

Declaration of Conformity



We,

Manufacturer: **Spartanics Ltd.**
3605 Edison Place
Rolling Meadows, Illinois 60008
USA
Phone: 847-394-5700
Fax: 847-394-0409

declare under our sole responsibility that the product,

Product: Decorated Material Feed
Model: M44 (Single Axis) & M224 (X/Y Axis)

conforms to the following standards

Safety: EN292 Safety of Machinery (1991)
EN60204-1 Electrical Equipment of Industrial Machines (1992)
EMC: EN50081-2 Electromagnetic Emissions (Heavy Industrial)
EN55011 Electromagnetic Emissions of ISM Equipment
EN50082-2 Electromagnetic Immunity (Heavy Industrial)

following the provisions of

Machinery Directive (89/392/EEC)
Low Voltage Directive (73/23/EEC)
EMC Directive (92/31/EEC)

when installed in strict accordance to all relevant safety, emc, and installation instructions set forth in the accompanying documentation.

Authorized Signature:

A handwritten signature in black ink, appearing to read "Thomas E. Kleeman", is written over a horizontal line.

Authorized Representative: Thomas Kleeman, Vice President, Engineering

Date of Issue:

27 April 1998



Spartanics[™]



English

Model 224
Decorated Material Feed
Operator Manual

SPARTANICS Model 224 Operator Manual

The information furnished herein is believed to be accurate and reliable. However, no responsibility is assumed by Spartanics for damages incurred directly or indirectly from errors, omissions or discrepancies between the product and this manual.

In order to show equipment detail, this manual may show equipment with guards or covers removed. In normal use, equipment must never be operated with guards or covers removed or modified, and safety mechanisms must never be defeated!

Spartanics Ltd. reserves the right to change specifications at any time without notice.

For information not contained in this manual, contact Spartanics Technical Services Department for assistance.

Spartanics is a registered trademark of Spartanics Ltd. Rolling Meadows, Illinois.

Table of Contents

Declaration of Conformity	2-1
<i>Introduction</i>	<i>1-1</i>
Model 224 Feed	1-1
Spartanics	1-1
Address:	1-1
Sales	1-1
Service	1-1
World Wide Web	1-1
Safety	1-2
General	1-2
Responsibilities	1-2
Operator Requirements	1-2
Malfunction Procedures	1-3
Safety Rules	1-3
Warnings	1-4
Safety Devices	1-4
Protective Equipment	1-4
Technical Data	1-5
Model	1-5
Accuracy	1-5
Material	1-5
Thickness	1-5
Width (strip or coil)	1-5
Length (strip)	1-5
Part Step-up	1-5
Feed Rate	1-5
Cycle Rate	1-5
Power Requirements	1-5
Dimensions	1-5
Weights	1-6
System Identification	1-6

Nameplate Sample	1-6
Manual	1-6
Symbols	1-6
Document Identification	1-7
Designation	1-7
Execution	1-7
Copyright	1-7
Declaration of Conformity	1-8
<i>Special Safety Warnings</i>	<i>2-1</i>
Integration Compliance	2-1
Guarding Warning	2-1
Interface Warning	2-1
Input Power Compliance	2-1
Safety codes	2-1
<i>Installation</i>	<i>3-1</i>
Shipping Damage	3-1
Concealed Damage	3-1
Installation	3-1
<i>Power Box</i>	<i>4-1</i>
Power Box - Left / Open view	4-1
Power Box - Wiring Chart	4-1
Power Box- Jumper Colors	4-1
Power Box Detail - Left	4-2
Circuit Breaker	4-2
Main Power Connector	4-2
Foot Switch Connector	4-2

Power Box Detail - Right	4-3
Strip Starter Connector	4-3
Press Interface Connector	4-3
Fuse	4-3
<i><u>M224 Control Panel</u></i>	<i>5-1</i>
Front Panel	5-1
On	5-1
Off	5-1
Setup	5-1
Run.	5-2
Language	5-2
Advance	5-2
Eject.	5-2
Reset.	5-2
Up Arrow	5-3
Down Arrow	5-3
Tab	5-3
Tab & Plus	5-3
Plus.	5-3
Minus	5-4
Plus & Minus	5-4
Sense Fault.	5-5
Monitor - Y Position	5-5
Monitor - Registration Mark	5-5
Rear Panel	5-6
Power Connection	5-6
Fuse - 3 Amp	5-6
Fuse - 5 Amp	5-6
Feed Connections.	5-7
<i><u>Display Menu</u></i>	<i>6-1</i>
<i><u>Operation</u></i>	<i>7-1</i>
Turn Feed On	7-1
Select Preset	7-1

Turn Press On 7-1

Press Run 7-1

Load Strip 7-2

Start Punching 7-2

Schematics 8-1

1. Introduction

1.1. Model 224 Feed

The Spartanics Model 224 Decorated Material Feed is a device that, when attached to a press, optically senses and positions each part entering the press for accurate embossing, piercing, die-cutting, or blanking.

1.2. Spartanics

1.2.1. Address:

Spartanics, Ltd.
3605 Edison Place
Rolling Meadows, IL 60008
U.S.A.

1.2.2. Sales

Tel: 847-394-5700
Fax: 847-394-0409
sales@spartanics.com

1.2.3. Service

Tel: 847-394-5700
Fax: 847-394-9349
service@spartanics.com

1.2.4. World Wide Web

[Http:www\\spartanics.com](http://www\\spartanics.com)

1.3. Safety

1.3.1. General

This device conforms to established safety regulations. However, hazards are involved in the operation of this device if:

- The operation and safety guide lines in this manual are not followed.
- The device is not operated for its intended use.

1.3.2. Responsibilities

The manufacturer is responsible for delivering the device in a flawless state in terms of operation and safety regulations.

The company operating the device is responsible for;

- Ensuring that the device is used in accordance with its intended purpose;
- Training the personnel
- Providing any required protective gear
- Controlling that only authorized personnel work on the device;
- Meeting the required maintenance requirements;

The operating personnel is responsible for;

- Operating the device only when it is in a flawless state with all safety guards properly installed;
- Immediately notifying the supervisor in charge of anything affecting safety;
- Ensuring that no unauthorized persons are near the device during operation;
- The use and care of appropriate safety and protective equipment;
- Cleaning the device and the work area around the device.

1.3.3. Operator Requirements

All persons involved in the operation of this device shall;

- Be of legal age to operate this type of machinery;
- Be adequately trained and instructed in the operation of this device;
- Have read and understood all operation and safety instructions in this manual;

- Have read and understood all local and regional safety instructions governing the use of this type of machinery.

Trainees shall only work on this device when supervised by an experienced operator.

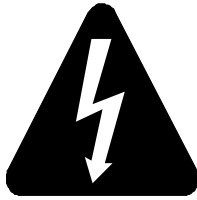
1.3.4. Malfunction Procedures

In the event of any malfunction, turn power off and contact qualified service personnel.

1.3.5. Safety Rules

- The operation of this device is subject to the local, state, federal, and international regulations regarding safety at work and accident prevention.
- Read this manual before operating this device.
- For any operation or maintenance procedures that may be required, but are not covered in this manual, contact Spartanics Technical Service Department before proceeding.
- Before device is put into operation, always check the safety equipment and protective covers.
- Unauthorized modifications and changes to the device are not authorized.
- Accessories, replacement, or spare parts produced from other manufacturers may only be used when approved by Spartanics
- Before carrying out any maintenance, repair, or modification work, lockout mains supply voltage to prevent power from inadvertently being switching on.
- Never operate this device unless it is properly grounded according to local regulations.
- Never operate this device with any of its safety guards removed or improperly installed.
- Never operate this device in an explosive atmosphere.
- Never operate this device in a wet or moist environment.

1.3.6. Warnings



Warning

Mains voltage is used to operate this device

Possible hazards

Death or injuries due to electrical shock

Safety measures

Covers containing electrical components, controls and distribution circuits may only be opened by authorized personnel.



Warning

Automatic or manual clamping action

Possible hazards

Pinch or compression injury under material hold down clamp or under tool punch area.

Safety measures

- Do not operate press with safety guards removed.
- Do not place inappropriate material into die area.
- Do not operate press with any other personnel near machine.



Warning

Foreign object may be ejected from clamp or die area.

Possible hazards

Face, hand, or other injuries due to ejected objects

Safety measures

Wear safety glasses, gloves or other protective

1.4. Safety Devices

1.4.1. Protective Equipment

- Close fitting work clothing
- Safety glasses
- Gloves

1.5. Technical Data

1.5.1. Model

Model 224

1.5.2. Accuracy

± 0.005 in. (± 0.13 mm) or better relative to the registration marks

1.5.3. Material

metal, plastic or paper

1.5.4. Thickness

Minimum: 0.010 in. (0.25 mm)
Maximum; 0.062 in. (1.6 mm)

1.5.5. Width (strip or coil)

Minimum; 0.750 in. (19 mm)
Maximum; 10 in. (254 mm)

1.5.6. Length (strip)

Minimum 12 in. (300 mm)
Maximum; 120 in (3048 mm)

1.5.7. Part Step-up

Minimum: 0.250 in. (6.3 mm)
Maximum; 15 in. (381 mm)

1.5.8. Feed Rate

Maximum: 12 in. (304.8 mm) per second

1.5.9. Cycle Rate

Maximum; 180 press strokes per minute

1.5.10. Power Requirements

220 to 480 VAC, 50/60 Hz., 350 VA, 1 \emptyset

1.5.11. Dimensions

Feed 36 x 18 x 6 in
..... (914 x 457 x 152 mm)
Power box 13 x 13 x 7
..... (330 x 330 x 177 mm)
Electronics..... 7.5 x 21 x 18 in
..... (191 x 533 x 457 mm)

1.5.12. Weights

Feed 30 lb. (13.6 Kg)
 Power Box 33 LB (15 Kg.)
 Electronics 27 Lb. (12.3 Kg)

1.6. System Identification**1.6.1. Nameplate Sample****1.7. Manual****1.7.1. Symbols****Warning**

Designation of a possible hazardous situation.
 If this situation is not prevented, the consequences may be;

- Unhealthy effects
- Serious injuries

**Caution**

Designation of a hazardous situation.
 If this situation is not prevented, the consequences may be;

- Slight or minor injuries
- Damage to the equipment.

**Important**

Designation of special working instructions

Dangerous voltages

Designates parts of the unit with a possible dangerous voltage

1.8. Document Identification

1.8.1. Designation

Model 224
Decorated Material Press Feed
Operator Manual
Part number and revision listed at bottom of each page

1.8.2. Execution

This manual is compiled following the provisions of the EC directive for operating instructions.

1.8.3. Copyright

The information contained in this manual was derived in part from proprietary and patent data of Spartanics. The express purpose of this publication is to assist users in the installation of said equipment. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form without the prior written permission of Spartanics.

© Spartanics
3605 Edison Place
Rolling Meadows, IL 60008
U.S.A.
All rights reserved

1.9. Declaration of Conformity



We,

Manufacturer: **Spartanics Ltd.**
3605 Edison Place
Rolling Meadows, Illinois 60008
USA
Phone: 847-394-5700
Fax: 847-394-0409

declare under our sole responsibility that the product,

Product: Decorated Material Feed
Model: M44 (Single Axis) & M224 (X/Y Axis)

conforms to the following standards

Safety: EN292 Safety of Machinery (1991)
EN60204-1 Electrical Equipment of Industrial Machines (1992)
EMC: EN50081-2 Electromagnetic Emissions (Heavy Industrial)
EN55011 Electromagnetic Emissions of ISM Equipment
EN50082-2 Electromagnetic Immunity (Heavy Industrial)

following the provisions of

Machinery Directive (89/392/EEC)
Low Voltage Directive (73/23/EEC)
EMC Directive (92/31/EEC)

when installed in strict accordance to all relevant safety, emc, and installation instructions set forth in the accompanying documentation.

Authorized Signature:

A handwritten signature in black ink that reads "Thomas E. Kleeman". The signature is written in a cursive style with a large, prominent 'T'.

Authorized Representative: Thomas Kleeman, Vice President, Engineering

Date of Issue: 27 April 1998

2. Special Safety Warnings

2.1. Integration Compliance



Spartanics Feed Systems are designed to be integrated into an end users equipment. Continued compliance with all government regulations and codes is the responsibility of the end user management.

2.2. Guarding Warning



Attachment of Spartanics Feed Assembly to the users equipment and automating material movement in no way reduces the need to adequately guard any hazardous areas. All guarding is the users responsibility.

2.3. Interface Warning



Spartanics Feed Systems provide a “request to trip” signal only. Any interfaces between the users equipment and the feed system must be done in a way that insures the integrity of all existing safety, redundancy, and shutdown features of the end users equipment.

2.4. Input Power Compliance



The Spartanics Feed Systems provide a hard wired input connection in the supplied power box. An external electrical disconnect must be supplied by the end user between the feed power box and the electrical mains voltage. This is usually accomplished by connection to the users equipment electrical circuit.

2.5. Safety codes



No information supplied by Spartanics either in written or verbal form regarding safe installation or operation is intended to supersede local electrical and safety codes.

3. Installation

3.1. Shipping Damage

Check for visible damage to shipping crate or equipment. Contact shipping company to register claim.

3.2. Concealed Damage

For any damage that was not apparent upon initial receipt, contact Spartanics or an authorized representative before installing or operating the equipment.

3.3. Installation

Installation of this equipment may only be completed by qualified personnel of the manufacturer, personnel trained and authorized by the manufacturer, or by qualified and licensed personnel authorized by the customer.

Contact Spartanics or an authorized representative for installation assistance.

Caution



All presses must have proper point of action guarding installed whenever the press is being operated with the feed. Adequate guarding is the responsibility of the user management.

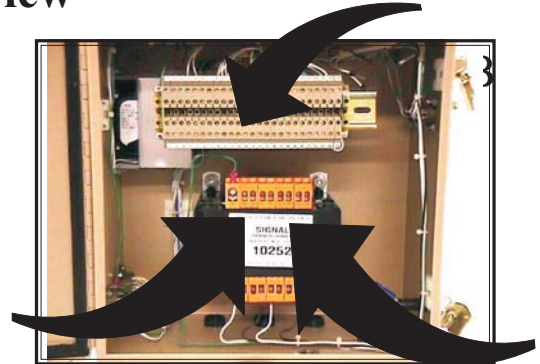
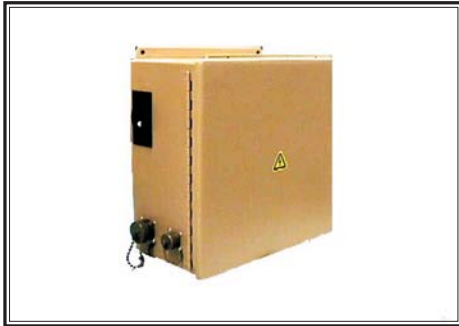
Caution



Never defeat safety features when modifying the press.

4. Power Box

4.1. Power Box - Left / Open view



A

B

4.2. Power Box - Wiring Chart

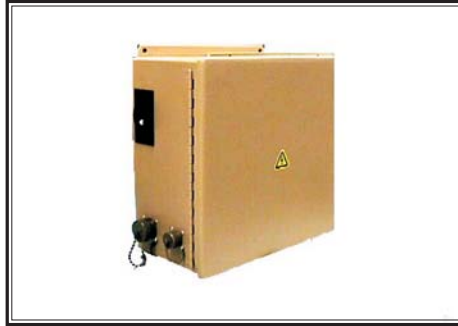
Voltage	#1	#2	#3	#4
480	A240 ↔ TB4	A0 ↔ TB7	B240 ↔ TB7	B0 ↔ TB5
460	A220 ↔ TB4	A0 ↔ TB7	B240 ↔ TB7	B0 ↔ TB5
440	A220 ↔ TB4	A0 ↔ TB7	B220 ↔ TB7	B0 ↔ TB5
380 / 400 / 415	A208 ↔ TB4	A0 ↔ TB7	B208 ↔ TB7	B0 ↔ TB5
230 / 240	A240 ↔ TB4	A0 ↔ TB5	B240 ↔ TB4	B0 ↔ TB5
220	A220 ↔ TB4	A0 ↔ TB5	B220 ↔ TB4	B0 ↔ TB5
200 / 208 / 210	A208 ↔ TB4	A0 ↔ TB5	B208 ↔ TB4	B0 ↔ TB5

Mains Input	PE	Phase 1	Phase 2	Phase 3
	TB - PE	TB1	TB2	TB3

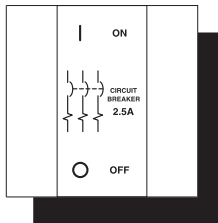
4.2.1. Power Box- Jumper Colors

#1 White / Blue
 #2 White / Violet
 #3 White / Gray
 #4 White / Black

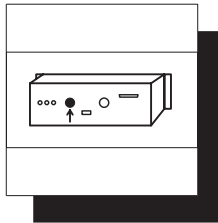
4.3. Power Box Detail - Left



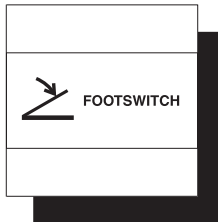
4.3.1. Circuit Breaker



4.3.2. Main Power Connector



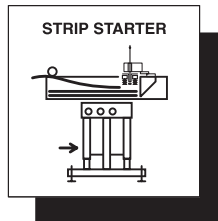
4.3.3. Foot Switch Connector



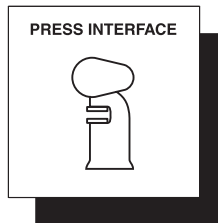
4.4. Power Box Detail - Right



4.4.1. Strip Starter Connector



4.4.2. Press Interface Connector

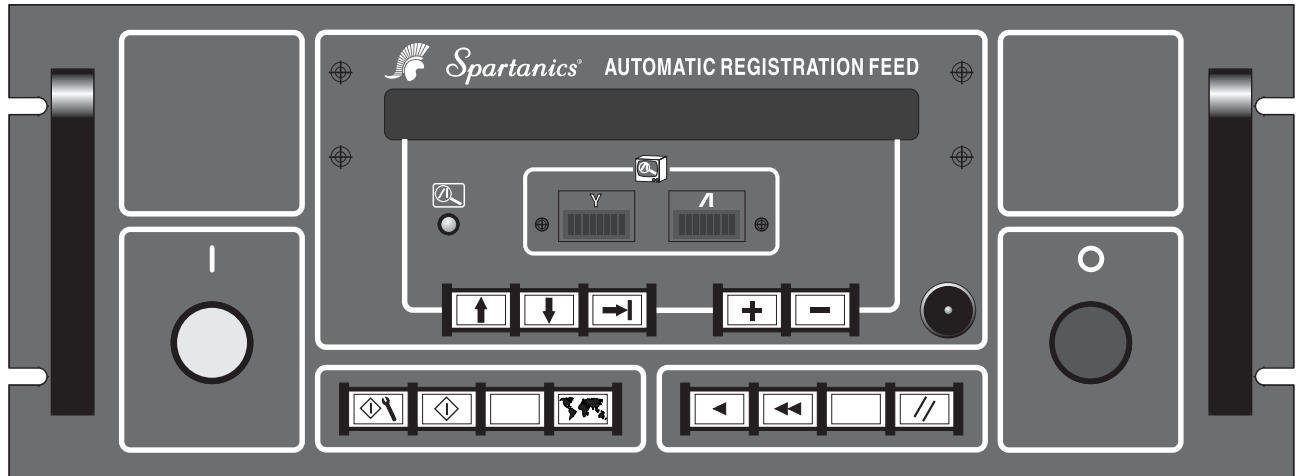


4.4.3. Fuse

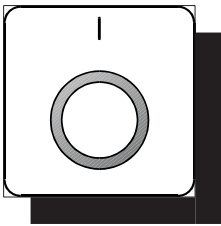


5. M224 Control Panel

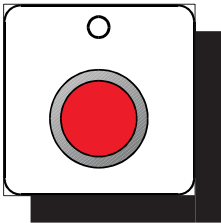
5.1. Front Panel



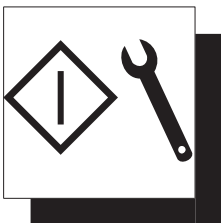
- 5.1.1. On**
Turns Feed on.



- 5.1.2. Off**
Turns Feed off

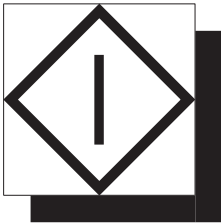


- 5.1.3. Setup**
Places Feed in Setup Mode



5.1.4. Run

Paces Feed in Run Mode

**5.1.5. Language**

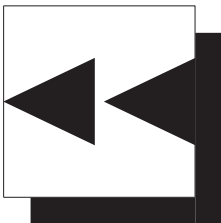
Selects the language for the display

**5.1.6. Advance**

In the run mode, when pressed, will move the next part through the press without the press cycling.

**5.1.7. Eject**

1. Ejects the material out of the feed
2. Clears error messages

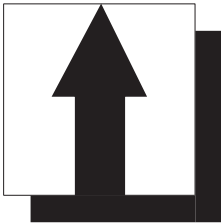
**5.1.8. Reset**

Resets the Feed Software

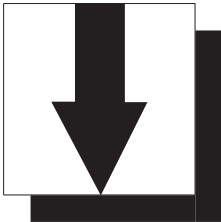


5.1.9. Up Arrow

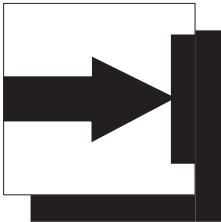
Moves the display up through the menu and submenu

**5.1.10. Down Arrow**

Moves the display down through the menu and submenu

**5.1.11. Tab**

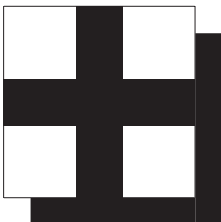
1. Scrolls the menus across the display
2. Operates reset, copy, and auto / manual options

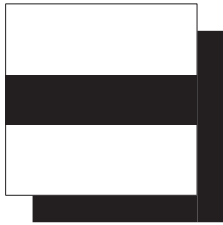
**5.1.12. Tab & Plus**

While holding TAB, moves display backward each time PLUS is pressed

**5.1.13. Plus**

1. Increases displayed value
2. Alternates any ON / OFF value
3. Alternates any YES / NO value



5.1.14. Minus

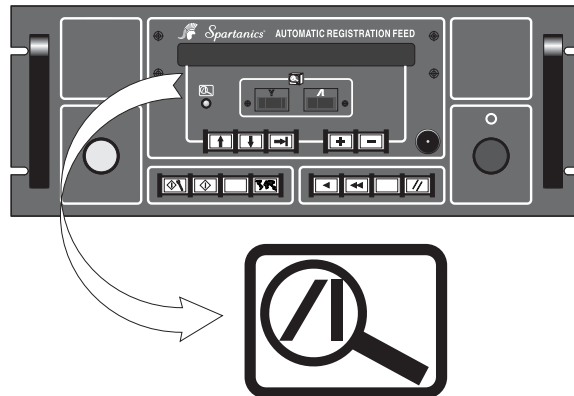
1. Decreases displayed values
2. Alternates any ON / OFF value
3. Alternates any YES / NO value

5.1.15. Plus & Minus

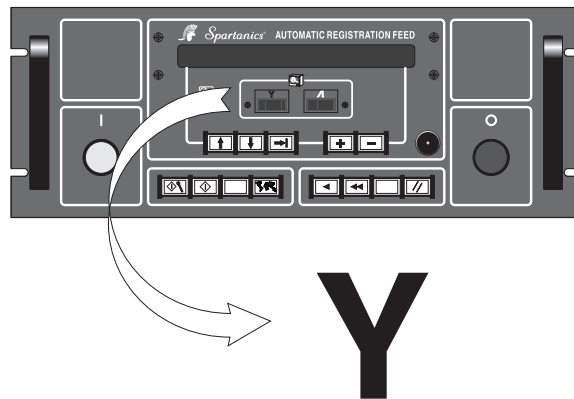
Press and hold desired direction button, then press other to rapidly change values

5.1.16. Sense Fault

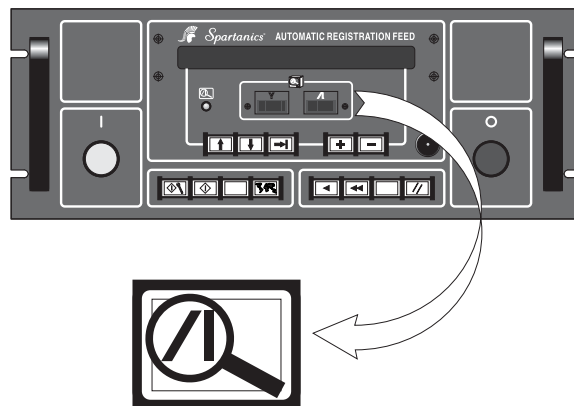
Light which indicates that the sensor did not properly detect the artwork.

**5.1.17. Monitor - Y Position**

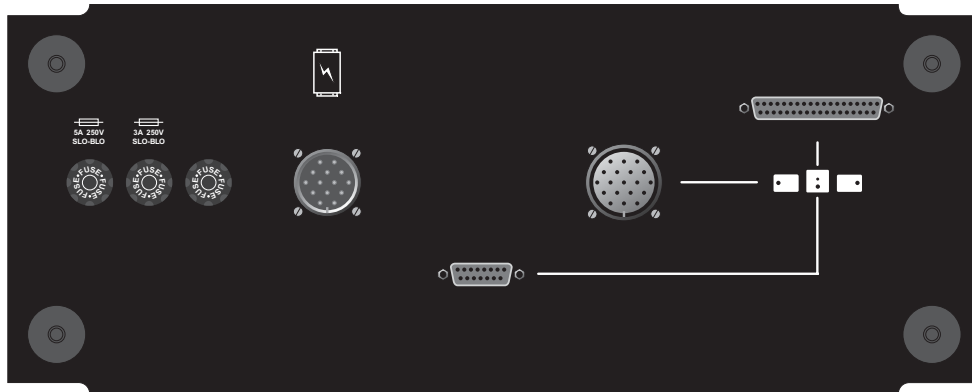
Lights which indicate the position of the Y axis corrector

**5.1.18. Monitor - Registration Mark**

Lights which indicate the position of the registration mark in the Registration Mark Window.

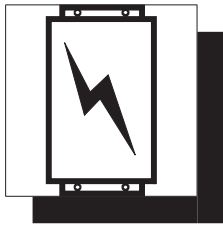


5.2. Rear Panel



5.2.1. Power Connection

Connects Electronics to Power Box



5.2.2. Fuse - 3 Amp

Fuse, 3 amp, slow blow



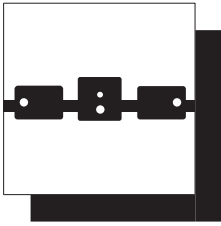
5.2.3. Fuse - 5 Amp

Fuse, 3 amp, slow blow



5.2.4. Feed Connections

Harness (with 3 connectors) connects Electronics to Feed Assembly

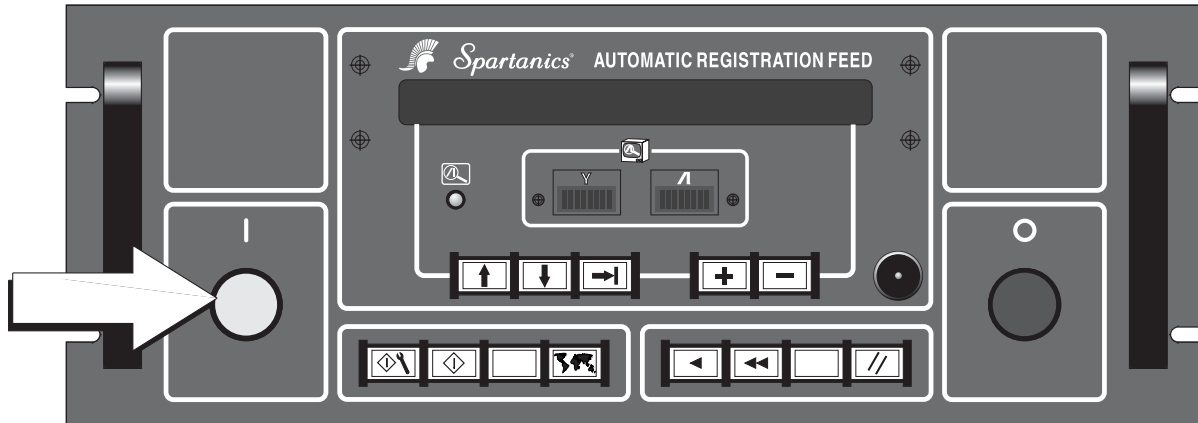


6. Display Menu

<p>Pre-Mark Menu</p>	<p>Feed Menu</p>
<p>Pre-Mark Position Pre-mark Type Pre-Mark Contrast Premark % Auto Manual</p>	<p>Roller to Sensor Sensor To Die Sensor to Crossover Y-Home out from Stop Auto Y Axis Reset Sensor Offset Strip Separation Auto Man Last Parts Correction Fault Response Feed Rate</p>
<p>Reg-Mark Menu</p> <p>1st Mark Offset Step Up Reg-Mark Type Quick Window Reg-Mark Contrast Reg-Mark Gain % Auto Man</p>	<p>Die Menu</p> <p>Steel Rule Die Progressive Die Yes Pre-Stations Post-Stations Progression No</p>
<p>Press Menu</p> <p>Trip Advance Delay Eject Air Duration 0 (zero) >0 (Greater than zero) Eject Air Delay Eject Air Start</p>	<p>Batch Menu</p> <p>Batch Yes Batch Size Batch Count No</p>
<p>Punch Menu</p> <p>Parts per Strip Bad Parts To Punch Bad Parts To Skip Parts Eject Sensor Strip Pull Back On Off Foot Switch Mode</p>	<p>Stats Menu</p> <p>Production Rate Press Count Press Rate</p>

7. Operation

7.1. Turn Feed On

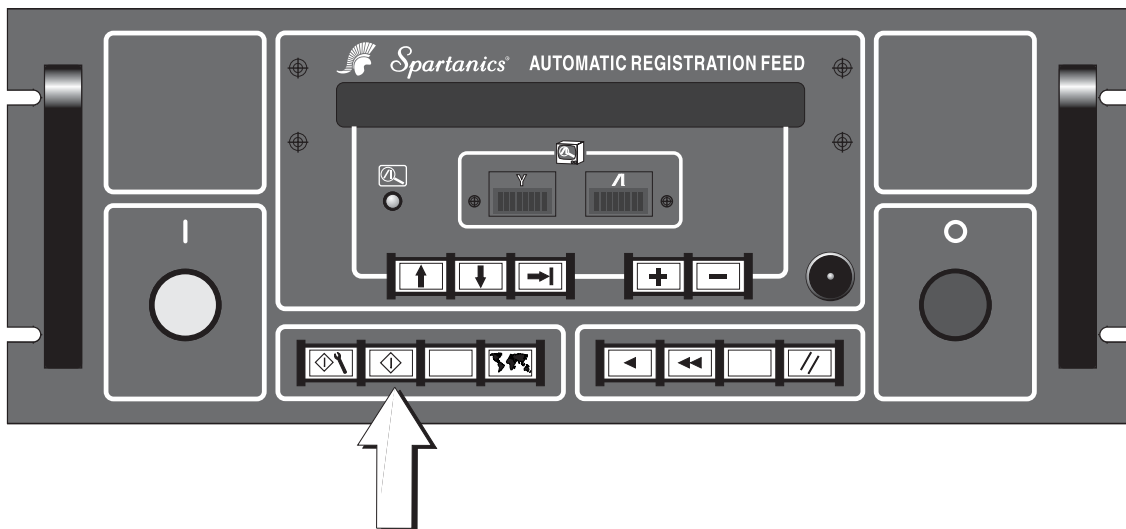


7.2. Select Preset

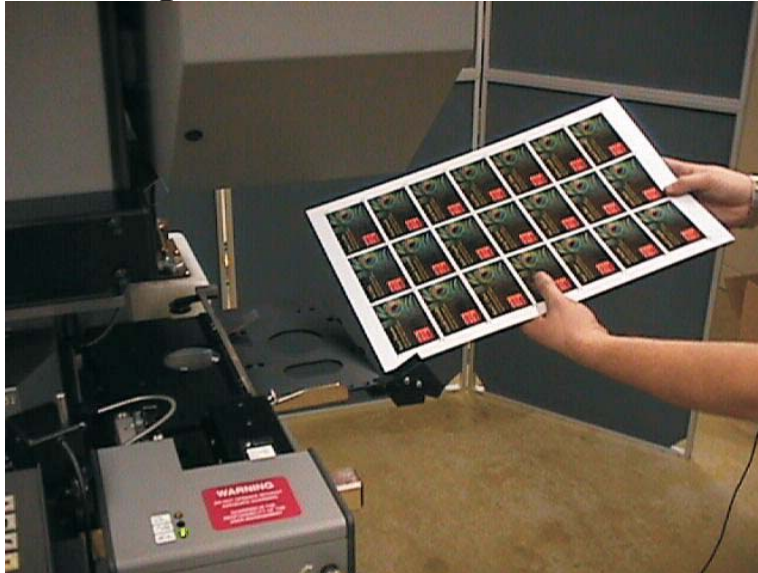
If presets are available, select by pressing the PLUS or MINUS buttons

7.3. Turn Press On

7.4. Press Run



7.5. Load Strip



Feed will display "Punch or Advance"



7.6. Start Punching

Depending on configuration, press foot switch or press palm buttons

8. Schematics

The following schematics are included in this manual

24-3001CE	Schematic, Feed Assembly
24-6001CE	Schematic, Electronics Package
44-1301CE	Schematic, Power Box