Zip21a

Operation and Maintenance Manual
01-03-15 onwards 1502005

Contents

Specifications

Maximum Paper Size:	320mm x 470mm	15.5" x 18.5"
Minimum Paper Size:	145mm x 145mm	5.7" x 5.7"
Maximum Paper thickness:	350gsm (0.5mm)	115 lb. Cover
Cutting Speed:	288 finished cards per minute.	
Cross Cut Method:	Programmable guillotine	
Maximum Cross Cuts per Sheet:	99	
Minimum Size of Cross Cut Gutter:	2mm	0.080"
Recommended Bottom Trim Off:	4mm – 10mm	0.160" - 0.3937"
Centre Slit Gutter:	6mm	0.275"
Inline Cut Method:	Rotary, spring loaded slitting knives	
Maximum Paper Capacity:	~ 200mm	~ 7.87"
Feeding Method:	Suction, top feed	
Delivery Method:	Adjustable receiving tray	
Physical Size: (including feed tray)	1100mm long x 680mm wide x 1100mm high	43.3" long x 26.8" wide x 43.3" high
Shipping Size:	950mm long x 700mm wide x 1500mm high	31.5" long x 25.6" wide x 21.6" high
Net Weight:	115 kilos	253 lbs
Shipping Weight:	135 kilos	297 lbs.
Power:	AC 220V, 50 Hz	

Auxiliary Parts supplied with machine:	Instruction Manual Power Cord Delivery Tray Dividers Hex T type 2.5mm wrench Screw Driver Vernier Callipers Card width adjusting tool

Safety Information

Read and understand all instructions in this manual before attempting installation, operation or general maintenance of the Zip21A.

Assemble the machine as outlined in the "Initial Machine Assembly" section

Use only a grounded electrical outlet when connecting the Zip21A to a power source. If you are unsure, check with a qualified electrician – see "Important information before you start" below.

Observe all warnings and instructions marked on the Zip21A.

Unplug the Zip21A from wall outlets before cleaning or maintenance.

Do not install or operate the Zip21A near water or whilst you are wet.

Make sure the Zip21A is installed on a secure and stable surface.

Make sure the power cord does not obstruct walkways near the Zip21A.

Keep long hair and jewellery clear whilst operating the Zip21A.

Never operate the Zip21A with any guarding removed.

Always disconnect the power to the Zip21A whilst not in use.

If you are in any doubt about the operation of the Zip21A, please call your local service agent.

Important Information before you start

The Zip21A is a microprocessor-controlled machine. As such, the Zip21A must be connected to a dedicated, clean power supply. The Zip21A may be unable to perform correctly and consistently if it is connected to a power supply with other equipment.

A power surge protector should be used with the Zip21A to protect the electronics. Electronics that are damaged due to power surges are not covered under the standard warranty.

The Zip21A is sold in Europe as a 230V machine with the correct power cord provided.

The user is also solely responsible to assure that the Zip21A is not connected to the wrong voltage. Damage caused by incorrect voltage hook-up is not covered under the standard warranty.

We recommend that the Zip21A box and packing materials be kept. While service parts are available from your dealer and can typically be easily replaced in the field, it may be necessary to return the Zip21A to the factory for complex service. The Zip21A box and packing material have been designed to protect the machine from normal handling during transportation.

Product Recycling and Disposal

European Union - Disposal Information for <u>Commercial Users</u>

Application of this symbol on your equipment is confirmation that you must dispose of this equipment in compliance with agreed national Procedures.

In accordance with European legislation end of life electrical and electronic equipment subject to disposal must be managed within agreed procedures.

Prior to disposal please contact your local dealer or Xerox representative for end of life take back information.

European Union - Disposal Information for <u>Domestic Users</u>

Application of this symbol on your equipment is confirmation that you should not dispose of the equipment in the normal household waste stream.

In accordance with European legislation, end of life electrical and electronic equipment subject to disposal must be segregated from household waste.

Private households within EU Member States may return used electrical and electronic equipment to designated collection facilities free of charge. Please contact your local disposal authority for information.

In some Member States when you purchase new equipment your local retailer may be required to take back your old equipment free of charge. Please ask your retailer for information.

Countries not within the European Union

Please contact your local waste authorities and request disposal information.

Initial Machine Assembly

Remove both pieces from packaging and store for safe keeping.

Place the top unit onto the lower base and locate the rubber feet from the top unit into the holes in the top of the base unit..

General Operation

Make sure that the Waste Collection Box, Delivery Dividers, Feed Tray and guards are all properly installed on the Zip21A before operation.

The top guard MUST be closed properly or the safety switch will not be activated.

The main power switch, located at the delivery end/non-operator side of the machine, is used to turn the Zip21A "ON". Once power has been turned on, the Zip21A will go through a self-test sequence.

At the end of this self-test, the Zip21A will be ready to operate. The last set of program parameters that were programmed into the Zip21A will automatically be recovered from memory and displayed on the touch screen.

Pressing the "START" button will activate the Zip21A and the machine will start feeding paper. When the machine has finished feeding all of the stock and the feed tray is empty, it will stop automatically. Likewise, if a Run Count is set the machine will feed the correct number of sheets and then automatically stop.

Pressing the "STOP" button will deactivate the feeding system of the machine and complete the sheet currently being processed.

If an error occurs, the Zip21A will sound a warning and stop the machine. An error message should be displayed on the touch screen display. Note the error message and refer to the "Errors" section. To clear the error, follow the procedure indicated until the machine returns to operation. The Zip21A will not operate until the error message has been cleared.

Feeder Section

The Zip21A uses a suction feeder that feeds from the top. The lead edge of the stack in the feeder should be pushed against the stop plate, under the suction unit.

The position of the top of the stack in relation to the suction unit is controlled by the blue cap knob situated above the feeder section. It has a scale on top that denotes the size of the gap and a red slider that indicates the position selected. Clockwise rotation decreases the gap and anti-clockwise rotation increases the gap.

A chrome rear guide is fitted and is adjustable for different lengths of stock. Undo the black knob and adjust the backstop so that is just touches the rear of the stock. This chrome rear guide also raises up to allow access to install/remove the sheets and to make adjustments to the sheet retarding plate adjuster.

Below the feed unit is the sheet retarding plate adjuster. This also has a black knob and adjusts the gap between the top of the sheet retarding plate and the suction drive belt. This should be adjusted `to allow one sheet at a time to be fed. Clockwise rotation decreases the gap and anti-clockwise rotation increases the gap.

To adjust for different widths of paper use the Paper Width Position Thumb Wheel situated on the non-operator side of the feeder.

To adjust the position of the paper in the feeder use the Left / Right Adjustment Dial situated on the operator side of the feeder.

Important:
The sensor at the front of the Paper Feed Tray may cause an error if it detects excess light or direct sunshine. Keep machine out of direct light.

Rotary Slitting / Scoring Section
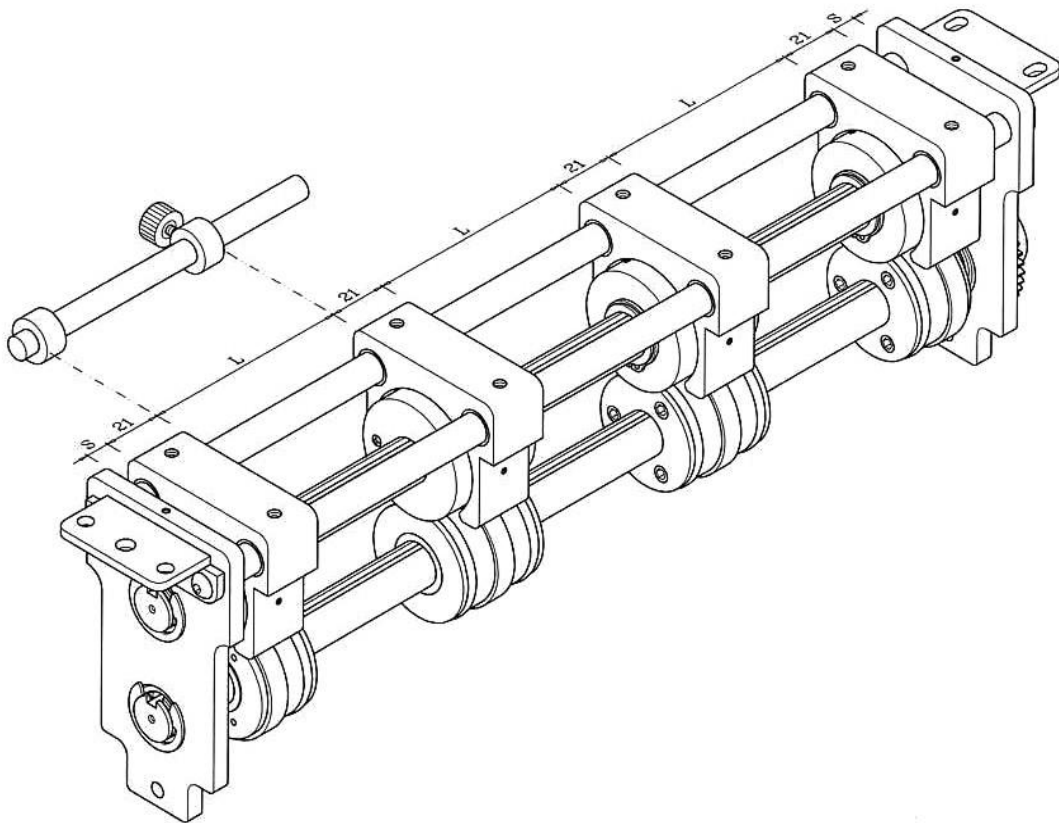
The Zip21A uses slitting and/or scoring blades mounted in a removable cassette to slit the paper as it passes through the machine.

Important: Before removing or installing a blade cassette, turn the main power switch to the "OFF" position.

Remove the top cover from the machine. Remove the four Philips head-mounting screws that secure the blade cassette, and then lift the cassette out of the machine. To install a new cassette, reverse the process making sure the gear on the cassette matches the drive gear on the machine. Always use all four Philips head screws when installing the blade cassette.

To adjust the cutting blade width, remove the top guard and the cassette guard and refer to the drawing above. Set the width of the adjusting tool with the Vernier Callipers supplied. The width "L" is equal to the width of the card less 15mm. For example, a card of 85mm wide would have the adjusting tool set to 85-15=70mm. The total distance between the side frames is 340mm so the distance "S" can be calculated as S=340-(3xL)-(2x21)-(2x19)÷2. In our example above this would be "S" = 340-(3x70)-(2x21)-(2x19)÷2 = 25mm (There is a quick reference settings guide on page 8)

Loosen the 2 screws holding each assembly and place the adjusting tool between the holders as shown above. Slide the assemblies until they touch the adjusting tool and lock the screws. Do not over tighten the screws.

Important: Always work around the centre of the machine when setting the cassette assemblies. Details of calculating this are shown above.

To correctly align the paper to the slitting/scoring blades, the infeed platform has a Left / Right Adjustment Dial. This adjustment is simple and easy to use. A reference scale and indicator are located on the feed tray to simplify side-to-side adjustments.

Card Width Setting Guide

Card Width	Vernier Setting	Side Gap	Card Width	Vernier Setting	Side Gap
47	32	82	77	62	37
48	33	80.5	78	63	35.5
49	34	79	79	64	34
50	35	77.5	80	65	32.5
51	36	76	81	66	31
52	37	75.5	82	67	29.5
53	38	73	83	68	28
54	39	71.5	84	69	26.5
55	40	70	85	70	25
56	41	68.5	86	71	23.5
57	42	67	87	72	22
58	43	66.5	88	73	20.5
59	44	64	89	74	19
60	45	62.5	90	75	17.5
61	46	61	91	76	16
62	47	59.5	92	77	14.5
63	48	58	93	78	13
64	49	56.5	94	79	11.5
65	50	55	95	80	10
66	51	53.5	96	81	8.5
67	52	52			
68	53	50.5			
69	54	49			
70	55	42.5			
71	56	46			
72	57	44.5			
73	58	43			
74	59	41.5			
75	60	40			
76	61	38.5			

Formulation

Vernier Gauge Setting
Card Width - 15

Side Gap Setting
260 - (3 x Vernier Setting) / 2

# Cross Cutting / Guillotine Section (change template)

The Zip21A uses a touch screen programmable controller and a guillotine cutter to cut the sheet into sections. The programmable controls are easy to set-up and adjust. Scissor or gutter cut formats can be programmed and produced on the Zip21A.

Refer to the Programming Section for set up.

There is no need to remove any screws on this section. The Cross Cutting / Guillotine Section is factory set and should not require adjustment. Make sure only qualified engineers carry out adjustments to this part of the Zip21A.

Note:

If the Gutter cut is not a straight scissor cut it must be 2mm or larger.
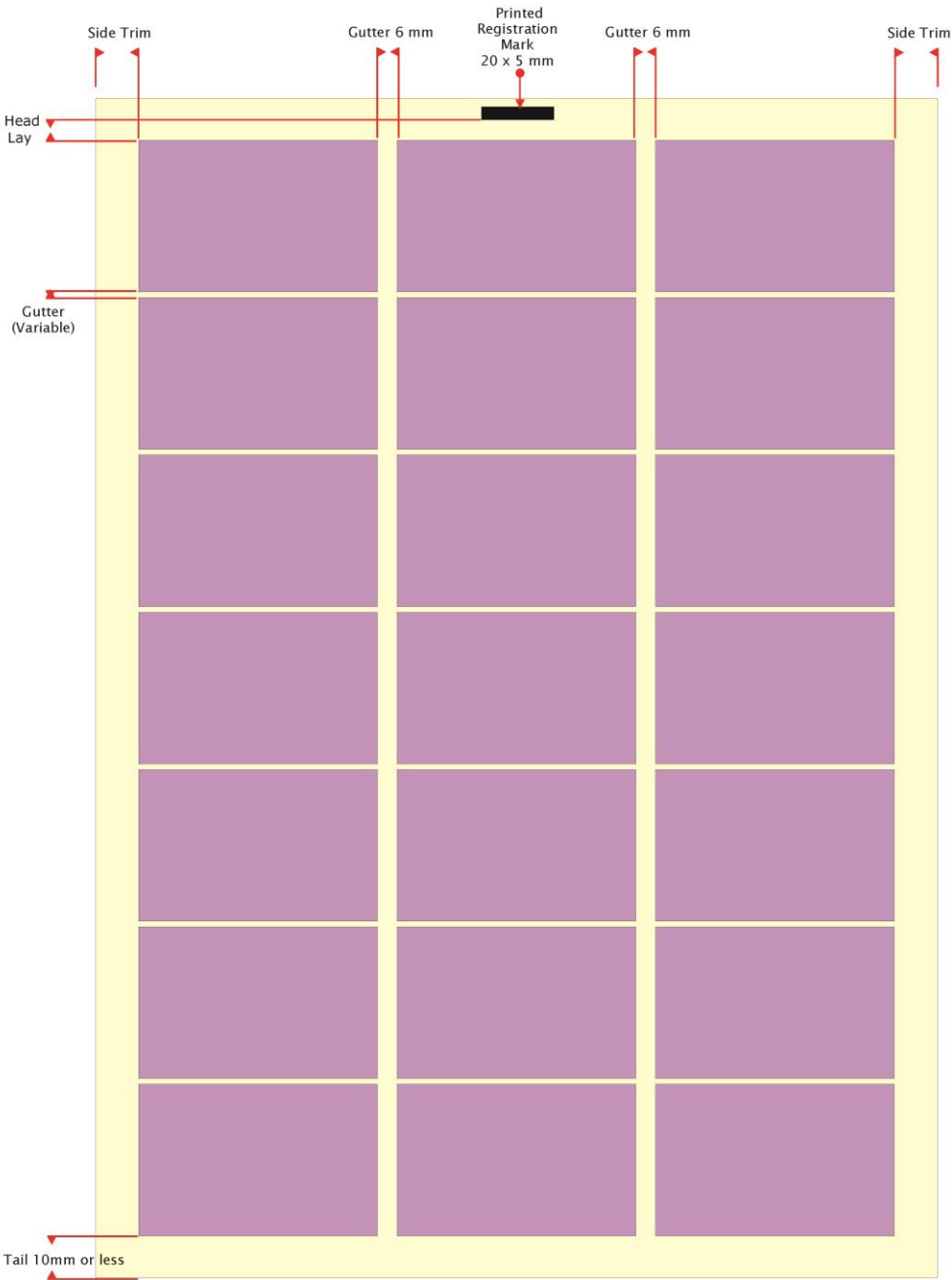
Programming

The program requires six pieces of information to be entered before a job can be run.

"Registration" = The mode of operation for registering the start of the cutting process. This can be either from the LEAD EDGE of the sheet or from a registration MARK printed on the sheet.

"No of Cards" = The number of pieces to be cut out along the length of each sheet.
Note:
If you are running three rows of seven-up business cards on the sheet then the value of "No of Cards" would equal 7.

"Margin:" = The space between the trail edge of the registration mark and the first cut or the lead edge of the sheet and the first cut..
Note:
If the first cut is 12mm from the trail edge of the registration mark then the value of "Margin:" would equal 12.00. Likewise, if the first cut is to be 18mm from the lead edge of the sheet then this value would equal 18.00.

"Card Length:" = The length of each piece to be cut out along the length of each sheet.
Note:
If you are producing a 50mm high business card then the value of "Card Length:" would equal 50.00

"Gutter Length" = The size of gutter to be removed between each individual piece on the sheet.
Note:
If you are using a 3mm gutter between business cards to remove a bleed then the value of "Gutter Length" would equal 3.00. If a gutter is not required then the value of "Gutter Length" would equal 0.00

"Last Cut Offset" = Adjusts the length of the last card cut.
Note:
The last card from each sheet can sometimes be longer than the others. If this is the case, the last card can be reduced by using this adjustment. Remember to enter a value preceded by a minus sign or the card will be made longer!

Touch Screen Operator Controls

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Start
The Start button will initiate the machine operation and sheet feeding and cutting will commence.

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Single Sheet
The Single Sheet button will initiate the machine operation, feeding and cutting one single sheet and then stopping. This is very useful when testing or setting the machine.

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Pause
The Pause button will stop the feeder and the machine at the point the button was pressed. When the Pause is pressed again, the machine will continue from the point it was paused.

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Stop
The Stop button will stop the feeder and the machine will complete the sheet that is currently being processed. Once this sheet is complete, the machine will stop.

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Reset
The Reset button will initiate the start up cycle of the machine. It runs all drives, motors and tests all sensors and signals. If everything is correct, the machine will then return to the stop position.

Manual
The Manual button will open a new screen which allows control of the individual motors on the machine and other functions described on page 12 of this manual.

Total Run
This indicates the total number of sheets that have been run since Zero was last pressed.

Zero
The Zero button will reset the Total Run count back to zero.

Total Set
This indicates the number of sheets required in the current batch. Pressing the display value allows the batch quantity to be changed.

Cutting Data
The Cutting Data button is used to access the jobs that are stored in memory for recall, editing or programming a new job.

Alarm List
This button accesses the alarm list that has been stored on the system. This list shows which error messages and faults have been detected and displayed in chronological order.

I/O Monitor
This button accesses a visual image of the machine sensors and there current operating status. Activating any of the sensors will show a status change on this display.

Manual Screen

Feed Motor
This button drives the feeder belt and will continue to operate whilst the button is held on.

Guillotine Reverse
This button changes the direction of the guillotine motor and is useful if a jam under the blade should occur and a normal reset of the blade is driving into the jammed stock. Selecting this button and then selecting the Guillotine Reset should clear the blade from any jammed stock.

Feed Tray UP
This button drives the feed tray motor UP when activated. If held for more than 5 seconds, the feed tray will continue to rise until it reaches the correct feed height selected by the operator.

Alignment Roller Motor
This button drives the alignment roller motor and will continue to operate whilst the button is held on.

Guillotine Reset
This button drives the guillotine blade motor and when activated will drive the motor until the guillotine blade returns to its rest position.

Feed Tray DOWN
This button drives the feed tray motor DOWN when activated. If held for more than 5 seconds, the feed tray will continue to drop until it reaches the bottom of the feeder section.

Rev. Jog
This button reverses the drive of the motors and is useful when trying to remove any stock that may have become jammed or when 2 sheets have fed together.

Doubles Detector Setting
This button allows the operator to set the Double Sheet Detector and is explained in more detail on page 12 of this manual.

Quit
This button will return the machine to the operating screen.

Double Sheet Detector Setting

Place the desired stock in the feeder and set the feed section ready to run.

Select 'Manual' from the operating screen

Select 'Doubles Detector Setting' and the machine will feed one sheet into the machine, until it is under the first control roller.

Rotate the knob above the first control roller until the machine signals a 'double'

Rotate the knob slightly, in the opposite direction, until the signal clears.

Press the 'Rev. Jog' button until the sheet has cleared back into the feed area.

The machine is now set for double sheet detection and ready to run.

To program a job into memory:
File to be saved as "ZIP21A DEMO SHEET"

24 Business Cards to view, 85x54mm, (3 columns of 8) on an SRA3 sheet.
Top Margin 6mm
Business Card Height 54mm
Cross Cut Gutter 0mm
Mark registration

Action	Operation
Turn Zip21A on	Machine will initialise and display operating screen.
Press "Cutting Data"	Machine opens current job for editing
Press "Edit"	Edit button flashes and program settings can be adjusted
Press "Mark/Edge button"	Selects Lead Edge or Registration Mark
Press "No of cards button"	Displays a keypad, press 8 and then return arrow
Press "Margin button"	Displays a keypad, press 6 and then return arrow
Press "Card Length button"	Displays a keypad, press 54 and then return arrow
Press "Gutter Length button"	Displays a keypad, press 0 and then return arrow
Press "Last Cut Offset button"	This is normally set at -0.01 Displays a keypad, press selection and then return arrow
Press "Job Name button"	Displays a keypad, enter ZIP21A DEMO SHEET and then return arrow
Press "Card Size button"	Displays a keypad, enter 85x54 MM 24 UP and then return arrow
Press " Edit"	Edit button stops flashing
Press "Save"	Dislay shows memory store locations. Select the location required.
Press "Save" again	Screen returns to the editing screen
Press " Main Page"	Returns to main operating screen with job recalled and displayed

Important: The recommended trim off from the tail edge of the sheet is between 4mm – 10mm (0.160" - 0.3937"). Tail edge trim off that is too long may hang up in the guillotine causing the Zip21A to display an error. If this occurs, turn the power "OFF". Remove the top guard and remove the tail edge trim off scrap. Assure that the recommended tail trim off dimension is established when laying out the sheet prior to printing.

Important: The Zip21A paper handling rollers that convey the stock through the machine are designed to handle a specific thickness of paper. If the paper is thicker or thinner, there may be a slight difference in the programmable cut off length. If the paper is thicker, the cut off length is usually longer. If the paper is thinner, the cut off length is usually shorter. After running the first sheet, check the cut off size and make any adjustments required in the program.

Important: Due to the feed system of the Zip21A, the last card cut can sometimes be slightly longer than the others. This is also affected by the thickness of the paper; the thicker the paper, the bigger the difference. To overcome this adjust the 'Last Cut Offset button' to the desired value.

To Edit a job in memory:

File to be saved as "CASLON BUSINESS CARD"
24 Business Cards to view, 85x54mm, (3 columns of 8) on an SRA3 sheet.
Top Margin 8mm
Business Card Height 54mm
Cross Cut Gutter 0mm
Mark registration

Action	Operation
Turn Zip21A on	Machine will initialise and display operating screen.
Press "Cutting Data"	Machine opens current job for editing
Press "Retreive"	Displays the job memory list and store locations
Press "Scroll"	Scroll up and down to find the job for editing
Press "Retreive"	Brings the selected job into editing screen
Press " Edit"	Edit button starts flashing
Press "Margin button"	Displays a keypad, change margin to 8 and then return arrow
Press "Job Name button"	Displays a keypad, enter job name to CASLON BUSINESS CARD and then return arrow
Press "Card Size button"	Displays a keypad, enter 85x54 MM 24 UP and then return arrow
Press " Edit"	Edit button stops flashing
Press "Save"	Dislay shows memory store locations. Select the location required.
Press "Save" again	Screen returns to the editing screen
Press " Main Page"	Returns to main operating screen with job recalled and displayed

To Recall a job:

File to be recalled is "ZIP21A DEMO SHEET"
24 Business Cards to view, 85x54mm, (3 columns of 8) on an SRA3 sheet.
Top Margin 6mm
Business Card Height 54mm
Cross Cut Gutter 0mm
Mark registration

Action	Operation
Turn Zip21A on	Machine will initialise and display operating screen.
Press "Cutting Data"	Machine opens current job for editing
Press "Retreive"	Displays the job memory list and store locations
Press "Scroll"	Scroll up and down to find the job for recall
Press "Retreive"	Brings the selected job into the main screen
Press " Main Page"	Returns to main operating screen with job recalled and displayed

To set a job run length:
The machine needs to run 50 sheets and then stop

Action	Operation
Turn Zip21A on	Machine will initialise and display operating screen.
Press "Total Set"	Displays a keypad, enter 50 and then return arrow
Press "Zero"	Resets the current sheet count to zero

Display / Error messages

Message	Meaning	Action
Top Cover Sensor	Top guard is not in place correctly. Top guard micro switch improperly adjusted	Lower Top guard Check Microswitch
Mark Sensor	Mark Sensor has detected stock	Remove stock from machine
Registration Sensor	Regsitration Sensor has detected stock	Remove stock from machine
Card Jam Sensor	Card Jam Sensor has detected stock	Remove stock from machine
Double Paper	Two sheets detected in machine	Remove stock from machine
Feed Tray Sensor	Detects Feed Tray UP position	Lower Tray Check Microswitch
Waste Door Sensor	Waste Door Open	Close Door Check Microswitch
No Paper	No Paper in machine	Load Feed Tray Check Microswitch

Maintenance / Troubleshooting

Sensor – Make sure that the light-detecting sensor is free from dust and other contamination. To clean, wipe with a soft cotton rag.

Rollers – Paper dust and ink residue will accumulate of the rollers causing inaccurate feeding. To clean, wipe with lint less rag. Spirit can be used but do not use Ketone or highly volatile solvents.

Problem	Remedy
Unable to feed card	Check tightness of paper feed side guides. Check Feed Gap Check Stack height in feeder
Card strips caught in cutter	Turn off machine first Remove strips with a non metallic object Check that the end cut off strip is between 4mm-10mm
Feeding more than one card at a time	Check tightness of paper feed side guides. Check Feed Gap Check Stack height in feeder Check for static in the stock
Cross Cutter does not cut	Check that card is below maximum thickness Check the Guillotine sensor is operating
Poor cut quality from Rotary Side Slitters	Check for off cuts caught around the blades Check magnetic dividers in delivery tray

Important
Turn off Power and disconnect machinery from electrical supply before removing any guards.

Discharging Static Electricity from the Stock

Static electricity is generated by the printing process and paper stocks sliding in and out of contact with each other. This may cause some paper handling problems as below:

Multiple sheet feeding
Cut waste not falling into the Waste Collection Box
Cut waste sticking to cutter blades
Erratic stacking in Delivery Tray

It is important to reduce the amount of static electricity in your card stock.

For laser printed stock, wait for 15 minutes before cutting to allow static to discharge.

Keep air between printed stocks to help static to discharge.
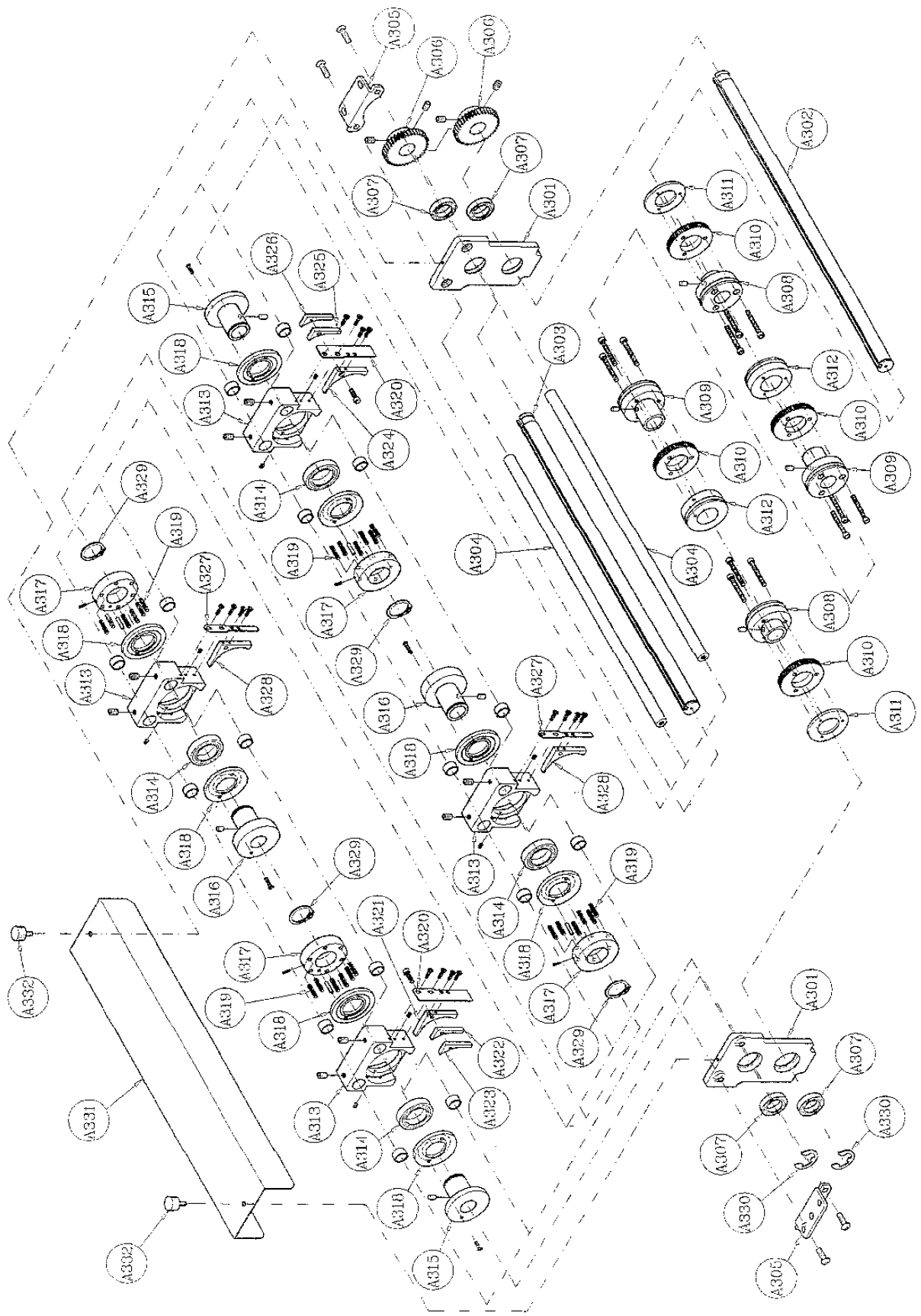
Do not stack printed cards too high.

Ideal operating conditions for the least amount static is above 50% humidity.
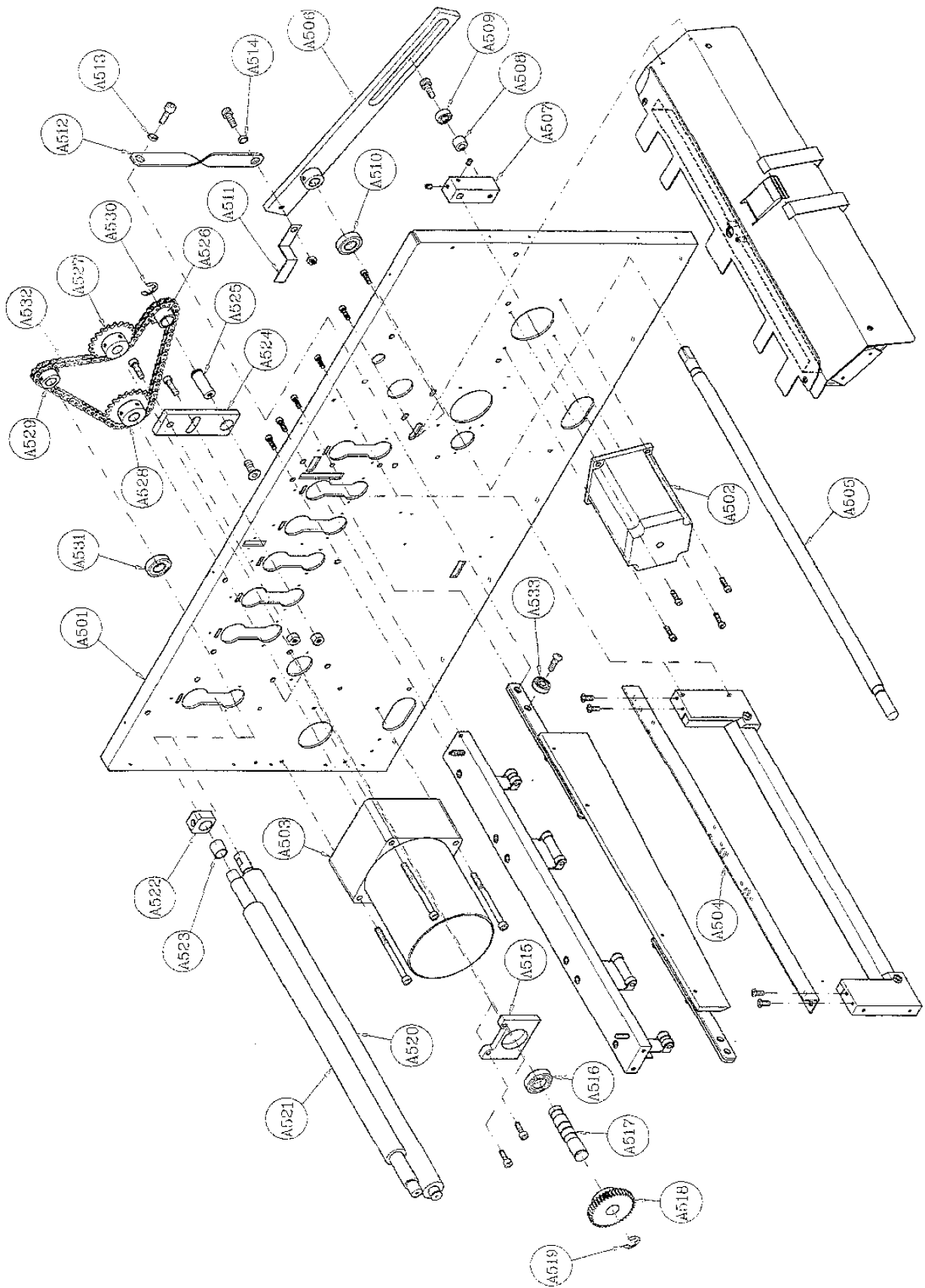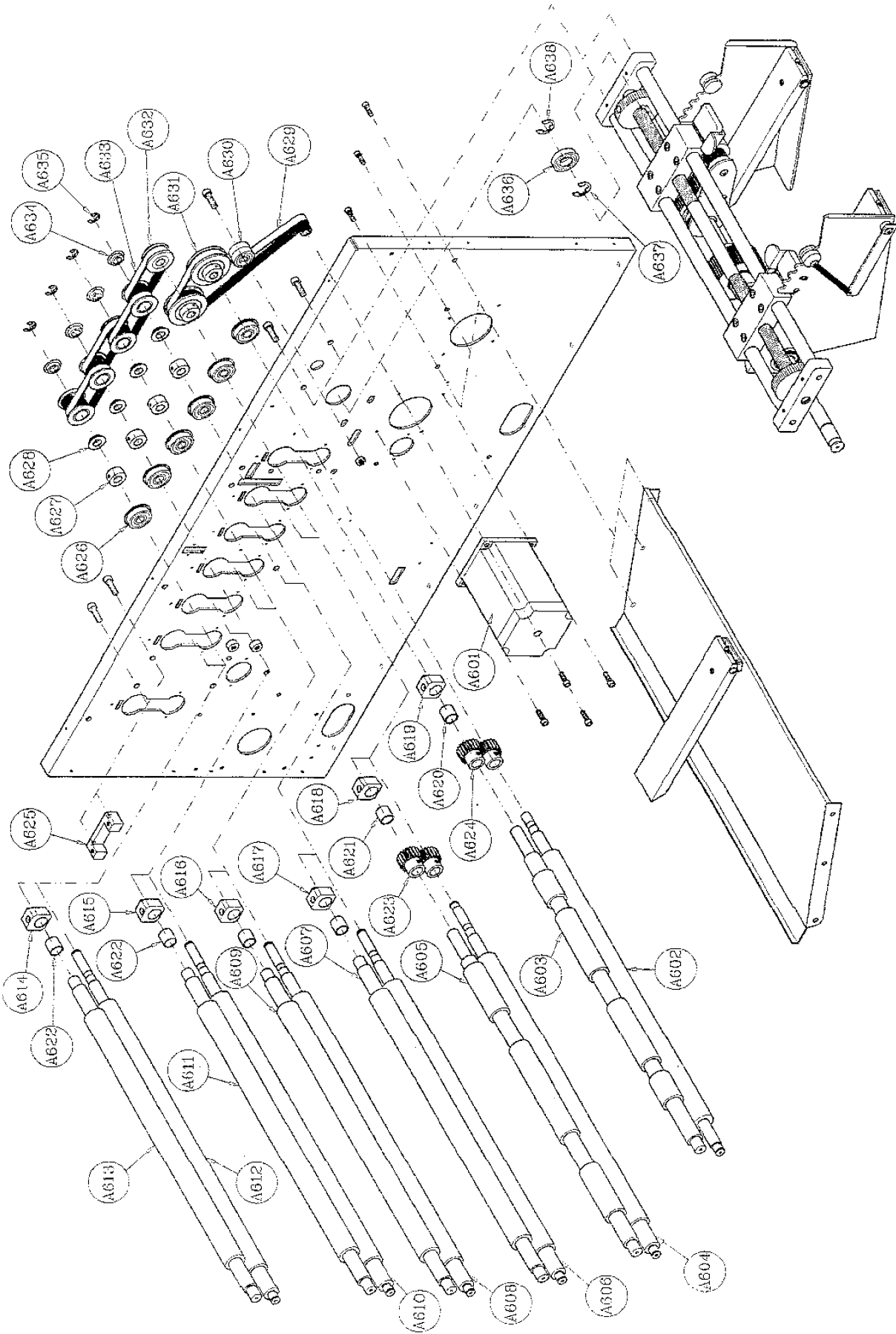
Make sure that your Zip21A is earthed.