Sterling Digipunch High Speed Automatic Punch

Instruction Manual

Sterling Digipunch®

Operator's Training Manual

Issue 3 May 2016

MyBinding.com
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This manual contains very important safety information and must be read!

Digipunch Operators Training Manual
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The Digipunch will greatly increase productivity by removing the manual punching process by automation. An in-depth look at the set up procedures is necessary to achieve maximum results follows.

The paper specifications for punching are between 12" un-punched x 14" punched side (maximum) down to 5-1/2" x 5-1/2" (4-1/4" is also possible on the un-punched side using our small format option). It will also punch mixed stock including tabs and cover material. See paper specifications section for more information.

Tool Required: Two allen keys provided with machine.

1. *Important Safety Notice!*

Make sure you read this section very carefully! Learn to recognize this **Safety Alert Symbol**. The Digipunch has been designed to provide a very high level of protection to an operator. Follow the guidelines below while installing, operating and maintaining your machine.

Always replace fuses or circuit breakers with the correct amperage and type.

If the machine cycles erratically, call dealer immediately for service.

Never bypass Safety devices.

Turn power switch off before performing maintenance.

2. *Placing the Digipunch in the Proper Location*

Locate a clear work area 72" wide X 48" deep with a duplex outlet within 5 feet of the machine that provides a 125vac / 15-amp service (230vac / 16-amp European) which is protected by the customer's circuit breaker box. The work area must be a solid and firm with a flat level surface.

3. *Preparing the Digipunch for Use*

Some items may be packed inside waste drawer!
Remove the machine from the crate by rolling it off the platform provided with the machine. Align one side of the platform on the pallet and the other end on the floor. Gently roll the machine off the pallet and onto the inclined platform until the machine is resting on the floor. The machine can be rolled into position resting on its wheels.

Remove the packing material located under the two upper feed belts located under the top clear cover.

Install the pile guides by inserting the black handle through the hole and into the nut located inside the channel. ***Do not over tighten!*** See figure 1.

Plug one end of power cord into machine socket located on the lower cabinet next to the main On / Off isolator switch. The other end can be plugged into a suitable wall outlet.
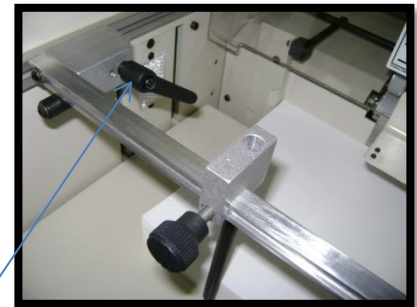

Figure 1

Handle

4. *Turning on the Digipunch*

Turn the main power switch to the "On" position. This switch is located on the lower left side of machine facing the operator's display. The operator's display will take about one minute to come up. You may hear and see the pile guides moving to the last saved position. This is normal and will not happen if a guard is open, die not installed or if the emergency switch is pressed down. See figure 2 & 3.
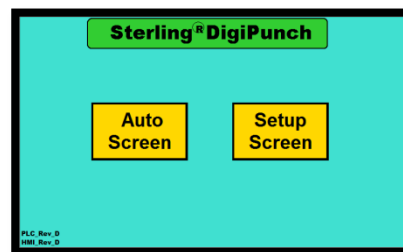

Figure 2

Figure 2

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5. Installing and Removing a Die

When the main screen comes up, you will see two menu choices. Enter the setup screen and press the "Die Removal" button. After a few seconds a message will appear "Die Is Ready for Removal". Open the rear cover and locate the die locking lever located on the machine frame closest to the operator. Pull the spring-loaded lever away from the die while pulling on the black die handle. Reinstall a different die into the opening lining up the die with the opening of the machine. Sometimes it may be necessary to raise or lower the upper channel of the die so it slides in to the movable holder. There are two notches cut into the die for odd or even hole patterns. Use the notch closest to the punch pins for an even amount of holes and the notch furthest away for an odd amount of holes. (If the holes are not centered within the sheet, please refer to the troubleshooting section of this manual). See figure 4, 5 & 6.
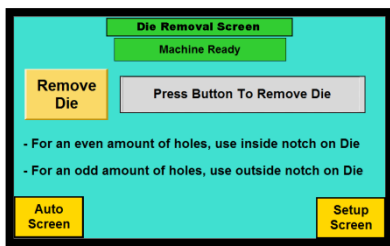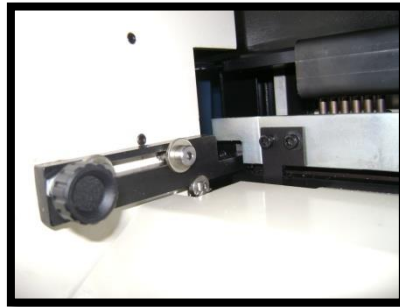
Notches

Figure 4	**Figure 5**	**Figure 6**

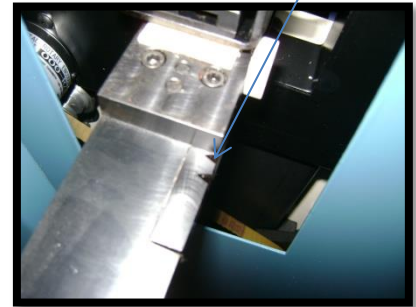## 6. Disengaging a Punch Pin in a Die

It may be necessary to disengage two punch pins so the sheet edge, does not have a partial hole cut into each side. For 3-1, 2-1 and Comb dies, there are pin pulls located directly in front of the pin to be disengaged. These levers can be disengaged while the die is still in the machine. For all 4-1 pitch dies or any other die which does not have a pin pull, remove the 5 screws from the top plate of the die using a 1/8" allen wrench provided with the machine. Remove the appropriate punch pins and reassemble the die. It may be necessary to remove punch pins from a die which do have disengagement levers for non-standard size sheets. Follow the same procedure listed above. See figure 7 & 8.
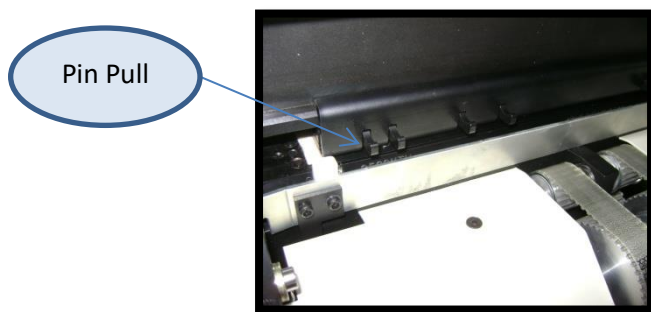
Pin Pull

Figure 7	**Figure 8**

7. Changing Format and Die type on Touch Screen

a. *Format*: There are several standard format sizes as well as one custom sizes to choose from located in the "Format Screen". The "Format Screen" button is located on the "Setup Screen". Locate the number next to the format you wish to punch. By pressing the black numbered box directly above the "Select Paper" a keypad will appear. Enter the number into the keypad and press enter key. If you enter a number outside of the range, the pop-up menu will remain until you escape or press a number in the correct range. Then press the "Set" button and the guides will automatically move to the correct position for the size chosen.

b. When choosing a standard size: (8-1/2" x 11" Landscape), means the guides will be set for ***punching*** on
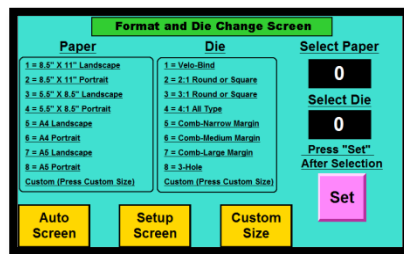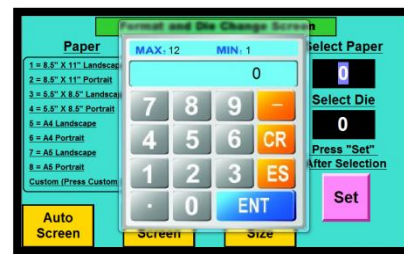

Figure 9

Figure 10

the landscape side of the sheet (the long side). (8-1/2" x 11" Portrait) means the guides will be set for punching on the portrait side of the sheet (the short side). See figure 9 & 10.

c. *Custom Sizes:* The custom size screen gives the operator the ability to choose any format from 12" x 14" down to 5-1/2" x 5-1/2" in small increments. There are 4 custom sizes which can be programmed as well as 4 custom metric sizes. You also have the ability to make small adjustments to standard sizes if the sheets are cut a fraction over or undersize.
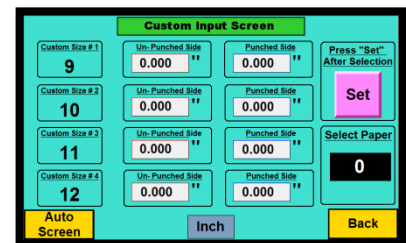
Figure 11

To access this screen press the "Setup" button then "Format Change Screen" button. Then press "Custom Size" button and finally the "Next" button. Select the area just to the right of the custom size #9 thru #12 and press the number you need to change. A pop-up screen will appear to select a size. Select the size for the un-punched side as well as the punched side. Press the enter key after each selection. **You do need to enter the decimal place when programming.** If you enter a number outside of the range, the pop-up menu will remain until you escape or press a number in the correct range. Press the "Set" button when finished. Both rear and side guides will move to their new positions. See figure 11.

d. *Die Type*: You can access these settings in the "Format Change" screen. To change the die type selected in the touch screen, locate the number of the die next to the description. (For example, 4-1 round = #4). By pressing the black box directly above "Select Die" a keypad will appear. Enter the number into the keypad and press the enter key. If you enter a number outside of the range, the pop-up menu will remain until you escape or press a number in the correct range. Then press the "Set" button and the guides will automatically move to the correct position for the die type chosen.
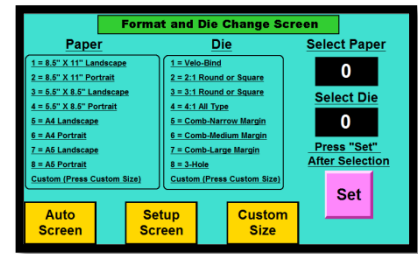

Figure 12

The Comb die is the only die with adjustable back stops. There are three positions which correspond to the three sizes preprogrammed into the die choices. Small, Medium & Large. See figure 12.

8. Loading Paper

Always make sure you choose the correct format before loading paper!

Lower the in-feed table by pressing the "Load Paper" button located on the auto screen. Load the paper on the table between both lateral pile guides. Make sure the pile is all the way up against the front panel located under the paper separator. Loosen the rear pile guide assembly using the black handle. Move vertical pile guides up against the pile leaving about 1/16" between guides and pile. When punching tabs, loosen the two black round knobs and move each vertical pile guide to the outside edge of the pile next to the indent of the tab. If the paper pile contains heavy cover material it may be necessary to use the paper separator option. (See section 9 in this manual.) See figure 13.

Figure 13

a. *In-feed Table Up / Down Buttons*: You can also move the In-feed up or down manually. These buttons are located in the "Setup Screen". See figure 14.
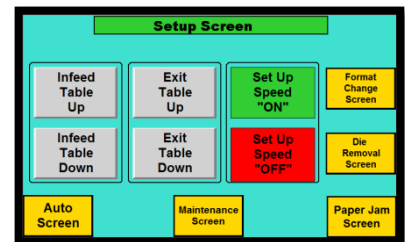

Figure 14

b. *Exit Table Up / Down Buttons:* You can also move the Exit Table up or down manually. These buttons are located in the "Setup Screen". See figure 14.

c. ***Rear Cover Exit Guide:*** The exit guide will need to be removed for sheets longer than 9" or extended down for shorter sheets. This guide helps direct the paper into the exit table. See figure 15.

9. *Paper Separator for Cover Material*

When punching heavy cover material, you may notice covers that are marked or split because of the separating process or you may even have a paper jam associated with separating. When this happens, it will be necessary to engage the cover separator. Using a 5/32" allen key provided, loosen the adjustment setscrew located just under the paper separator and move it to the right to engage the cover separator mechanism. It is recommended that you return this feature to the left when not encountering problems with cover material. See figure 16.
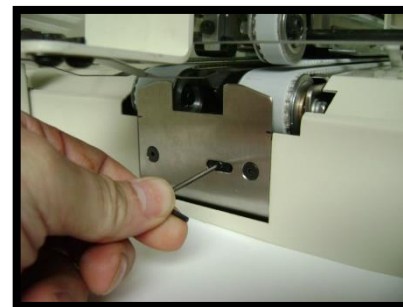
10. *Starting the Punching Process*

To start the punching process, go to the auto screen and press the "Start" button. The in-feed table will move up until the top of the paper pile is detected. The exit table will also move to its start position. Sometimes the pile may stop some distance from the separator, this is normal. The punch may cycle up to 15 times before taking the first lift of paper, only then will the punching process begin. To stop the punching process, press the "Punch / In-feed Stop" button. The paper in process will finish punching and unload automatically. Only use the "Emergency Stop" switch to stop the machine when an immediate stop is required. Paper joggers will normally reset after the emergency stop is released. If not, please reset joggers located in the "Format Change Screen". (If the machine stops cycling before the first lift of paper is punched, refer to the troubleshooting section of this manual). See figure 17.
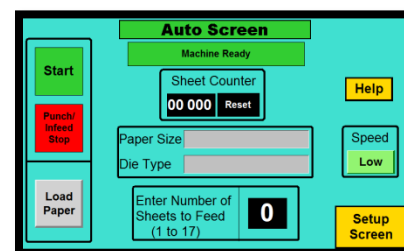
a. ***Number of Sheets:*** You can control the number of sheets to be punched for each lift from the "Auto" screen. By pressing the black numbered box directly below "Enter the Number of Sheets to Feed" a keypad will appear. Enter a number between 1-17 into the keypad and press enter. If you enter a number outside of the range, the pop-up menu will remain until you escape or press a number in the correct range. Normal punching is between 8 to 12 sheets. Lower numbers are used when punching only cover material or acetate. Higher numbers are for 3 hole punching and Velobind. (Because acetate is clear, the machine thinks there is no paper in the feed table and will shut down. Please refer to the troubleshooting section of this manual for correct settings).

b. ***Speed Select & Setup Speed***: Setup speed is used when encountering registration problems or paper jams. Go to the setup screen and press "Setup Speed On". The machine will run at 75% of low speed. The speed select Button located on the "Auto Screen" will toggle between low running speed, (60 strokes per minute or high speed which is 72). You can stop the punching process by pressing "Setup Speed Off" button or turning the machine off from the auto screen. See figure 17.

c. ***Sheet Counter or Paper amount***: The sheet counter is located on the "Auto Screen" and provides an estimate of your production. If the job contains various thickness materials, as many do, it will not reflect the actual number of sheets but provides a means of measuring production throughout a given shift. You can also monitor how many inches of paper punched instead of sheets. This can be changed in the operator's "Help Screen". This number can be reset by pressing the black reset button located to the right of the number. See figure 17.

Unloading Paper: The exit table can be manually moved up or down using the two buttons located on the "Setup Screen".

11. Waste Removal

When the paper waste tray is full, a message will appear "Paper Waste Tray Full" letting the operator know it is time to empty the tray. To remove paper waste, locate the paper waste tray directly under the in-feed table. Pull the drawer all the way out to discard paper waste. **Make sure the tray is pushed all the way in before starting the punching process!** See figure 18.

Figure 18

12. Paper Jam

There are two paper jam sensors which are located at the die station as well as the exit station.

Figure 19

Die Area: When a paper jam occurs inside the die area, the machine will stop and display the following message: "Paper Jam, Die Area". Go to the setup screen and press the "Paper Jam Screen" button and then press the "Clear Jam" button. Wait for the punch die to reverse the pins out of the jammed paper. When the pins are clear of the paper the belts will automatically bring the paper out of the die for easy removal. Open the cover and remove the paper. (Sometimes the paper will show no signs of damage and can be placed in the exit tray as long as the holes were punched). Close the cover and wait for the machine to reset the paper joggers. ***Be careful not to bend the rear jogger brackets when removing paper!*** See figure 19.
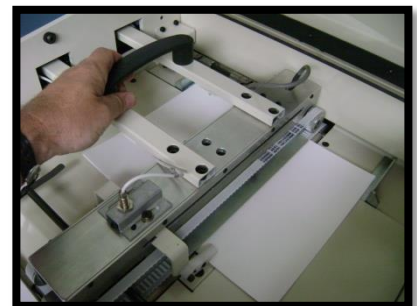
Exit Area: If a jam occurs in the exit area, the machine will stop and display the following message: "Paper Jam, Exit Table). Please make sure you have the rear cover exit guide set correctly. See the loading paper section of this manual for setup procedure. After this jam is cleared, another message will be displayed that there is a jam in the die area. This is normal. You will need to remove the lift of paper in the die area before proceeding. See figure 20.

Figure 20

13. Paper Parameters

The following sizes can be punched on the Digipunch:

12" x 14"	(14" is the punched side of the sheet)
5-1/2" x 5-1/2"	(4-1/4 on the un-punched side is possible when using the small format option)
Tabs ½"	(Tabs must have a ¼" minimum indent to allow for stacking at the in-feed table)
Covers 160lb Index max	(Covers must be the same size of the body of the book)
Acetate	(Acetate should be punch separately. Set the number of sheets on "3". You will also have to make a change in the maintenance screen, see troubleshooting)

When punching material with a curl, always place the open side of the curl down on the in-feed table. If there is toner buildup on the paper where one side of the pile is higher than the other, you will have to load smaller stacks. (If the machine stops cycling before the first lift of paper is punched, refer to the troubleshooting section of this manual). *Always stack warm paper on a flat surface while cooling*!

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14. Message Help Screens

The below messages will be displayed in several screens alerting the operator of a certain condition. See figure 21.

|	
"Machine Ready"	(Machine is ready to punch paper)
"Please Wait"	(Wait for joggers to move to their correct location)
"Emergency Stop Push Button"	(Twist the red emergency stop knob to reset)
"Die Not Locked in correct Position"	(Check die locking lever is engaged properly into die notch)
"Top Cover Open"	(Close the top cover)
"Die Cover Open"	(Close the die cover)
"Die Not Installed Properly"	(Make sure die is in position)
"Paper Jam Die Area"	(Go to setup screen and press the "Paper Jam Screen" Button)
"Paper Waste Tray Full"	(Empty paper waste tray)
"Exit Table Full"	(Remove paper)
"Paper Jam Exit Table	(Clear jam, check to make sure exit guide are set properly)
"Press Help, Then Press Status"	(Die may need to be lubricated or sharpened. Also, machine may need maintenance)
"Inverter Fault"	(Main motor drive has faulted, try restarting machine)
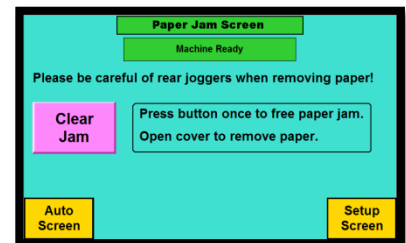
Figure 21

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⚠

Unplug the machine before going forward with maintenance!

The following items should be maintained every six months or when a message is displayed on the status screen "Call Dealer for Service", "Lubricate Die" or "Sharpen Die" whichever comes first. Always clean the paper dust off of the items to be lubricated before proceeding.

Figure 22

a. *Die lubrication:* A message will appear after 100,000 sheets on a specific die to let you know it is time to maintain the die. Using lightweight machine oil, lubricate the die by running oil on the white felt strip located next to the row of punch pins. Press the clear message button located in the status screen to clear this message. (Dies may have to be lubricated more often depending on the material being punched).

b. *Die sharpening:* A message will appear after 5 million sheets on a specific die to let you know it is time to sharpen the die. Please call your dealer for more information on how to have your die sharpened. (Dies may have to be sharpened more often depending on material being punched)

c. *Machine maintenance*:

1. Lubricate the following items with white lithium grease or equivalent: Linear bearings, cams and cam followers.
2. Lubricate the following items with lightweight machine oil: All three lead screws for format change guides, pivot points and bronze bushings.
3. Open the electrical cabinet door and vacuum the paper dust in the electrical cabinet, the tops of the electrical components, and inside the machine.
4. Clean off the paper dust from all of the sensors and reflectors.
5. Make note of total cycle count located in maintenance screen. It is useful to know your service intervals. User; Password (call dealer for password)

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16. Troubleshooting

Problem	Cause	Solution
Machine stops after 15 cycles without feeding paper. Feed table and exit table move down.	1) Paper has toner buildup or curl which causes sensor to stop pile below the separator. 2) Number of sheets selected is set low.	1) Go into maintenance screen and change the default 15 to a higher number IE. (25). Need password & username. 2) Increase the amount of sheets selected. (3-17)
Paper skews when fed into belts.	1) Toner buildup causes uneven pile height which then drags on leaf spring brackets.	1) Reduce the size of pile.
The side joggers are away from edge of sheets or buckling the sheets.	1) Wrong size selected. 2) Paper is smaller or larger than standard size selected.	1) Check size chosen in setup screen. 2) Use custom size if sheet size is not standard.
The rear joggers are away from edge of sheets or buckling the sheets.	1) Wrong size selected. 2) Paper is smaller or larger than standard size selected.	1) Check size chosen in setup screen. 2) Use custom size if sheet size is not standard.
The operator panel says "Machine Ready" but does not run when pressing start. (This can happen even though the display says everything is ok)	1) Guard or cover switch may need adjustment. 2) Die not pushed all the way into machine. 3) Die interlock not engaged	1) Make sure there is full travel with the guard & cover interlocks. 2) Check die installation. 3) Make sure the die locking lever is not sticking on side frame.
Machine stops punching in the middle of a cycle. Display reads" Paper Jam Die Area".	1) Paper curled beyond specification. 2) Too many sheets were fed into die. 3) Jam actually caused in the exit area and then fell away from exit sensor. 4) Die locking lever not adjusted properly.	1) Let paper cool before running. Also stack your paper on a flat surface while cooling. 2) Punch fewer sheets. Can be an issue with the gripper. 3) If the paper falls slowly in exit area, this will cause the machine to stop with paper under the die jam sensor. 4) During punching, there is a lot of vibration which causes die locking lever to trip safety. Adjust switch.
Cover material is split or jams when being fed.	1) Cover separator not engaged. 2) Cover separator sticking.	1) Engage cover separator located on stainless steel caliper. 2) Make sure cover separator pivots up and down freely.
Several sheets left behind on feed table.	1) Sheets being pushed under pile guide.	1) Make sure pile guides move freely up and down.
After punching, paper jams when exiting into exit tray.	1) Adjustable cover guide in wrong position.	1) The adjustable paper guide should be set above edge of sheets so they fall freely onto pile.
Paper interferes with side joggers when feeding.	1) Lateral In-feed guides out of adjustment.	1) Guides must be centered between side plates.

Holes not Centered in sheet.	1) Die adjustment block not adjusted properly.	1) Loosen two allen screws on adjustment block. Move block until holes are centered.
Rear jogger is behind the paper ½" or more.	1) Wrong size selected. 2) Rear jogger stays in clear jam position. 3) Die removal button pressed but die was not removed.	1) Check size chosen on setup screen. 2) Go to clear jam screen and repeat clear jam. Open cover and then close to reset to chosen size. 3) Open any cover and close to reset jogger.

17. Machine Specifications

- Electrical: 115 volt AC / 2 amp   (230 volt AC / 1.5 amp)
- Uncrated Weight: 510 lbs. / 231Kg
- Floor Space: 47" x 30" x 48" / 119cm x 76cm x 122cm
- Crate size: 63" x 51" x 59" / 160cm x 130cm x 159cm
- Shipping Weight: 860 lbs. / 391Kg

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