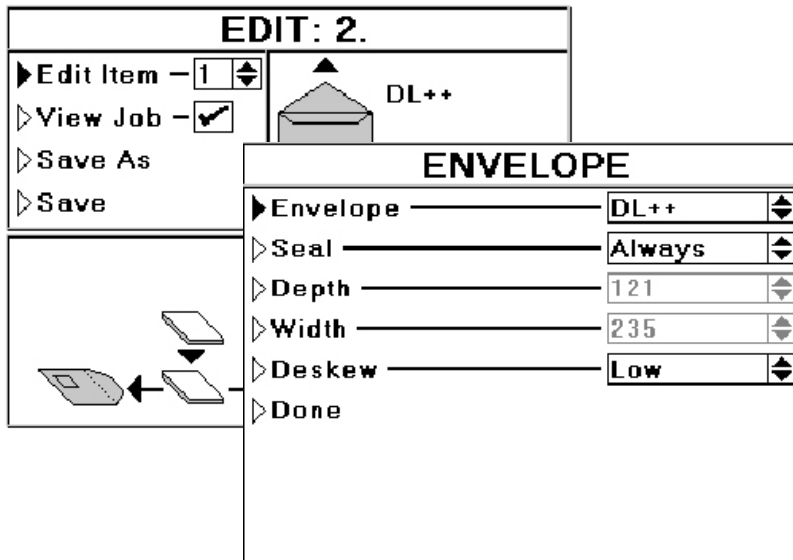
If you select Handfeed, by default the machine will expect the document to be fed into the handfeed hopper in the folder unit on the last station (when fitted). If a track mounted folder unit is also fitted, the graphic on the display will indicate which one to use. Select Card Carrier only if a card folder is fitted to the machine.

Select 'Done' when finished to move on to editing the envelope and document settings. **Note:** when 'Done' is selected, you cannot return to this screen, hence sheets or inserts cannot later be added to or removed from the job.

cont.

5.6.1 Envelopes

When you enter the edit screen, the first 'Edit Item' shown will be #1 which is the envelope - higher numbers will be documents (folded sheets or inserts). Press ✓ to highlight the scroll box, then press it again to display the envelope settings.




Select the envelope from the standard range, or 'Custom' (this allows depth and width to be set). Choose whether flap is to be sealed always, by OMR select, no seal with flap closed or no seal with flap open. Select required deskew level (high slows machine more). Select 'Done' when finished to return to the Edit screen. **Note:** If you wish these settings to be default, see 'Supervisor Mode' on page 30.

5.6.2 Documents

Press ✓ to highlight 'Edit item' scroll box, then use the scroll-up button to select #2 (this is usually the prime, or address document). Options are explained below.

SHEET - ITEM 2	
▶ Address	<input checked="" type="checkbox"/>
▶ Address Position	Top
▶ Select template	Restore
▶ Size	A4
▶ Length	297
▶ Width	210
▶ Feed Count	1
▶ Feed Mode	Feed always

 The settings that appear may be fewer than those described below, depending upon whether the item is a folded form or an insert. If a card carrier is selected at the previous screen, settings shown here will be slightly different.

Address	Deselect only if #2 is not the address document. Note that #2 is assumed to be address document, #3 onwards is assumed not to be.
Add. Position	Options are Top / Middle / Bottom.
Sel. Template	Select from the available list if required. Restore means no template.
Size	Use a standard size, or 'Custom' (this enables length and width settings).
Feed Count	Multiples of the document, up to 8.
Feed Mode	Options are Feed always / OMR or Barcode selects / Off
Packlength	Adjust as required only if calculated setting is not suitable.
Fold Type	Use a standard size, or 'None' (this should be selected only if you have a special job and intend to use advanced settings in 'View Fold Settings' (see below).
View Fold Set.	Displays your settings and allows custom adjustment if 'Advanced' is selected. Note: 'Advanced' should only be used if you have a special job and know what fold-plate settings are required - inappropriate settings may result in operating problems. When you have finished with 'View Fold Settings', select 'Done' to return to the remainder of the settings.
Feed Orient.	Select Face up (which will be top of form trailing) or Face down (top of form leading). Default is Face Up which will suit most jobs.
Fold Mode	'Together' means all sheets fed from tower folder unit will be collated, then folded. 'Singly' means sheets will be fed and folded individually. 'Via accumulator' means sheets will feed into accumulator before folding. Note: options available will depend upon the actual unit fitted.
Mark read	Options are OMR / Barcode / None. If OMR or Barcode are selected, you will move to further settings (see below) when you have finished in the above screen - see sections pages 27 & 29 for full details.
Cascade	If selected, continues to feed from the next hopper down if this one runs out of paper.

- Doubles Det.** Detects for double documents. On by default. Deselect only if you are using unusual stationery that may cause spurious errors (eg. some sheets heavy, dark text and some almost none).
- Deskew** Straightens a document if it is skewed. Options are Off/ Low / Medium / High. If deskew is selected, note that the operating speed is slowed; a setting of 'High' will slow the machine more than 'Low'.
- Select Hopper** You can decide where on the machine this hopper will be located. If selected, you will move to further settings (see below) when you have finished in the above screen.
- Save As Temp.** Saves these settings as a template. If selected, you will move to further settings (described later) when you have finished in this screen.

Note: If you wish these settings to be default, see 'Supervisor Mode' on page 30.

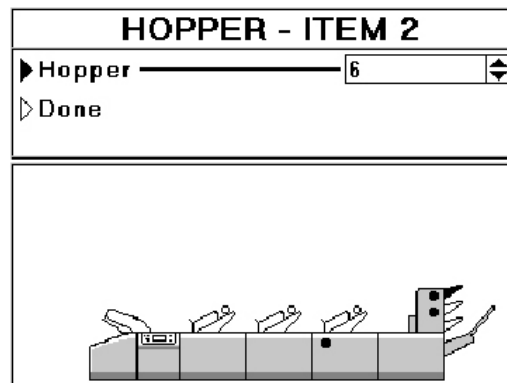
When all options for #2 have been set, select 'Done'. Depending upon your settings, further choices may now need to be made, as described below.

Mark reading:

If this was set to OMR or Barcode, the appropriate settings screen will then be displayed. See page 27 for details of OMR setting, page 29 for Barcode settings.

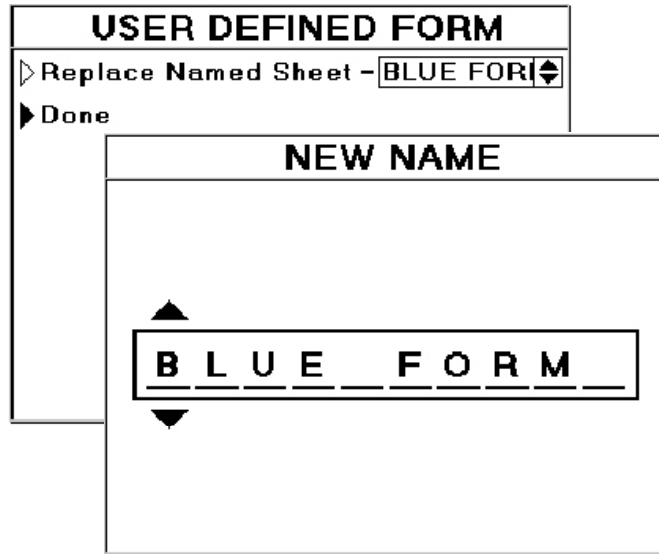
Select Hopper:

If this was selected, the following screen will be displayed, allowing you to choose which hopper this item is to be fed from, instead of using machine default. Note that the selected hopper will be highlighted in the graphic. Select 'Done' when finished to return to the edit screen.



Save As template:

If this was selected, the following screen will be displayed, allowing you to save the edited item as a template for future items. Up to four templates can be defined, and when all are used, you must replace an existing template to save the new one.

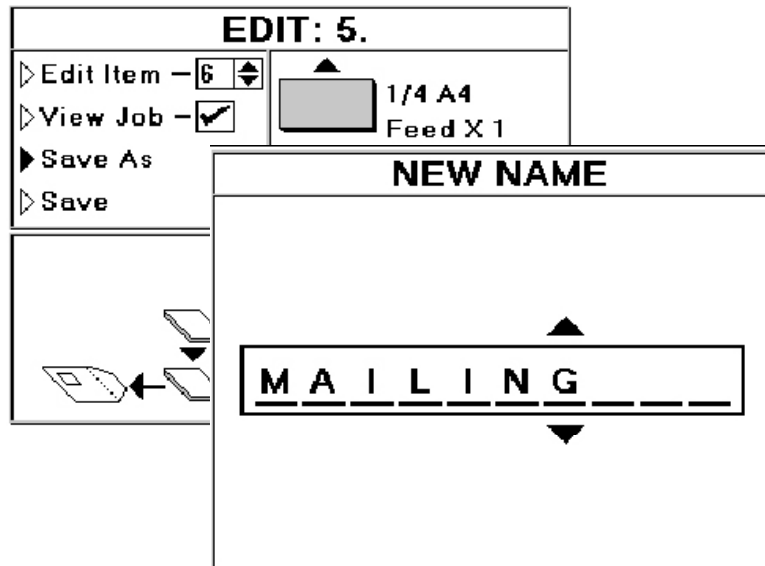


Select the named sheet you wish to replace, then 'Done'. When the New Name screen appears, use the Scroll Up/Down buttons to select the first character, then press ✓. This moves to the second character, and so on, up to the maximum 10 characters. When finished, press x to exit the screen. Confirm your changes, and your new template is now saved.

Repeat the edit process for all the remaining document or insert items. When finished, select 'Done' to move to the Save screen, as described on the following page.

5.6.3 Saving the job

When all documents and inserts have been edited, you move to the Save screen, which allows you 'Save As' to a new jobname (for a new job), or 'Save' (if editing an existing job). To enter a new jobname, select 'Save As', as shown below:



Use the Scroll Up/Down buttons to select the first character, then press ✓. This moves to the second character, and so on, up to the maximum 10 characters. When finished, press x to exit the screen. Confirm your changes, and your new job is now saved and will appear on the Run Job menu.

5.7 OMR Reading

If 'Mark read' was set to OMR when editing a document or insert, the following screen will appear when all other settings have been made.

Note: OMR definitions can only be created by authorised personnel.

OMR - ITEM 2	
▶ OMR definition	OMR 1
▷ Read Head ID	Head ID 2
▷ Gate position	100
▷ Pitch adjust	0.00 mm
▷ Leading margin	5
▷ Trailing margin	5
▷ Mark threshold A	0.391 v
▷ Mark threshold B	0.391 v

Explanation of settings

OMR definition

This is the name of the setup that defines the function of each of the marks. It can only be created by authorised personnel and must already exist in order to be used. Up to 9 definitions can be created.

Read head ID

This stipulates the location of the read head on the machine, ie. which hopper and whether LH or RH side.

Gate position

Defines how far the gate mark is from the top edge of the paper.

Pitch adjust

Allows the operator to make fine adjustments to the length of the mark set if small deviations in the mark pitch allow the overall length to increase or reduce. Positive figures increase the length, negative figures reduce it.

Gate margin

Tolerance in front of the first mark outside which mark will not be read. Reduce the default setting of 5mm if other printing is very close to the mark.

Tail margin

Tolerance beyond the last mark outside which mark will not be read. Reduce the default setting of 5mm if other printing is very close to the mark.

Mark threshold A & B

If marks are not clearly defined, reduce the read head voltage threshold to allow reading, or preferably use clearer printing. Default is 0.391v; try 0.3v initially if adjustment is required. Note: The 2 thresholds apply only to 2-track OMR definitions. For 1-track, only mark threshold A is used.

cont.

Divert blank sheets

Diverts sheet with no gate mark without stopping machine. Sheet must be between groups; if a mid-group sheet is diverted, then machine will stop with 'no gate mark' error - operator must then intervene. Only one consecutive blank sheet allowed - more will cause same error as above.

Divert oversize group

Diverts groups that are larger than setting of 'Default Max. Folds', set in Supervisor. Defaults are 5 for C, Z or V fold, 4 for Double V fold.

When all character positions have been defined, select 'Done' to return to the edit screen.

5.8 Barcode reading

If 'Mark read' was set to Barcode when editing a document or insert, the following screen will appear when all other settings have been made.

Note: Barcode definitions can only be created by authorised personnel.

BARCODE - ITEM 2	
▶ BCR definition	BCS 0
▷ Read Head ID	1
▷ Divert oversize group	<input type="checkbox"/>
▷ Good decode reads	3
▷ Done	

Explanation of settings

BCR definition

This is the name of the setup that defines the function of each of the marks. It can only be created by authorised personnel and must already exist in order to be used. Up to 9 definitions can be created.

Read head ID

This stipulates the location of the read head on the machine, ie. which hopper and whether LH or RH side.

Divert oversize group

Diverts groups that are larger than setting of 'Default Max. Folds', set in Supervisor. Defaults are 5 for C, Z or V fold, 4 for Double V fold.

Good decode reads

Set the number of consecutive good reads required before the label is accepted. Set to low number is print quality is poor.

When all character positions have been defined, select 'Done' to return to the edit screen.



5.9 Supervisor mode

Supervisor mode can only be accessed by input of the correct PIN. It allows a variety of machine functions, as described below.

The screenshot shows a menu titled "SUPERVISOR" with the following options:

- ▶ Language ————— English [dropdown arrow]
- ▷ Firmware version
- ▷ Machine count ————— 99
- ▷ Enable Supervisor PIN -
- ▷ Change Supervisor PIN
- ▷ Delete Job
- ▷ User access
- ▷ Default max. folds

At the bottom of the menu, there are two small navigation icons: a downward-pointing triangle and an upward-pointing triangle.

Language

Select required operating language from available list.

Firmware version

Read-only display of firmware for each module fitted.

Machine Count

Read-only display of the total cycle count to date (this count cannot be reset).

Enable Supervisor PIN

Enables/disables the need to enter a PIN for Supervisor access.

Change Supervisor PIN

Change the PIN to any 3-digit number.

Delete Job

Presents a list of all jobs to allow deletion. When asked to confirm, press ✓ for 'yes' or x for 'no'. Note that once deleted, a job cannot be recalled.

User Access

Use to set the screen displayed at startup and the level of operator access to machine functions. If any box is deselected, user will not be able to change or use this function - it does not mean the function is disabled.

Default Max. Folds

Use to set the max. sheets to fold for 'C', 'Z', 'V' & double 'V'. (defaults are 5, 5, 8 & 4 respectively). Used by the software to determine how to split a pack for folding. Adjust only if using non-standard paper, or for other specific purposes. Note that these maxima can be overridden in 'Advanced Settings' described on page 19.

Default Sheet / Insert / Envelope

Use to set the defaults for these items (these can be overridden when setting size options in 'Create Job').

cont.

Analogue Sensors (only available if this option is set in Engineer mode)

A read-only display of analogue sensor settings, as described below:

Settings are shown in the format:

abc d.d C or B

The meaning of the numbers is as follows:

a = emitter current value (0 - 9).

b = receiver pot setting value (0- 9). Both 'a' & 'b' are mostly of use only to Technical Support for fault checking in combination with other parameters.

c = threshold voltage value (0 - 9). Should be approx. 4/5

If the values differ substantially from those shown above, the sensor is suspect.

d.dd = receiver voltage in volts. If clear, should be approx. 0.5v. If blocked, should be > 4v.

C / B = clear or blocked

Note: depending upon unit fitted, some sensors may show receiver voltage only, and whether clear or blocked.

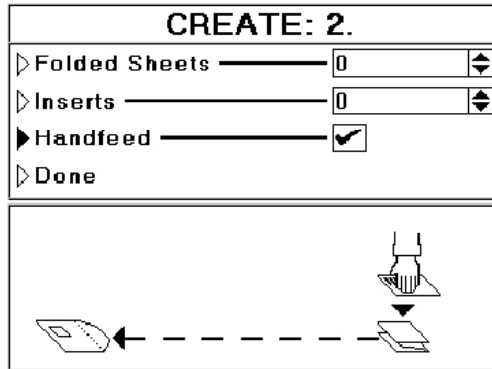
These figures are read-only – prior to analysing them, sensors should be auto-calibrated and if any sensor fails, it should first be cleaned and its connector checked. Re-calibrate, and then if failure still occurs it must be replaced by a Service Engineer. The figures may help in fault finding if failure still occurs - contact Technical Support for further assistance.

When you have finished making selections, press x to exit and save your changes.

5.10 Daily post

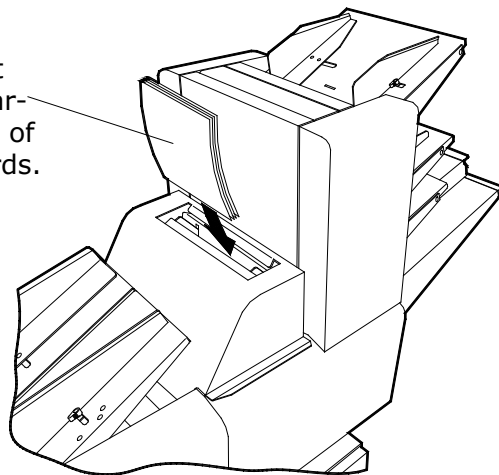
Daily post allows a group of forms to be hand-fed, folded and inserted. Up to 8 forms of 80gsm (20lbs bond) may be fed, and they may be stapled or not, as required.

To use daily post, you must first create a new job using Handfeed. Select 'New Job' from the Main Menu and ensure that the Handfeed box is ticked. Note that other sheets and inserts can also be collated with the hand-fed daily post if required, up to the limits shown in 'Specifications'. Select 'Done' and edit the envelope and mail items in the same way as any other new job ('Creating a New Job' on page 21). When finished, save the job to a suitable name.



To run daily post, load feed hoppers as required if you have selected additional folded sheets or inserts ('Loading Paper Hoppers' on page 33). Select the job from 'Run Job' on the Main Menu and press the Run button. Insert the daily post documents into the handfeed tray on the folder as shown below - the forms will then automatically be fed and the machine will await further documents. Note that the tower folder is shown - feeder folder is similar principle, but design is different.

Load the daily post with print side facing rearwards and top of form downwards.



Other paper orientations are possible for non-standard envelopes - see Appendix A for details.

When you have finished running daily post, Press the stop button as normal.

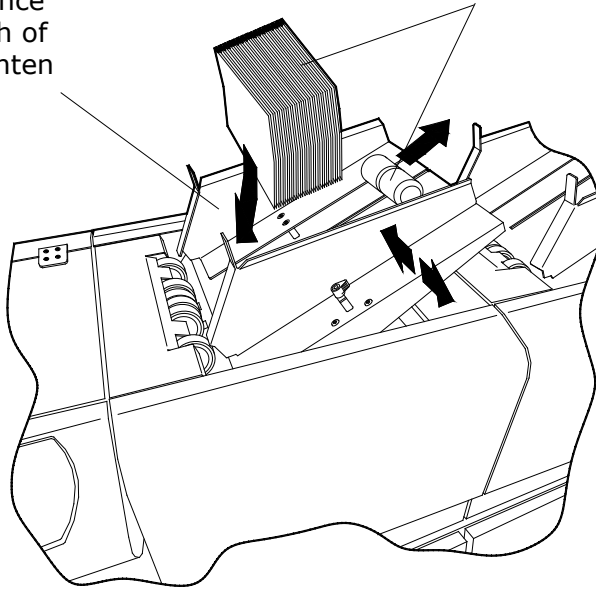
6 SETTING UP THE MACHINE

6.1 Loading the paper hoppers

Insert Feeder

Slacken the lock-lever and adjust the side guides to give 1 - 2mm clearance across the width of the inserts. Tighten the lock lever.

Pull the weighted roller back and load the inserts, ensuring they are fully down. Release the weighted roller so that it 'tips' the inserts into the pickup roller. An alternative heavier roller is also available (part no. C3656A) which can improve feeding of thick booklets. This must be fitted by an Authorised Service Engineer.

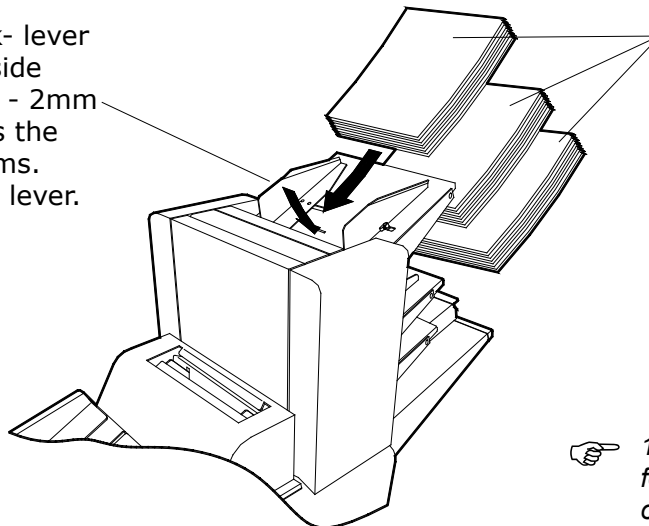


Note: A single feeder is shown – if the unit is a tower or OMR/Barcode feeder, the method of loading is identical, but the hopper capacities are different.

Tower Folder

Slacken the lock-lever and adjust the side guides to give 1 - 2mm clearance across the width of the forms. Tighten the lock lever.

Press down on the tray and load the fanned stack of forms. Ensure that the leading edges are firmly contacting the chassis bridge at the lower end of the tray. Use the indicator lights on the rear edge to orientate the paper.

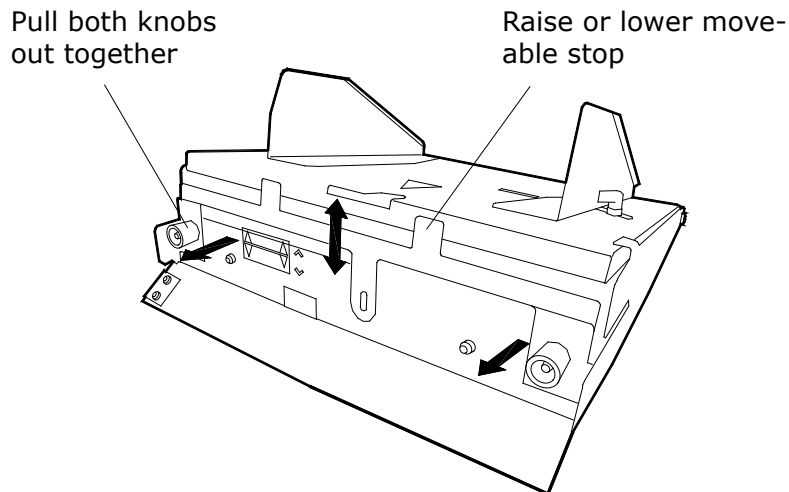


1. Tower folder is shown; feeder folder is similar except only 1 tray is fitted and there is no indicator.
2. See the following page for setting the curled forms stop.

Tower Folder - curled forms stop

Documents that are slightly curled may not feed properly, as the leading edge may become snagged at the infeed. To help overcome this, each hopper tray is fitted with a 2-position stop that can be raised or lowered.

1. Withdraw the hopper and pull both of the spring-loaded knobs outwards.
2. For flat forms or forms curling upwards, select the **upper** (default) position.
3. For forms curling downwards, select the **lower** position.

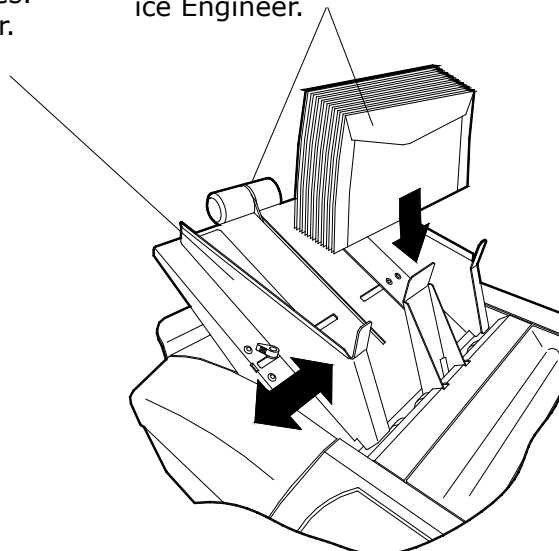


4. Ensure both knobs are properly located before replacing the tray.

6.2 Loading the envelope hopper

Slacken the lock-lever and adjust the side guides to give 1 - 2mm clearance across the width of the envelopes. Tighten the lock lever.

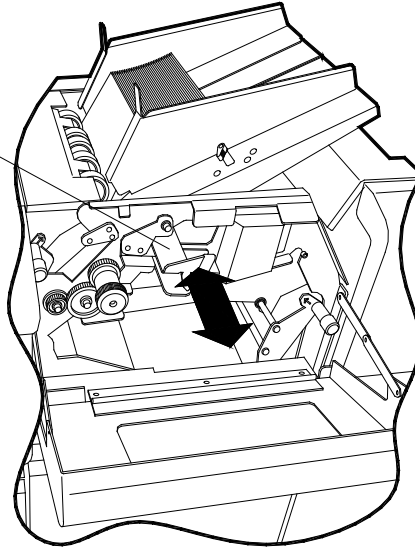
Pull the weighted roller back and load the envelopes, ensuring they are fully down - flaps must be facing forwards. Release the weighted roller so that it 'tips' the envelopes into the pickup roller. An alternative heavier roller is also available (part no. C3656A) which can improve feeding of thick booklets. This must be fitted by an Authorised Service Engineer.



6.3 Setting the separator gap


The feeder separator has 4 settings, marked A to C on the slide. Before running the job, the gap must be set to suit the thickness of material being processed - this prevents more than one item being fed at a time. Note that there is an intermediate setting between each marked position, allowing finer adjustment.

Lower the side cover and move the slide to suit the thickness of the insert.



Slide positions:

A = 0 to 0.75mm
B = 0.75 to 1.5mm
C = 1.5 to 2.5mm
D = 2.5 to 4.0mm
(A - C only on Tower Feeder)

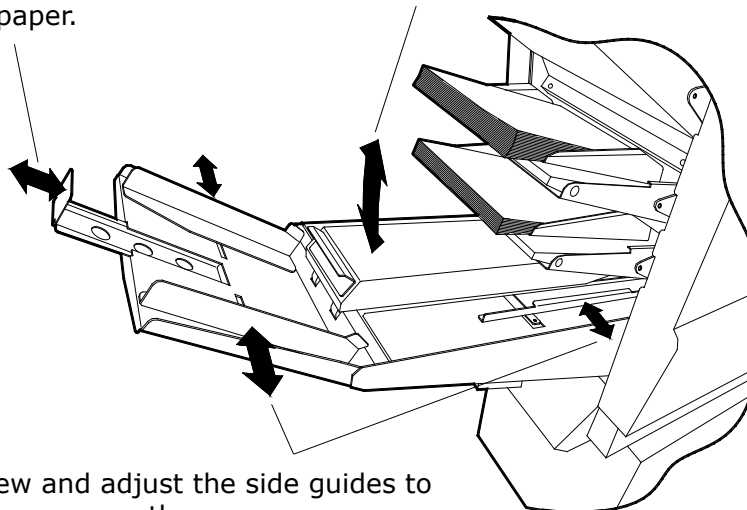
 *Most jobs will use position A. If you use the wrong setting, an error will appear on the control panel.*

6.4 Using the accumulator

If the machine is fitted with an accumulator, this can be used for grouping forms prior to folding, or for OMR/Barcode grouping for subsequent removal by hand. It can also be used to hold diverted forms for subsequent hand removal. With an optional diverter tray fitted, diverted forms can be fed into this instead. The accumulator is located behind the tower folder. Prior to use, the side-guides and diverter must first be set to suit the width and length of the paper, as shown below.

Slacken the lock screw underneath and adjust the diverter stop to suit the length of the paper.

Raise the accumulator channel to remove grouped or diverted forms (where applicable).



Slacken the lock screw and adjust the side guides to give 1 - 2mm clearance across the paper.

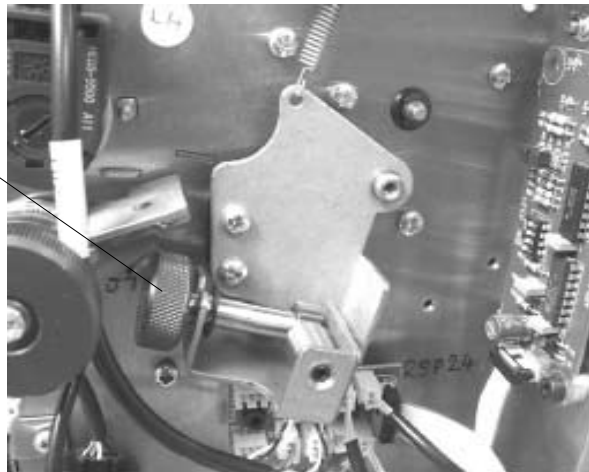
6.5 Operator settable separator (optional)

The standard separator on the tower folder is spring-loaded and operates with a preset gap for 80gsm (20lbs bond) paper. Under certain circumstances (eg. extra thick material) it may be necessary to open the gap, or in some cases to close it. As standard, this can only be carried out by a Service Engineer, but with some stationery, this may not provide a sufficiently sensitive adjustment. The optional operator-settable separator allows the operator to set the gap using a knurled knob on each of the hoppers fitted (1 or 3). It can be specially useful when double feeding has been a problem with the standard separator, as it allows 'fine tuning'.

Where fitted, the separator is accessed by opening the side cover of the tower folder – the separator is behind an opening.

Set the separator gap to suit 80gsm (20lbs bond) paper, or to a different setting as required. This is most easily achieved by removing the top tray, and for 3-tray machines, the second tray also. Lift out the infeed bridge (with cork strips) to prevent drag from the pre-feeder. Slide a sheet of the stationery into the separator gap and adjust the knurled knob until a moderate drag is felt on the paper as it is withdrawn rearwards. Refit the infeed plate and trays.

Turn the adjusting knob to achieve the required setting (see above).

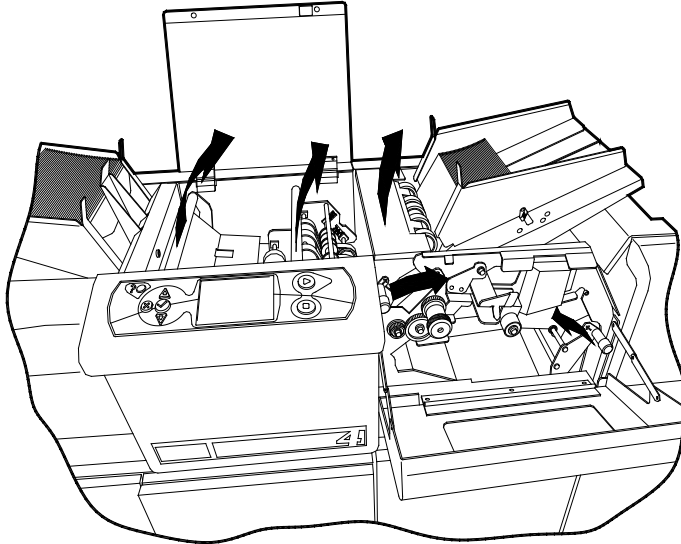


Note: separator is shown with black inner cover not fitted.

SECTION 7 OPERATOR MAINTENANCE

7.1 Clearing paper crashes

If a paper crash occurs, the machine will stop and indicate the position of the crash on the screen. Clear the crash as shown below, then press the Run button to resume operating.



Insert head and feeder

Raise the top perspex cover and small feeder cover. Lift the green latch bars as shown to access the paper paths below. Carefully withdraw any jammed paper, taking care not to tear it. To clear a crash in the feeder, lower the feeder side cover and swing the green handles upwards to access the paper paths. If necessary, use the green knob to turn the shafts for 'winding out' jammed paper.

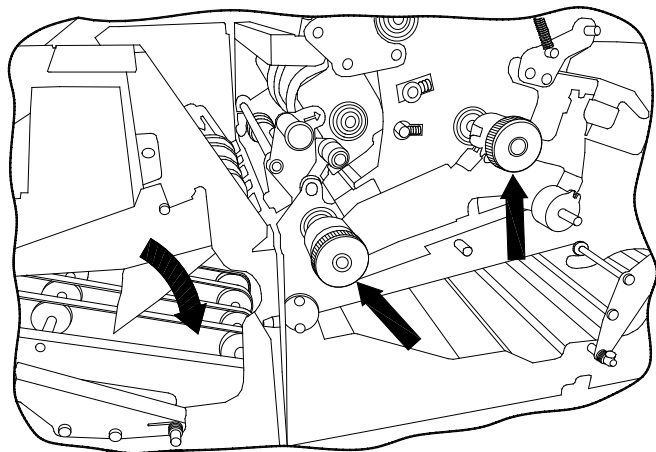
If a jam occurs at the input of the envelope or feeder hoppers, remove all material and withdraw the jammed item. For feeders, ensure that the separator gap is correctly set (see page 35). For the envelope

hopper, if jams occur frequently, contact your Authorised Service Agent.

Tower feeder & OMR Feeder

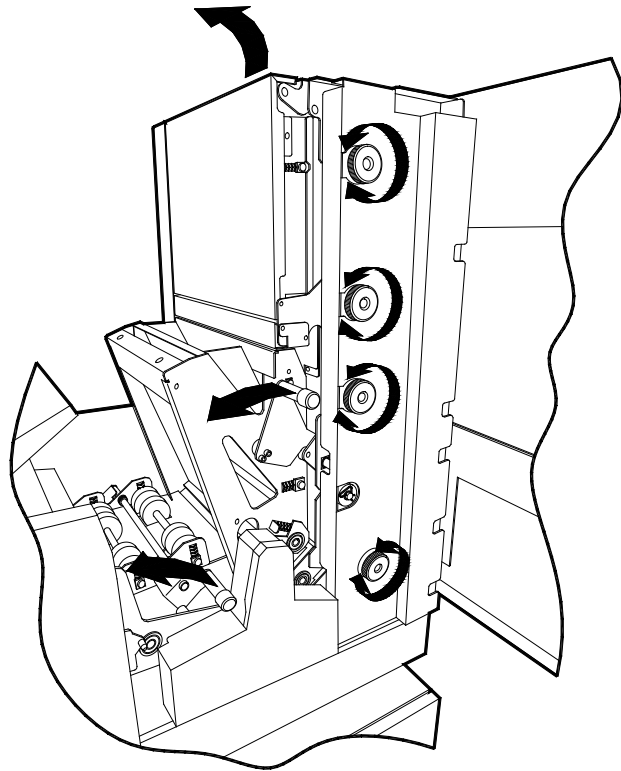
If a paper crash occurs, this is most likely to be at the eject sensor at the exit. To clear the jam, it can be awkward to pull the paper out if raising the roller carrier at the exit. An easier method is described below:

1. Lower the operator side cover of the tower feeder, and of the feed unit in front (if the unit in front is the insert head, raise the perspex cover).
2. Use the green knob on the feed unit in front to swing down the lower conveyor, or raise the rearmost clam assembly if the unit in front is the insert head.
3. Turn the green knobs on the tower feeder to wind the crashed document into the cavity ahead – it can then be easily removed.



Tower Folder

Open the side cover and operate the two green latches to raise the roller platten and open the daily-post hopper. Also open the top cover to access the upper part of the feed hopper. Carefully withdraw any jammed paper, taking care not to tear it - turn the green knobs to help wind jammed paper out of the rollers.



7.2 Cleaning rollers and sensors

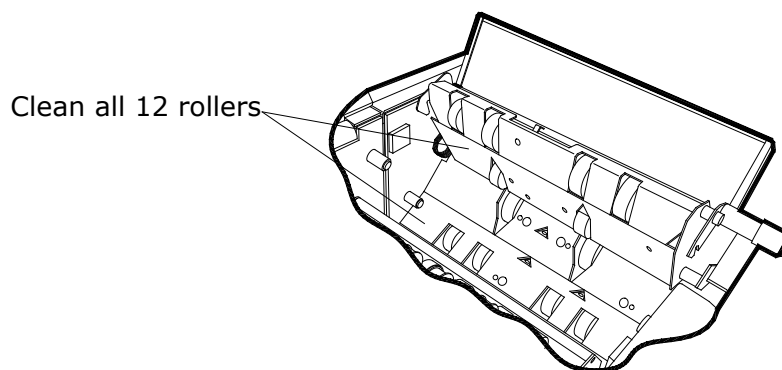
Periodically, all rollers, feed wheels and sensors should be cleaned, especially if a long run is envisaged. Use only Rubber Roller Restorer, **except for the pick-up rollers on the feed and envelope hoppers - these must be cleaned using only a cloth dampened with water.** Clean the full circumference of rubber rollers, feed wheels and conveyors in the area of:

- a) Feeder, folder and envelope hoppers
- b) Insert area at the head end
- c) Closer area at the head end

Ensure the machine is switched off before cleaning rollers or sensors.

To access rollers in the insert area, raise the perspex cover and lift the green handles to reach the paper path. Rotate rollers by hand when cleaning.

To access feeder rollers, lower the LH side cover and lift the infill cover in front of the hopper. Use the green knob to rotate the rollers for cleaning. **Note:** after a long period of time, some inserts can cause a jam with the insert stuck between the rollers - this may especially occur on coated material. If this happens, open the upper roller plate with the green latch and using a cloth dampened with Rubber Roller Restorer, clean all the rollers, both upper and lower. Use the green knob to help rotate them.



To access tower folder rollers, open the LH side covers and use the green latches to open the daily-post hopper and paper path platten. Also open the front cover using the black latch on the top edge.

Cleaning sensors

When cleaning the rollers, the sensors should also be cleaned by blowing away dust and debris using the supplied airduster. **It is important that sensors are regularly cleaned, or operating errors may occur.** Locations are shown on the following page - note that each sensor is in two halves, receiver and transmitter. Both halves must be cleaned.

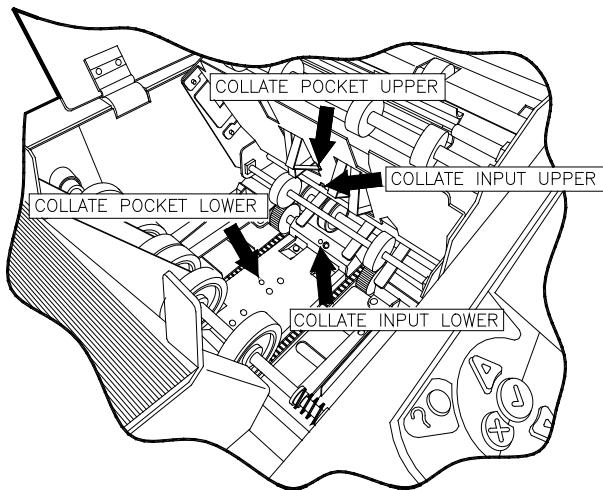
Use only non-flammable airdusters

Cleaning sensors (contd.)

Note: in most places the sensor or access hole is indicated with an arrow punched into the sheet metal. Spray the air jet liberally into holes to ensure thorough cleaning.

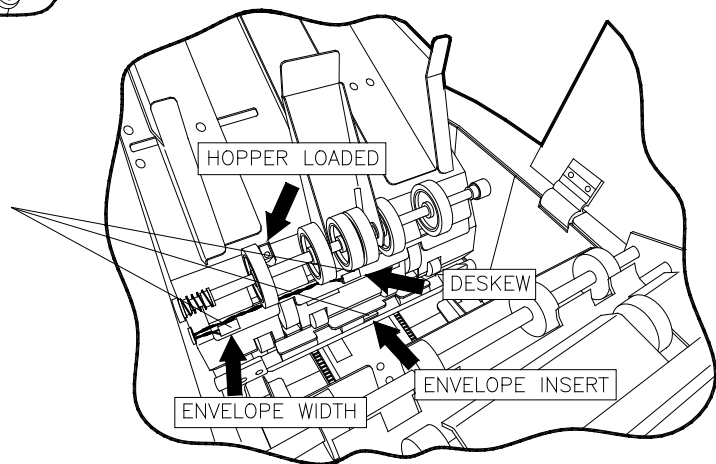
Insert and collate area

For all positions shown, direct the jet of air onto the sensors, indicated by arrows in the following views. Note that sensors are in two halves, receiver & transmitter - both halves must be cleaned.

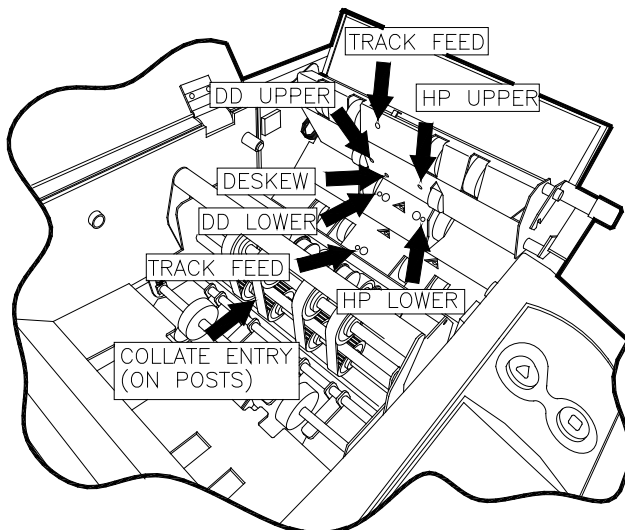


Open the perspex cover and front feeder cover, then lift the front-most green handle to raise the mechanism - this is held in the raised position by a latch.

For the sensor pairs, liberally spray the air jet in the gap between them.



Feeders

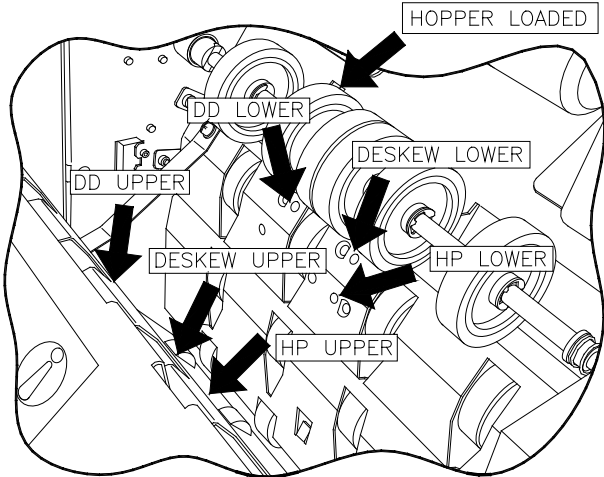


Lower the feeder side cover and raise the top cover. Swing the green latch upwards to raise the roller platten.

Note: station 1 feeder is shown - others are similar.

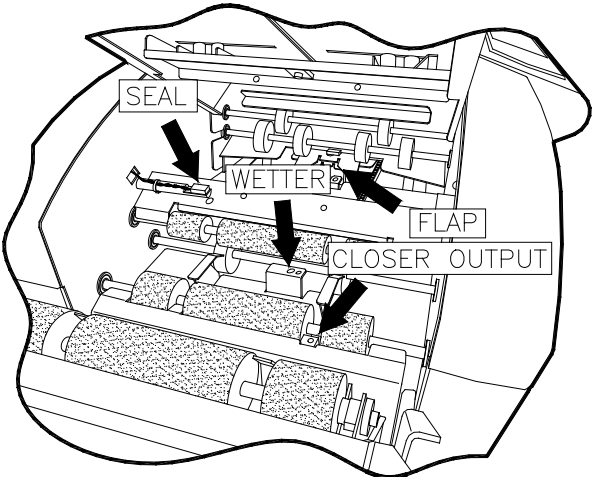
Tower Feeder

Open the cover in front of the feeder trays and direct a jet of air onto the sensors shown by the arrows in the diagram below. Ensure that all sensors, including those inside the pivoting cover are thoroughly cleaned as some sensors are located deep behind the apertures.



Closer area

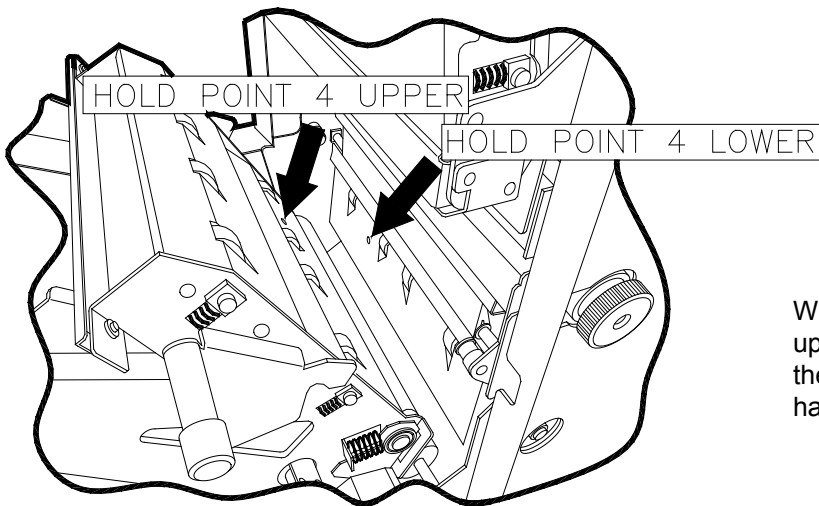
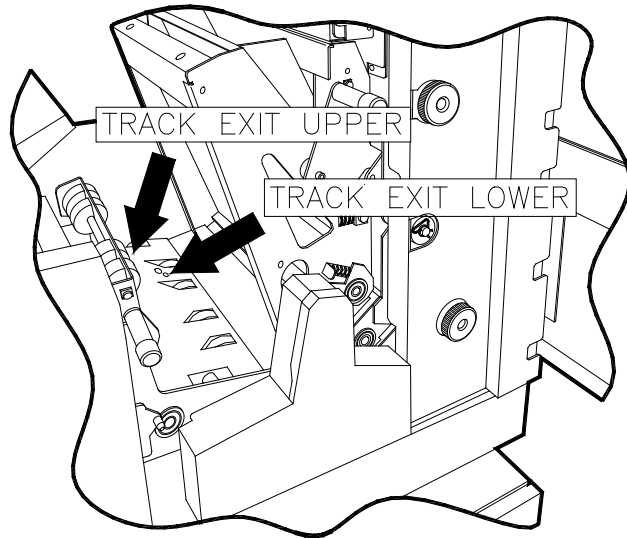
Open the closer cover below the envelope hopper and direct the jet of air onto the sensors, indicated by arrows in the following view. For the sensor pairs, liberally spray the air jet in the gap between them.



Tower Folder

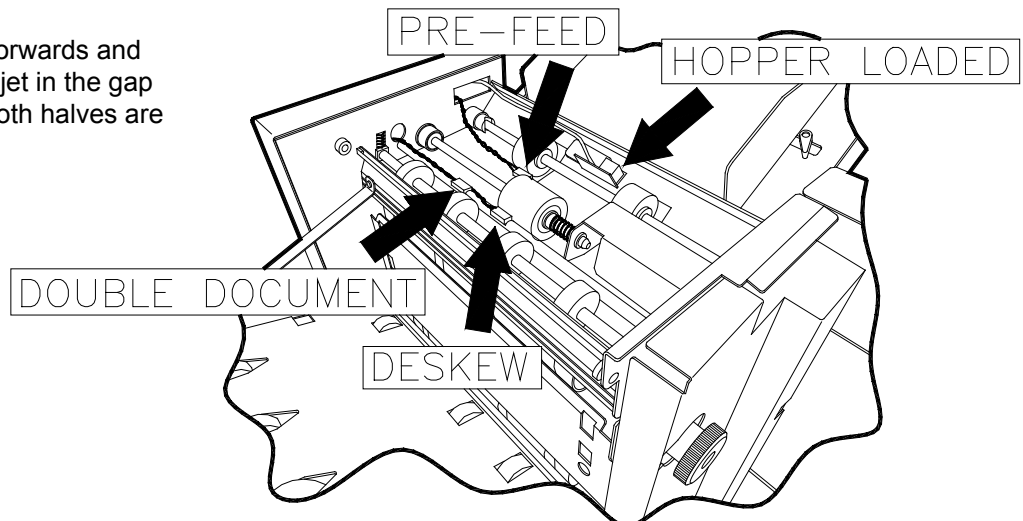
There are sensors in three locations.

Open the side cover and swing the lower green latch upwards to raise the roller platten. Clean both halves as shown.



With the side cover open, swing the upper green latch forwards to open the daily post hopper. Clean both halves as shown.

Hinge the top cover forwards and liberally spray the air jet in the gap indicated to ensure both halves are cleaned.

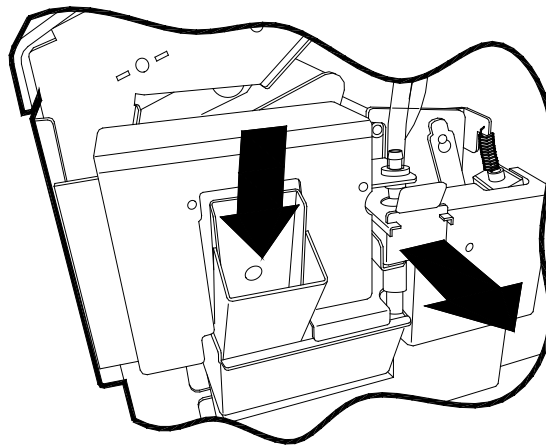


7.3 Maintaining the wetting system

The wetter tank supplies the fluid for wetting the envelope flaps and needs topping up from time to time. It is located on the left hand side of the machine, below the closer area at the output. To gain access, lower the side cover on the insert head. Fill the tank through the spout until the level reaches the indicator visible inside - be careful not to overfill.

Note: Use only Envelope Sealing Fluid as this has been specially formulated for greatly enhanced sealing and antibacterial qualities.

Fill through the spout as shown, up to the level indicator.



Withdraw the tank by using the green tab

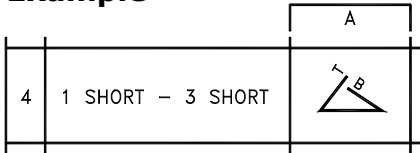
Check the condition of the sponge at regular intervals and clean off gum residues as required. Remove the wetter tank to do this by lifting the end slightly using the green tab, then withdraw it. **Note: use a piece of absorbent material to under the drain tube to catch any drips.** Clean the sponge under running water and replace the tank, ensuring it is fully located. After cleaning, or if the sponge has dried out, it should be primed by immersing it in Envelope Sealing Fluid.

If the machine is to be left unattended for more than a week, it is advisable to remove the tank and drain it. Wipe dry after washing to prevent contamination. **The tank must also be removed if the machine is moved, and the reservoir drained.** The reservoir can be drained by pulling out the plastic drain tube tucked underneath it and pulling out the bung to drain into a suitable receptacle.

8. DOCUMENT ORIENTATION TABLES

Paper orientation on the feed hoppers will depend on fold type, accumulation tray, OMR/Barcode and feed sequence. The example below shows how to reference the required orientation from the tables. Note that for most applications, the LEDs on the rear edge of the tower folder will indicate the required orientation.

Example



Fold Chosen is top address 'C' fold.

1. Select configuration from table 1. Note column A (unshaded).
2. OMR or Barcode? If NO, use table 2. If YES, use table 3 for OMR, table 4 for Barcode. Daily Post (table 5) is not an option for this fold type.

See following page for tables 2 - 5.

3. For chosen table, use row A (from step 1). This indicates orientation, feed sequence and read head position (where applicable).

Note that for Daily Post, only configurations in table 1, column B can be used.

Fold generation requires:

Foldplate 1 set to 1/3rd paper length
Foldplate 3 set to 1/3rd paper length

Table 1

		← TOWARDS INSERT HEAD				
		FORM ORIENTATION FOR REQUIRED FOLD TYPE				
FOLD PLATE SELECTION		A	B	C	D	
1	1 SHORT - 2 SHORT					# = BOTTOM ADDRESS
2	1 SHORT - 2 LONG					
3	1 LONG - 2 SHORT					* = MIDDLE ADDRESS
4	1 SHORT - 3 SHORT					
5	1 SHORT - 3 LONG					
6	1 LONG - 3 SHORT					
7	2 SHORT - 3 SHORT					
8	2 SHORT - 3 LONG					
9	2 LONG - 3 SHORT					
10	1 SHORT					
11	1 LONG					
12	2 SHORT					
13	2 LONG					
14	1 LONG - 3 SHORT					
15	2 LONG - 3 SHORT					



Preferred fold configurations are indicated **bold** and give correct address orientation in window of standard envelopes.

Shaded areas denote folds that give *incorrect* address orientation in window of standard envelope. Reverse printing and/or non-standard window envelopes may permit use.

Note: For some complex jobs, not all paper trays may be loaded in the same way.

Table 2

FEED TRAY LOADING WHEN ACCUMULATION TRAY IS NOT IN USE		
	FORM ORIENTATION ON FEED TRAY	FEED SEQUENCE
A		A - Z
B		Z - A
C		
D		

Table 3

FEED TRAY LOADING WHEN ACCUMULATION TRAY IS USED			
	FORM ORIENTATION ON FEED TRAY	OMR READ HEAD POSITION	FEED SEQUENCE
A		BOTTOM	Z - A
B		TOP	A - Z
C			
D			

Table 4

FEED TRAY LOADING WHEN ACCUMULATION TRAY IS USED			
	FORM ORIENTATION ON FEED TRAY	BCR READ HEAD POSITION	FEED SEQUENCE
A		BOTTOM	Z - A

Table 5

DAILY POST 'HANDFEED' TRAY LOADING	
FORM ORIENTATION ON FEED TRAY	
B	

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