PRINTRONIX

P8000 Printer Technical Training

Tally Genicom
BY PRINTRONIX

July 2013

Agenda Day 1

leadership by design

- P8 Introduction
- Line Printer Theory
- Ribbon Cartridge Operation
- Enhancements/Improvements
- P7 and P8 Feature Comparison
- Mechanism Differences
- Firmware Downloading
- Recommended Tool List
- Sub-assembly Removal

Agenda Day 2

leadership by design

- Sub-assembly Removal
- Calibration/Adjustment
- Diagnostic Printer Tests
- Cleaning Shuttle Assembly
- Printer Windows Driver
- PrintNet
- PrintNet Enterprise Suite (Intro)
- Documentation

Introduction – General Description

- The P8000 families have a high degree of commonality with a few key differences from the previous P7000 family including:
  - Items such as print speed, rated performance, and security are the same as the existing P7000 products.
  - The consumable Cartridge will be identical to the P7 Cartridge Ribbon systems.
  - New electronic assemblies and spare sub-assemblies consisting of low and high speed controllers, low and high speed power supplies, new control panel, USB interface, optional parallel card, new Motors and new Cable Harnesses. These spares are exclusive to the new P8000 products and NOT backwards compatible with the P7000 family.

Introduction – General Description

- There is a new Parallel Port option Card Interfacing through a Single PCI slot located on the Controller Board.
- The P8000 Shuttles are **Exclusive** to the new Product Line and will be using Mechanical and Electrical lockouts. All P8000 Shuttles are **NOT** backwards interchangeable.
- New PSA Level 4 P8000 software that is unique from the existing P7000 software and not backwards compatible due to the changes in the microprocessor and analog circuitry.

  It is not possible for someone to download P7000 PPC V6 software on to a P8000 printer or vice versa.

  One P8000 software program file will support both low and high-speed controllers.

Introduction – General Description

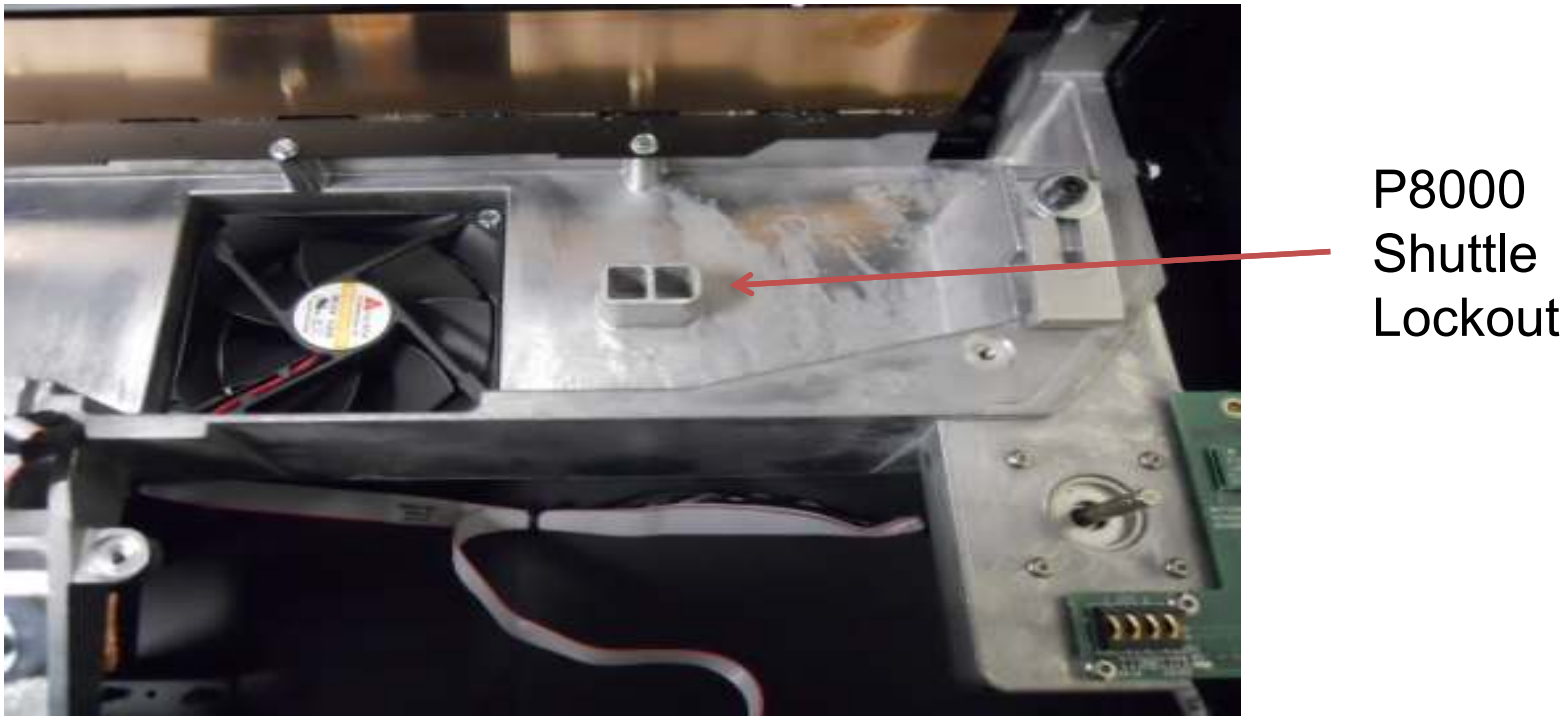
- All current emulations are supported with the exception of Coax, Twinax, GPIO and Wireless.
- A removable security key on board is used for the protection of chargeable features.

Mechanical and Electrical Lockout

- The Shuttle, Power Supply and Controller are different between the Low-Speed (05/10/03H) and High-Speed (15/20/06H/08H/HD) printers
- Both Mechanical and Electrical lockouts are put in place to prevent accidental damage to hardware

Shuttle Lockout

- The P8000 casting has a Block on the right side of center to lock out both P5000 and P7000 shuttles



Power Supply Lockout

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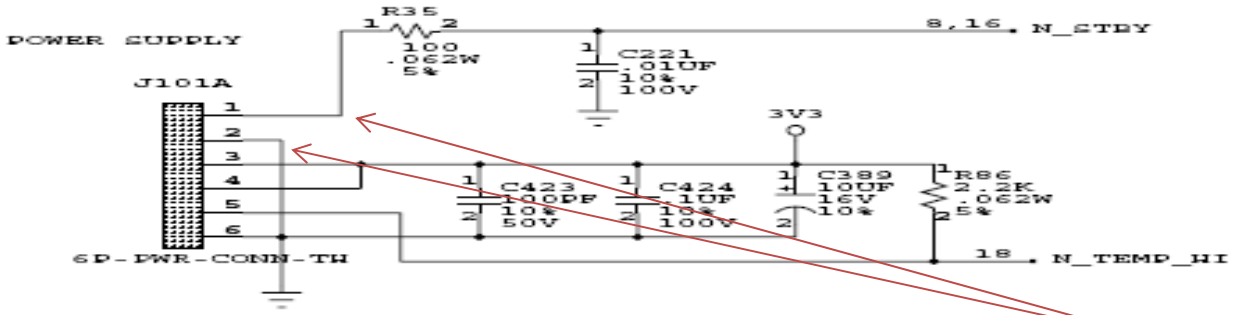
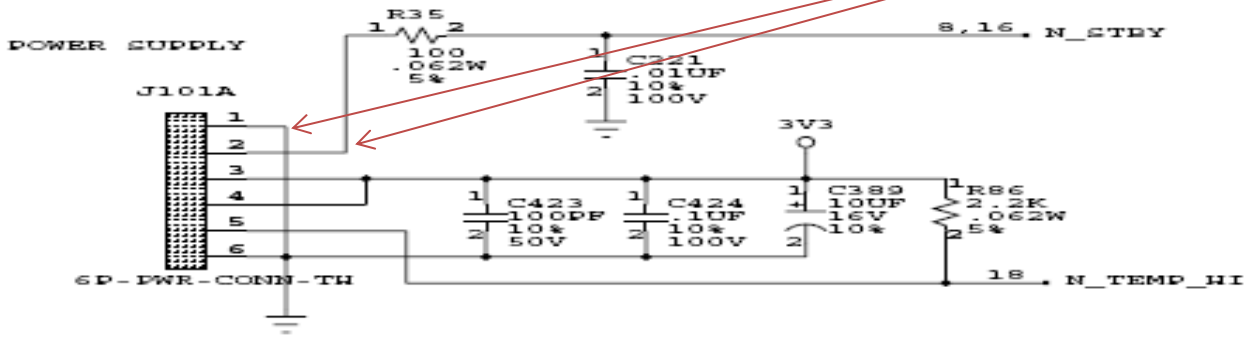
- The N_STBY pin and GND are reversed between both the Low and High Speed Power Supplies to insure the controller would not be damaged if wrong hardware was used.

HS Power Connector



HS Pin 1 and 2 are reversed on LS Supply.

LS Power Connector



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P8000 Series Printer Model Definitions

leadership by design

- LMPPLS – Line Matrix Printer Pedestal Low Speed
- LMPPHS – Line Matrix Printer Pedestal High Speed
- LMPCLS – Line Matrix Printer Cabinet Low Speed
- LMPCHS – Line Matrix Printer Cabinet High Speed

Please Note the S/N above - 7PTX**8**1302003. The 5th Digit "8" indicates P8000.

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P8000 Series Printer Label

leadership by design

- One noticeable item that is now missing is the Model Number Badge on the front of the various P8000 Pedestal and Cabinet-types. The Model Number is, however, prominently displayed in the Control Panel LCD when the printer is Online. Should the LCD post either a Fault Condition or fail to turn on due to a malfunction and the Model Number is needed to identify the Shuttle-Type, direct the End-User to the Label on the Rear Panel and read-off the Configuration Section.

Configuration = Actual Model-Type as shown in the Control Panel LCD.

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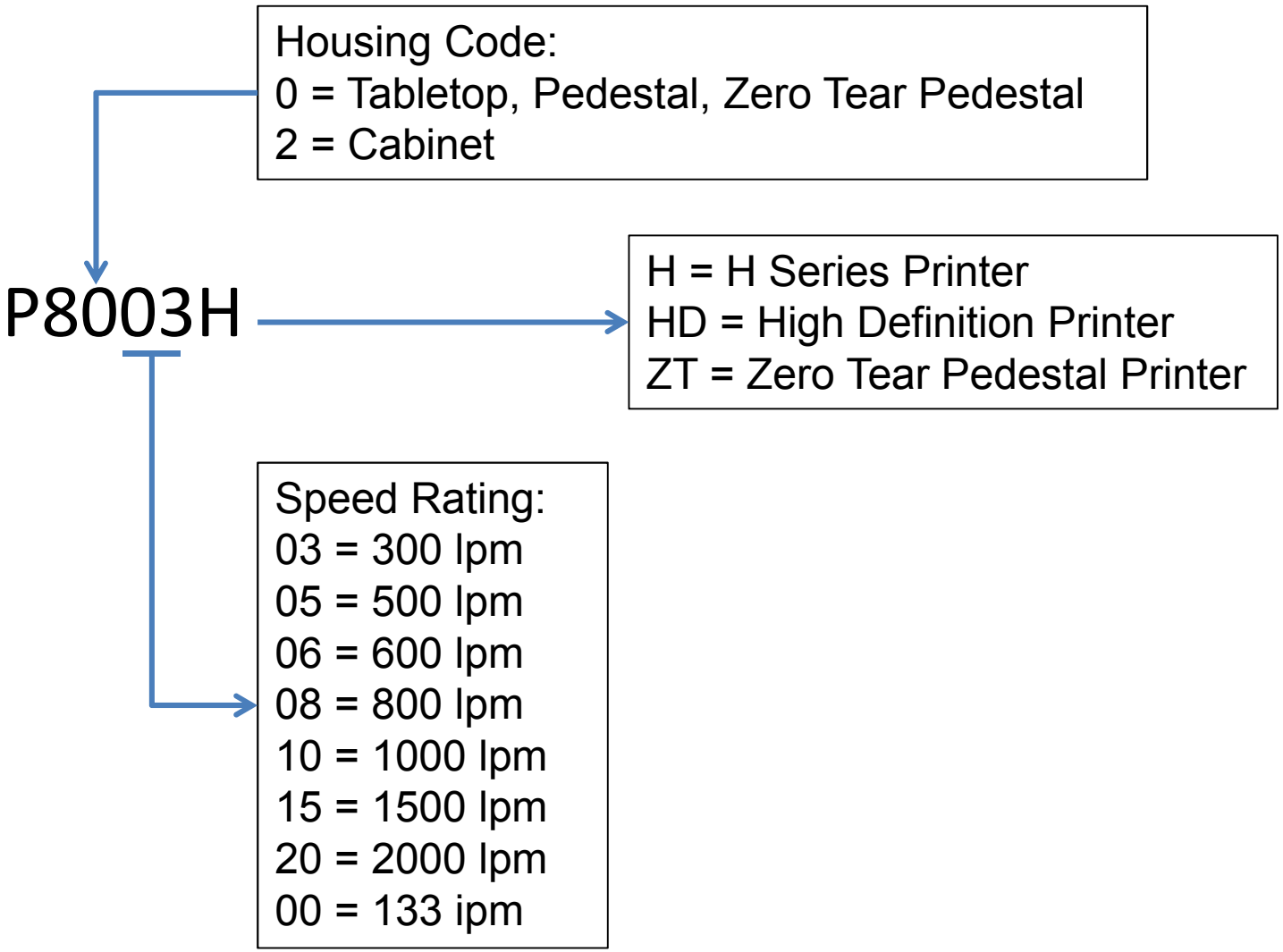
Identify a P8000 Printer

leadership by design



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P8000 Series Printer Configuration

leadership by design

Tabletop

- P8005
- P8010
- P8003H
- P8006H
- P8000HD

Pedestal

- P8005
- P8010
- P8003H
- P8006H
- P8000HD

Zero Tear

- P8005ZT
- P8010ZT
- P8003HZT
- P8006HZT
- P8000HDZT

Cabinet

- P8205
- P8210
- P8215
- P8220
- P8203H
- P8006H
- P8208H
- P8200HD

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P8000 Tabletop Models

leadership by design

- Designed for space constrained environments, allowing for the printer to be placed on a desk or tabletop for use
- Paper guides allow for paper input under the table or as a small stack on the table
- Ideal for short print runs and easy access to output

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P8000 Tabletop Models

leadership by design

Forms Loading

Under Table

Top of Table

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P8000 Pedestal Models

leadership by design

- Easier paper loading
- Oversized casters making movement easy
- Smaller Footprint

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P8000 Zero Tear Models

leadership by design

- Specialized for customers using pre-printed and serialized documents that require print on demand
- Single form tear-off usability
- Eliminate wasted forms
- Reduce operating costs

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P8000 Cabinet Models

leadership by design

- Best choice for large unattended print runs
- Protected input and output media
- Whisper quiet operation
- Passive stacker
  - Elegantly simple, but highly effective combination of moveable fences and chains allows for neat stacking all the way up a full box of paper.

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SureStack - Power Stacker

leadership by design

- Cabinet Models P8215, P8220 & P8200HD
- Factory Installed Option
- Active Output Paper Stacker
- Stacker Control Panel
  - Accessible from the back door

Optional Rear Cabinet Sliding Pull Out Tray
- For easy Unloading

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Front Paper Access

- Load and retrieve all media from front
- Dramatic floor space savings
  - Printer can be pushed against wall or into corner
  - Min. 4” clearance required at rear for top cover to open
- Adjustable input shelf
  - Adjust shelf higher to allow bigger output stacks
  - Adjust shelf lower to accommodate larger input stacks
- Operation
  - Push bottom tray in to catch printed output
  - Print job, then tear off and let fall into rear area
  - Pull handle to slide tray forward for retrieval

Note :- Cannot be combined with power stacker or rear pull out tray

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Rear Pull Out Paper Tray

leadership by design

- Pulls paper stack out to allow it to be removed straight up
- Makes unloading easier
- Safer – allows lifting with legs
- Sturdy slides can handle weight of a full box
- Tray is standard with SureStak models

Note :- Cannot be combined with front paper access tray

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Extended Form Support

leadership by design

- Allows doors to close with oversized forms
- Encloses both input and output media
- Protects media
- Keeps printer quiet
- Up to 14 inch form support
  - Add one door to rear
- Up to 17 inch form support
  - Add doors to both front and rear

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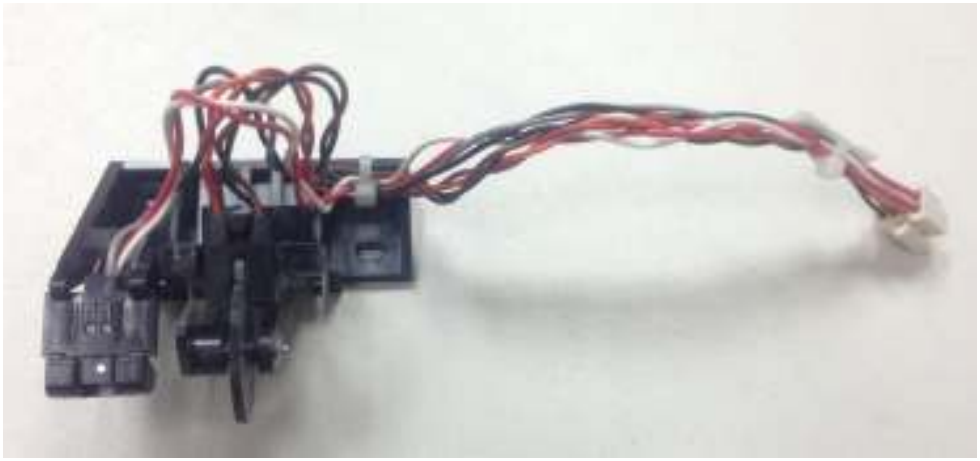
Paper Handling Options

leadership by design

- Black back forms sensor 257976-001



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P8000 Printing Speed

leadership by design

Models	P8005 P8205 P8005ZT	P8010 P8210 P8010ZT	P8215	P8220
Lines Per Minute, Upper/Lower case characters				
High Speed	500/428	1000/856	1500/1289	2000/1700
DP	375/300	750/600	1125/900	1500/1200
NLQ	200/154	400/306	600/459	800/615
Graphics Speed (Inches Per Minute)				
60x48 dpi	63	125	187	250
60x72 dpi	42	83	127	167
90x96 dpi	21	42	61	83
Paper Feed Speed (Inches Per Second)				
	12	20	25	38.5

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P8000HD OpenPrint Printing Speed

leadership by design

Models	P8000HD P8200HD P800HDZT
Print Speed (Inches Per Minute)	
180x180	79
120x120	165
90x180	147
90x120	200
90x90	236
Paper Feed Speed (Inches Per Second)	
	32

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P8000H Printing Speed

leadership by design

Models	P8003H P8003HZT P8203H	P8006H P8006HZT P8206H	P8008H P8208H
Lines Per Minute, DBCS / SBCS			
Letter Quality	177/245	315/435	390/535
Near Letter Quality	195/275	348/492	430/605
Normal	221/292	390/522	485/645
High Speed	258/365	460/653	570/807
Super High Speed	340/440	603/784	745/968
Ultra High Speed	367	655	605
Paper Feed Speed (Inches Per Second)			
	20	25	32

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Acoustic Noise (dBA) per ISO 7779

leadership by design

	Tabletop	Pedestal	Zero Tear	Cabinet
500 lpm	64.4	60.5	70	50
1000 lpm	69.4	65.5	70	50
1500 lpm	X	X	X	52
2000 lpm	X	X	X	55
HD OpenPrint	X	NA	NA	55
300 lpm	NA	65	70	50
600 lpm	NA	68	70	52
800 lpm	X	X	X	55

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P8000 Cartridge Choices

leadership by design

- Standard Life Cartridge (255049-103)
  - Most economical
  - 17,000 pages, single pack
- Extended Life Cartridge (256976-403) - Multi
  - Long life, better operating cost
  - 30,000 pages each, 4 pack

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P8000H/HD Cartridge Choices

leadership by design

- Standard Life Cartridge (255051-103)
  - For moderate use with sharper and darker images for high definition printing requirements
  - 18,000 pages, single pack

- Extended Life Cartridge (256977-403) - Multi
  - Long life, sharper and darker images for high definition printing requirement
  - 34,000 pages each, 4 pack

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P8000 Cartridge Choices

leadership by design

- Security cartridge (255542-401) – Multi
  - A Non-ink Ribbon for NCR /Carbon forms that require no printing on the face-stock
  - 18,000 pages each, 4 pack
  - Fits all models

- Label cartridge (256449-401) – Multi
  - 11,360 pages each, 4 pack
  - Fits all models

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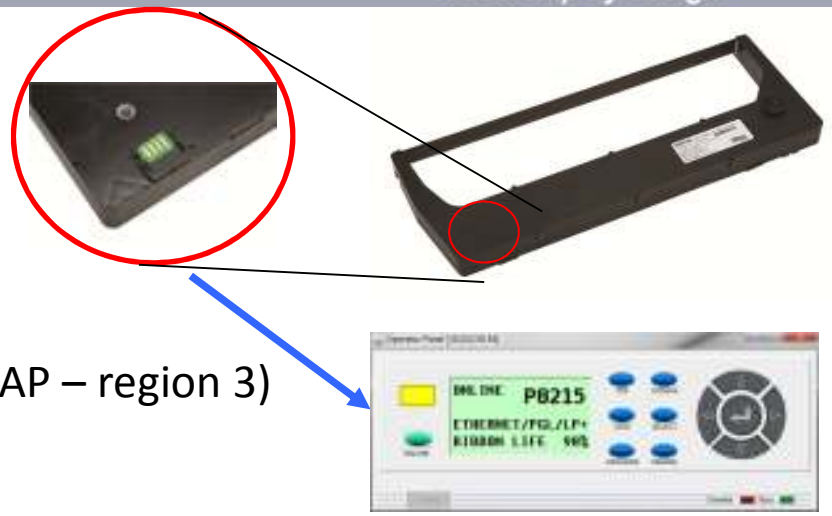
Integrated Print Management

leadership by design



- Cartridge security
  - Using electronic chip
- Region Coding
  - Printers and cartridges coded by region (AP – region 3)
- Fully automatic
  - No required user setup – just load cartridge and go
- Quality and Cost control
  - Set & Forget
  - Adjust darkness control and printer automatically monitors and controls consumption
- Precise ribbon life indication – better job planning
- Remote visibility and e-mail alerts

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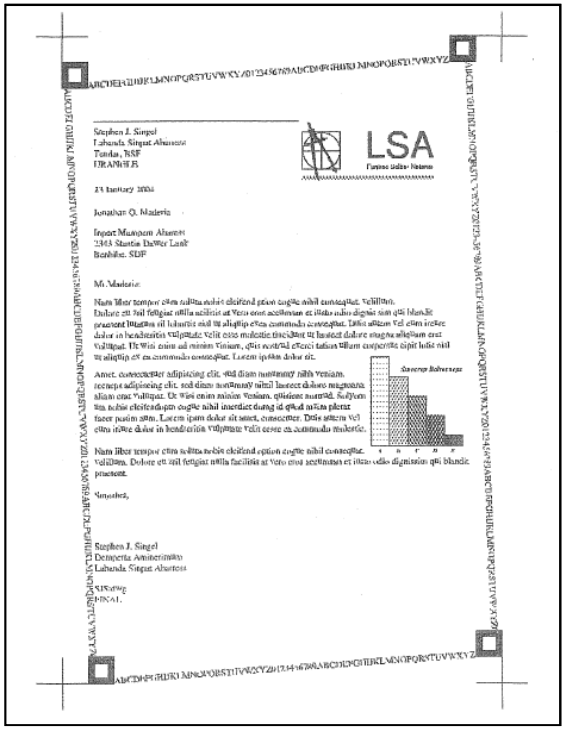
Page Rating Specification

leadership by design

- Based on data processing mode printing – default and most popular
- Used similar test pattern as ISO 19752 test page
- 8.5” x 11” – Letter size
- Counts pages printed



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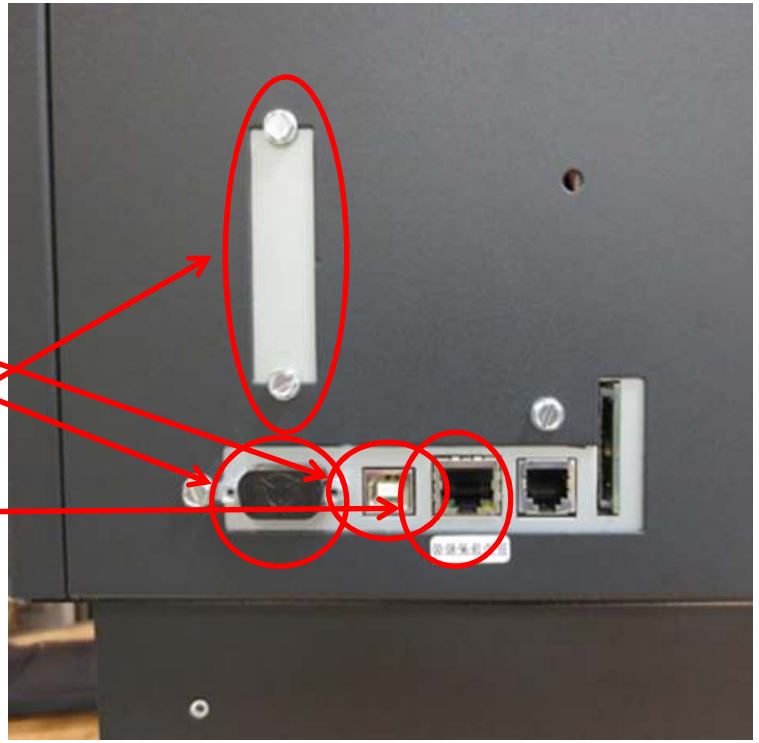
Hardware Connectivity

leadership by design

- Standard
  - USB
  - RS232 Serial
- Optional
  - 10/100 base T Ethernet (on-board)
  - IEEE1284 Bidirectional Parallel



P8000 Emulations

- Standard Emulation : LinePrinter Plus (LP+)
  - P-Series, P-Series XQ, Serial Matrix, Epson FX1050, IBM Proprinter III/XL
- Optional Emulation:
  - PGL/VGL
  - IPDS (Require PrintNet)
  - ANSI 3.64
  - TN 5250/3270 (Require PrintNet)
  - PCL 2
  - DEC LG (exclude P7220, any ZT model)

P8000 Emulations

leadership by design

- Asian Language Support
  - Thailand : Thai LP+, Thai PGL
  - India : India LP+ (Hindi + Gujarati / Kannada / Tamil)
  - Vietnam : Viet LP+
  - Korea : Hangul Scalable/Bitmap PGL (KS)
  - China : Hanzi PGL (GB)
  - Japan : Kanji SJIS PGL

P8000H/HD Emulations

leadership by design

- Asian Language Support
  - China Hanzi GB LP+/LQ1600K
  - Taiwan/Hong Kong BIG5 LP+/LQ1600K
  - Korea KS LP+/KS/KSSM
  - Japan SJIS LP+/LQ1600K
- OpenPrint
  - Ghostscript Postscript (Level 3 compatible) and PDF (Level 1.7 compatible)

Note: Supported Interface USB/Serial/Parallel/Ethernet

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Assured Compatibility

- CST Feature
  - Intercepts data before it is sent to emulation
  - Allows for complex substitutions, deletions, and modifications
  - Can fix most compatibility issues
- P8000 is ready for seamless replacement of
  - Any previous Printronix line printer
  - Virtually all competitive line matrix models
  - Almost all serial matrix printers

Residence Barcode Support

leadership by design

P8000 Printer Software,
Features 30 Residence Bar Code Symbologies

- Codabar
- Code 39
- Code 93
- Code 128
- EAN 8
- EAN 13
- FIM
- MSI
- PDF 417
- PostBar
- POSTNET
- UCC/EAN-128
- UPC-A
- UPC-E
- UPS 11
- UPC Shipping
- Royal Mail
- Telepen
- German I-2/5
- Interleaved 2/5
- Intelligent Mail Barcode

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Line Printer Theory

Line Printer Theory

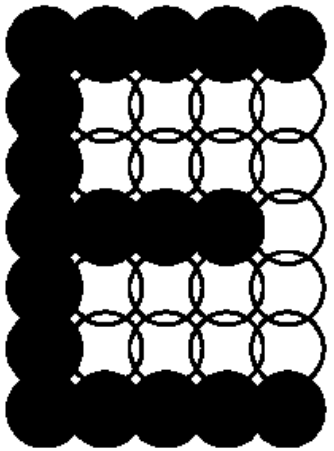
Line Printer Theory

- Character Formation

Printing Characteristics
(Formation of Characters):

- Horizontal shuttle motion

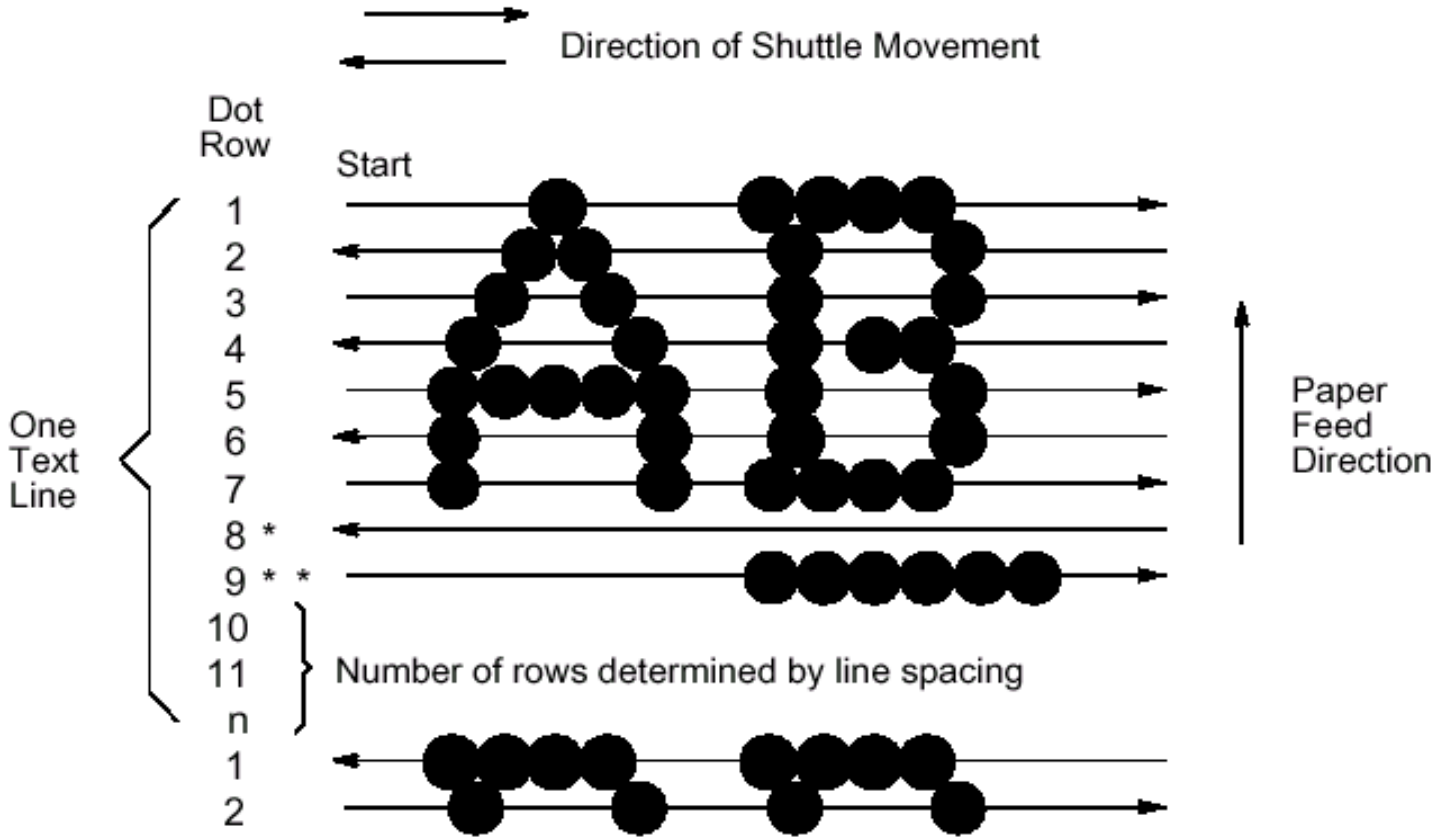
- Vertical Paper Motion



Line Printer Theory

leadership by design

- Character Formation



* This row is used only for lowercase descenders
** This row is used for underlining and lowercase descenders

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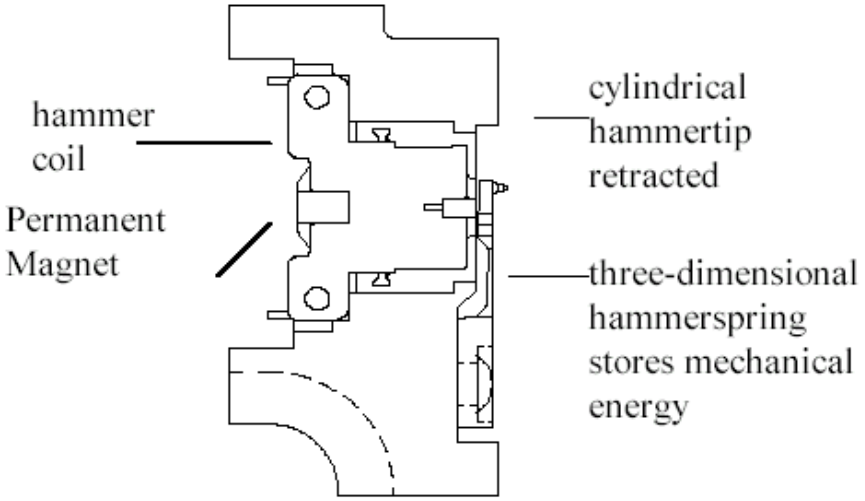
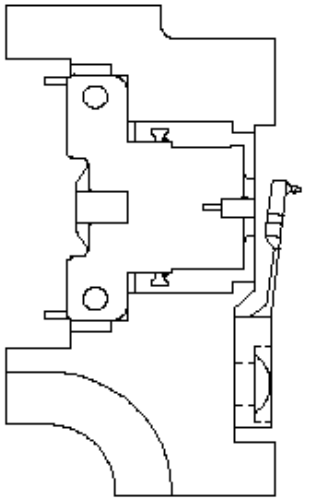
Line Printer Theory - Hammer Spring Action (Actual)

Fifth Generation, three dimensional hammerbank

No current in hammer coil



Current pulse in hammer coil

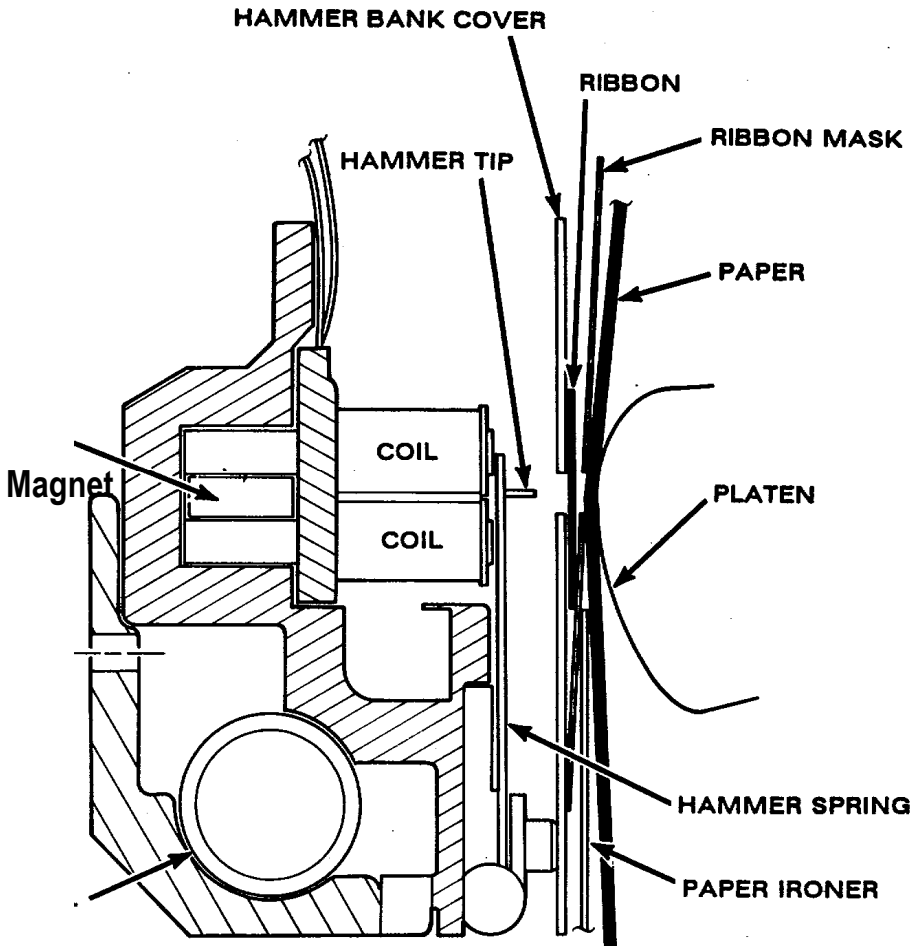


the current pulse releases the hammertip, which strikes the ribbon and delivers the hammerspring's stored energy to make the ink dot on the paper.

Line Printer Theory

leadership by design

- **Hammer And Shuttle Arrangement**



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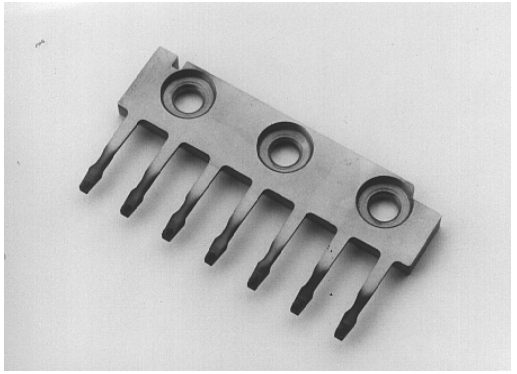
Line Printer Theory

leadership by design



WARNING!!!

USE ONLY GENUINE RIBBONS

Greatly Reduce Missing Column Printing & Prolong Hammer Fret Life

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Ribbon Cartridge Operation

- Single ribbon drive motor (one direction)
- Ribbon welded to form a continuous Mobius loop (push+pull through cartridge)
- PCBA in cartridge mates to I/O board on printer to communicate with controller
- Different color “patch” at weld for detection by weld sensor located in Air Shroud (no printing on weld)

P7000

VS

P8000

Feature Comparison

P7000 vs P8000 Feature Comparison

leadership by design

Feature	P7000	P8000
Media Type	Continuous forms, perforated fanfold	Same
Multi-Part Form (Max)	6	Same
Print Density Enhancement	No	PowerPrint Mode (1000 LPM only)
Max print width	13.6 inches	Same
Pedestal Paper Paths (Standard) – All except Table Top	**Input:** Bottom load – pull tractors **Exit:** Batch (rear) or configurable for Quick Access (top)	**Input:** Bottom load – pull tractors **Exit:** Batch (rear) ONLY
Table Top	Orderable in some regions and by some partners – Need a custom table	Standard – True Table Top with Quick Access paper exit

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P7000 vs P8000 Feature Comparison

leadership by design

Feature		P7000	P8000
Acoustics		Per product specs	Same
Card Cage		Not Completely Enclosed	Completely Enclosed
Tractors		Kevlar re-enforced belts with metal pins	Same
Print Mechanism Spare		Shuttle including Hammerbank and Frets	Same
Enclosure	Pedestal	Structural foam top, cast aluminum bottom	Sheet metal
	Cabinet	Sheet metal	Sheet metal
Control Panel Display		Two lines of 16 Western European characters	128x64 LCD with Multi-Menu Navigation with Asian language
Consumable		Per product specs	Same

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P7000 vs P8000 Feature Comparison

leadership by design

Feature		P7000	P8000
Interfaces (Standard)		IEEE 1284 Bidirectional Parallel RS232 Serial	USB RS232 Serial
Interfaces (Options)		Data Products Parallel RS422 Serial 10/100 Base-T Ethernet Wireless Twinax / Coax	10/100 Base-T Ethernet IEEE 1284 Bidirectional Parallel
Speeds	Pedestal	ASCII: 500, 1000 DBCS: 300, 600 and 800	ASCII: 500, 1000 DBCS: 300 and 600
	Cabinet	ASCII: 500, 1000, 1500 and 2000 DBCS: 300, 600 and 800	ASCII: 500, 1000, 1500 and 2000 DBCS: 300, 600 and 800
Memory		8MB Flash (Expandable to 32) 32MB SDRAM	256MB Flash 128MB DDR2 DRAM
SD Memory		NA	4 - 32 GB

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P7000 vs P8000 Feature Comparison

leadership by design

Feature	P7000	P8000
User Download Files (Fonts, Forms, Logos, Feature Files, CSTs, etc.)	All Users Files are erased upon firmware download	User Files are retained upon firmware download (except 3 finger download)
Firmware Upgrade Methods	Two-Key Power-Up Three-Key Power-Up: Parallel PNE Suite FDU (Firmware Download Utility) FDX (part number.exe)	Two-Key Power-Up Three-Key Power-Up: Parallel Three-Key Power-Up: USB PNE Suite Windows Drivers FDX (part number.exe) Webpage
Webpage Features	Network Configuration Printer Status	Network Configuration Full Printer Configuration Load / Save Configuration File Upload / Download Firmware Upgrade Advanced Diagnostics

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P7000 vs P8000 Feature Comparison

leadership by design

Feature	P7000	P8000
Print Languages (Standard)	Printronix P-Series Printronix P-Series XQ Serial Matrix Epson FX1050 IBM Proprinter III XL	Same
Print Languages (Optional)	IGP (PGL/VGL) ANSI 3.64 HP PCL2, DEC LG IPDS (Twinax and Ethernet) TN5250, TN3270 IBM 5225 Twinax / IBM 3287 Coax Postscript / PDF (OpenPrint)	IGP (PGL/VGL) ANSI 3.64 HP PCL2, DEC LG IPDS (Twinax and Ethernet) TN5250, TN3270 Postscript / PDF (OpenPrint)

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P7000 vs P8000 Feature Comparison

leadership by design

Feature	P7000	P8000
Windows Drivers	New combined driver supports both P7 and P8 platform. MS Certified. Win 2k, Win XP, Win 7, Win 2003/2008 Server Also Supported Vista and Win 8.	
Linux CUPS Drivers	(1) Combined P7/P8 Linux Driver available for PGL builds. (2) Combined P7/P8 Linux Driver available for OpenPrint HD.	
Power Supply	100-200/200-240VAC, 50-60Hz Energy Star	100-240VAC, 50-60Hz Energy Star
Physical Dimensions	Width: 26 inches Depth: 21 inches (w/o Basket) Height: 36 inches Weight: 114 lbs (52 kg)	Width: 25.8 inches Depth: 19.1 inches (w/o Basket) Height: 35.9 inches Weight: 115 lbs (52.1 kg)
Printer Life	Steven years or more	Same

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ENHANCEMENTS/IMPROVEMENTS

Print Density Enhancement – 1000 LPM only

leadership by design

- A new Feature Enhancement now available on the P8X10 (1000 LPM) Printers is a Menu Item called **PowerPrint**.
- Selecting this Feature gives better Print Quality and Print Darkness on Multipart Forms by increasing Impact Energy.

  Note: It may affect throughput depending on the Print Job.
- Speed may be Reduced at Higher Dot counts due to both Power Supply and Coil Temperature Limitations.

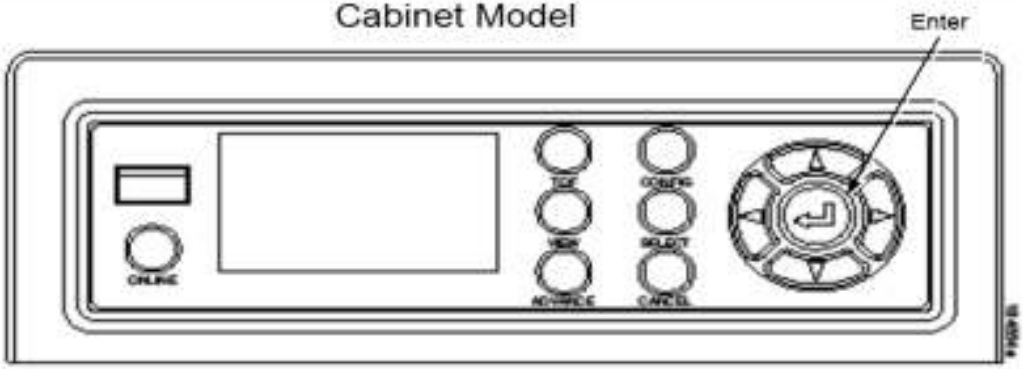
Graphical Control Panel LCD

- P8 will have the same Keys as P7C
- Navigation Philosophy follows T4M
- 8 Icons for top level menu navigation
- Model number on Online display
- Some Combo Keys have been redefined

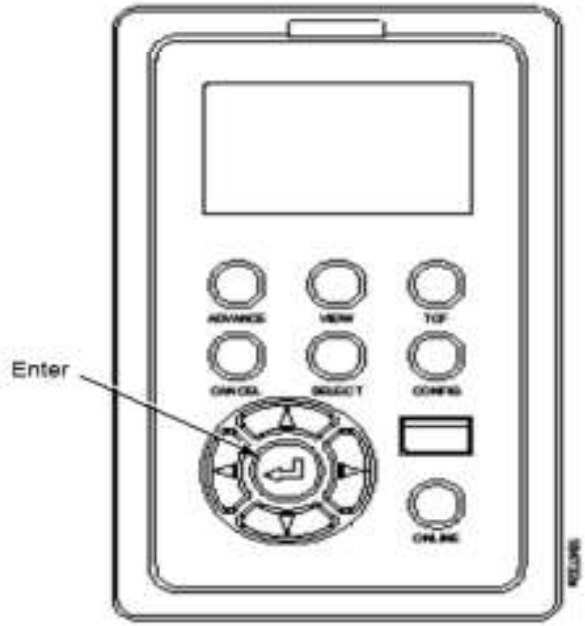
Graphical Control Panel LCD

leadership by design

Cabinet Model



Pedestal Model



Legend:

TOF = Set TOF (Top of Form)

VIEW = View/Eject

ADVANCE = Paper Advance

CONFIG = Print Config

SELECT = Load Config/Print Mode [1]

CANCEL = Cancel Job

ONLINE = Online/Clear

NOTE

[1] Print Mode only available for H-Series printers.

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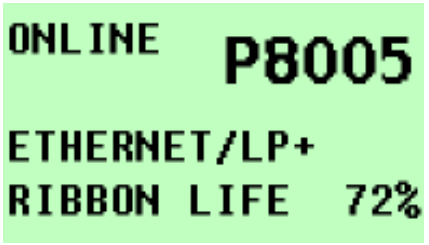
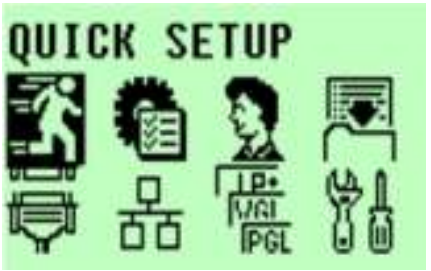
Graphical Control Panel LCD

leadership by design

	P8000	P7000
Online Screen		ONLINE LP+ RIBBON LIFE 52%
Top Level Navigation		OFFLINE QUICK SETUP
Menu Navigation		Tear Bar Dist. 7.46 inches*

PRINTRONIX Tally Genicom

Graphical Control Panel LCD

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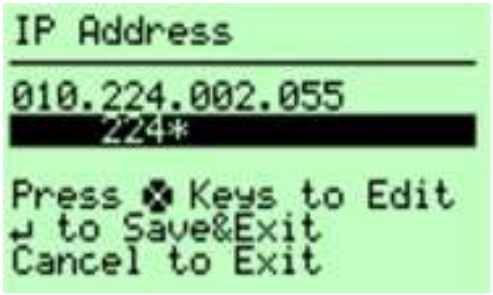
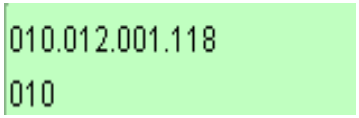
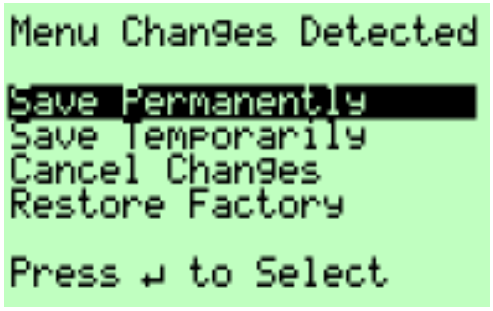
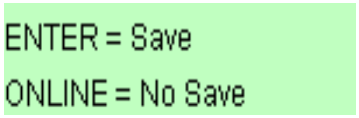
	P8000	P7000
Setting IP Address		
Saving Menu Changes		

PRINTRONIX TallyGenicom

Top Level Menu Overview

- When entering Menu mode, the user will see top level menus represented as icons as shown below. Use the navigation buttons up, down, right, and left to highlight the desired icon. As the user navigates, the name of the top level menu displays on the top line of the LCD.

Graphical Control Panel LCD

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Icon Level Menus

Menu Icon	Menu	Description
	QUICK SETUP	These options allow quick access to the most frequently changed or inputted parameters during the installation of the printer.
	PRINTER CONTROL	This menu allows you to select parameters common to a general user, such as display language and Barcode quality.
	ADVANCED USER	This menu allows you to select several advanced operating parameters for the printer, such as the speed at which paper will advance when slewing. The **SURE SCAN** menu for OpenPrint models is under this menu.
	CONFIG. CONTROL	These options allow you to save, print, load, delete, name, and reset entire sets of configuration parameters.

PRINTRONIX TallyGenicom

Graphical Control Panel LCD

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	HOST INTERFACE	These options allow you to select either the Serial RS-232, Centronics® parallel, Ethernet™, IEEE® 1284 parallel, or Auto Switching interface for the printer. This menu also allows you to configure several parameters for each interface.
	NETWORK SETUP	This option allows you to select from Ethernet Address options and Ethernet Parameters options.
	EMULATION	This menu allows you to configure the options which are available for the current operating (active) emulation. For example, if LinePrinter+ is the active emulation, then the LinePrinter+ emulation options can be configured using this menu. The **ACTIVE IGP EMUL** and **ACTIVE EMULATION** menus are under this menu.
	DIAGNOSTICS	This menu includes the diagnostic tests, system memory, software build part number, Feature File (if one exists), the shuttle type, and statistics of the printer. The **Printer Mgmt** menu is under this menu.

Webpage Enhancements

- **Full** configuration from webpage
- Monitor Printer Status; real-time updates
- Storing / Loading / Displaying configurations
- Diagnostics – Job capture, Auto Dump
- Font / Form file Upload / Download
- Program File download
- Great new tools for users without PNE installation
- User can work remotely to gather information and send them to CSC

Misc. Improvements

- NVRAM Error or E03x Logging
  - The Printer's Flash File System holds NVRAM logs. The user can use PNE to upload the autodbg1 or autodbg2 to their PC and send the Logs to CSC.
  - Auto Dump feature enables remote capture of hangs – The printer automatically generates a Log that captures internal printer information for diagnostics. The Log is saved in the printer's Flash file system.
- New Firmware Download Options
  - FDX online
  - Webpage
  - Via Windows Driver
  - Two-Finger retains User Files (Fonts, Forms, Logos, CSTs and Feature Files, No Config Files (CFGs).
  - Three-Finger clears all Flash Content

Misc. Improvements

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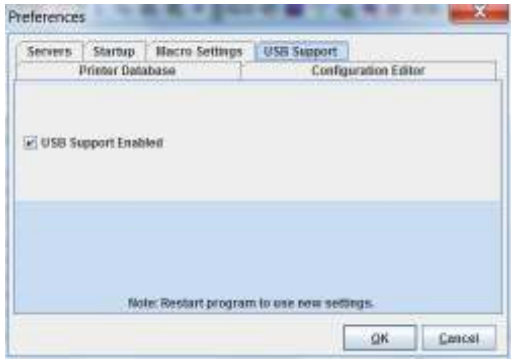
- PNE managing printers connect via USB
  - Using USB with PNE, you need to go to “File -> Preferences” which will pop up a window.
  - Click “USB Support” tab and Click “USB Support Enable”



  - You also need to change “PNE Port” under “Diagnostic Menu -> Printer Mgmt” on the printer to use USB Port

  - Then wait for your printer to show up in the list

PRINTRONIX Tally Genicom

Engine SW Differences from P7C

- Weld Sensor
  - Code embedded, not on sensor
  - More robust sensing
- Coil Temperature for all shuttles
  - Need to set coil temperature when replacing **any** shuttle or controller
- Improved debugging and fault logging

Incompatibilities

- HS or LS Power Supply on LS or HS board
  - CTL VOLT FAIL (also get if J101B not plugged in)
- HS or LS Shuttle in LS or HS Printer
  - SHTL NOT SUPPORT
- P7 Shuttle in P8 Printer
  - HMRBANK NOT INSTALLED (also get if shuttle data cable not plugged in)

HS = High Speed (ASCII - 1500/2000, DBCS – 600/800)

LS = Low Speed (ASCII - 500/1000, DBCS – 300)

SD Card (Post Launch)

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- Extra storage similar to T4M cartridge
  - For Fonts, Forms, Logos – copy onto card from PC
- Directory in config printout:

```
SD File System
   Overwrite Files  Enable
   View SD Files
      file.txt                1025 Bytes
   SD Flash Avail.            4345194294 Bytes
   Delete SD Files
   Copy to SD
   Copy from SD
   Format SD
   Print File List
```

- New Messages
  - SD INSERTED or SD REMOVED
  - Warning not to remove during writing, formatting
- 24.3 filename format
- SDHC cards (4-32 G)
- Files must be in root directory of card
- Plan to have QCMC functionality available post launch

P8000 Series
Printing Mechanism
Model Differences

Mechanism Differences

- Shuttle Frame Assembly
- Paper Feed Stepper Motor
- Tractor Set
- Paper Ironer
- Paper Entrance Guide

P8000/HD Shuttle Assembly

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Models	Shuttle Frame Assembly	HB Cover Assembly
P8X05/ZT	256799-901	256590-901
P8X10/ZT	256835-901	256587-901
P8X15/ZT	256921-901	254356-901
P8220	256922-901	254138-901
P8X00HD/ZT	256930-901	254138-901

P8000H Shuttle Assembly

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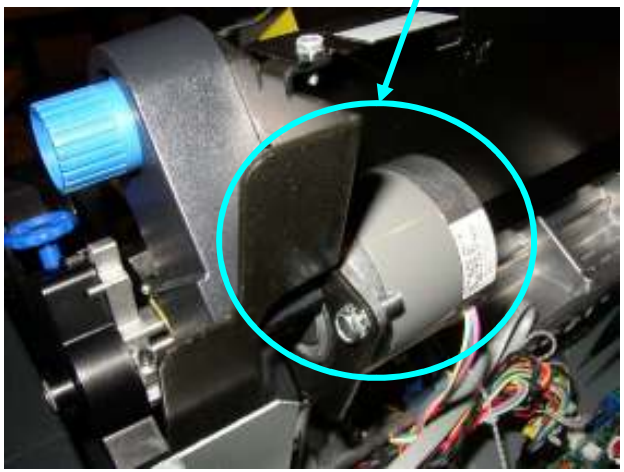
Models	Shuttle Frame Assembly	HB Cover Assembly
P8X03H/ZT	256837-901	256587-901
P8X06/ZT	256929-901	254356-901
P8208/ZT	256930-901	254138-901

Mechanism Differences

leadership by design

- Paper Feed Stepper Motor



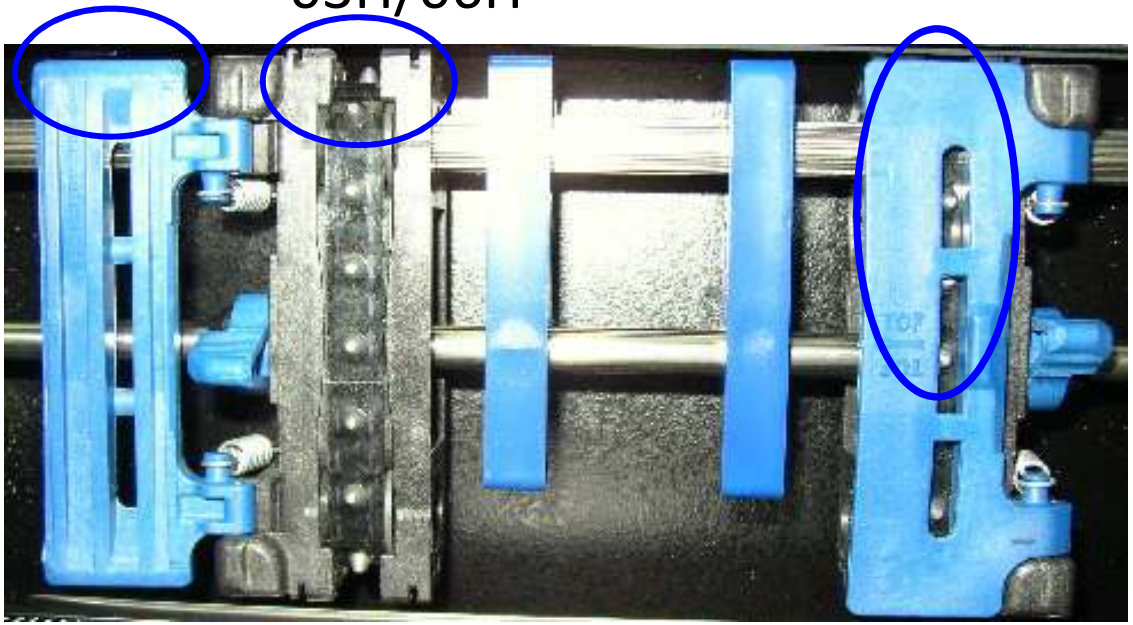
500/1000/1500
03H/06H
Part # 257763-001

2000/08H/HD
Part # 257764-001

PRINTRONIX TallyGenicom

Mechanism Differences

- Tractor Set, RH & LH:
  - Printer without Power Stacker
    - 500/1000/1500 LPM
    - 03H/06H



Part # 179065-901
Order As A Set

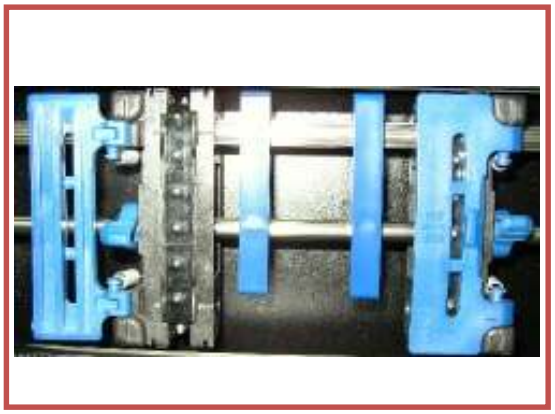
Ref Shows 2000

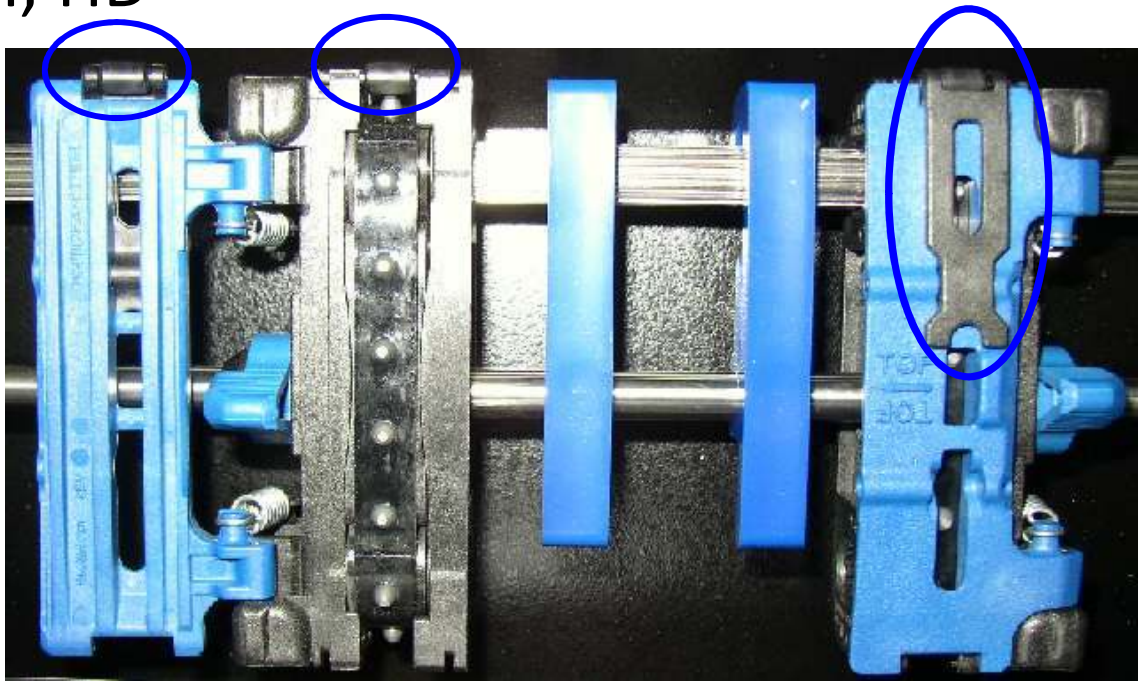
Mechanism Differences

- Tractor Set Ironer Roller, RH & LH:
  - Printer with Power Stacker
  - 2000 LPM, 08H, HD

Part # 179061-901
Order As A Set

Ref Shows 500/1000/1500

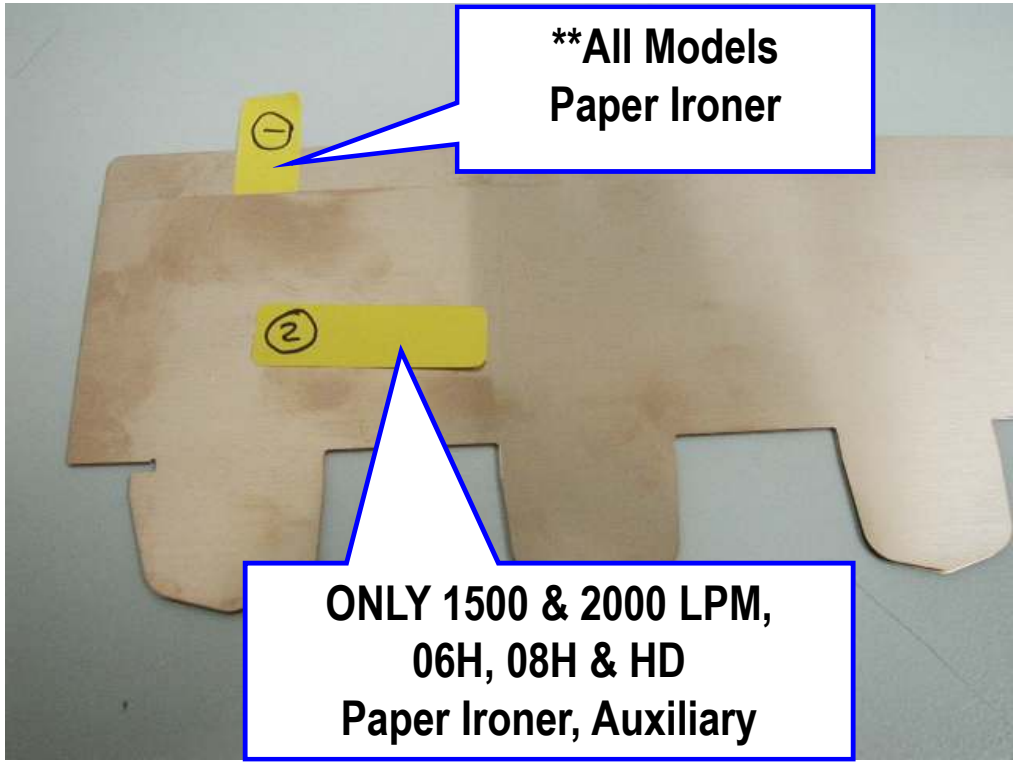


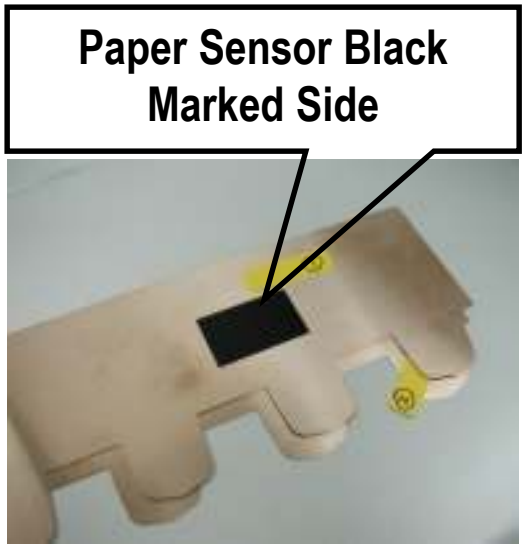


Mechanism Differences

leadership by design

- Paper Ironer
- 257665-001 Field Kit, IRONERS,PPR FD,AUX





Mechanism Differences

leadership by design

P8220/P8208H/P8200HD Paper Entrance Guide

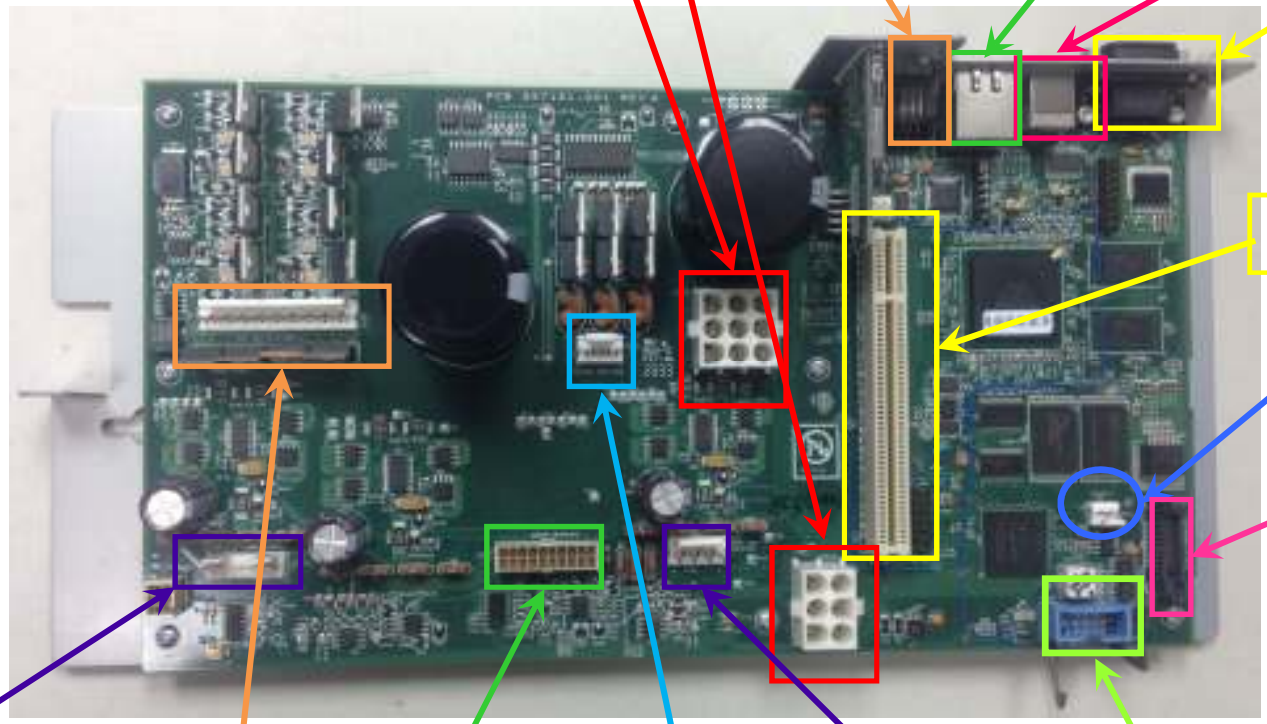
PRINTRONIX TallyGenicom

P8000 series
Electronics

PRINTRONIX TallyGenicom

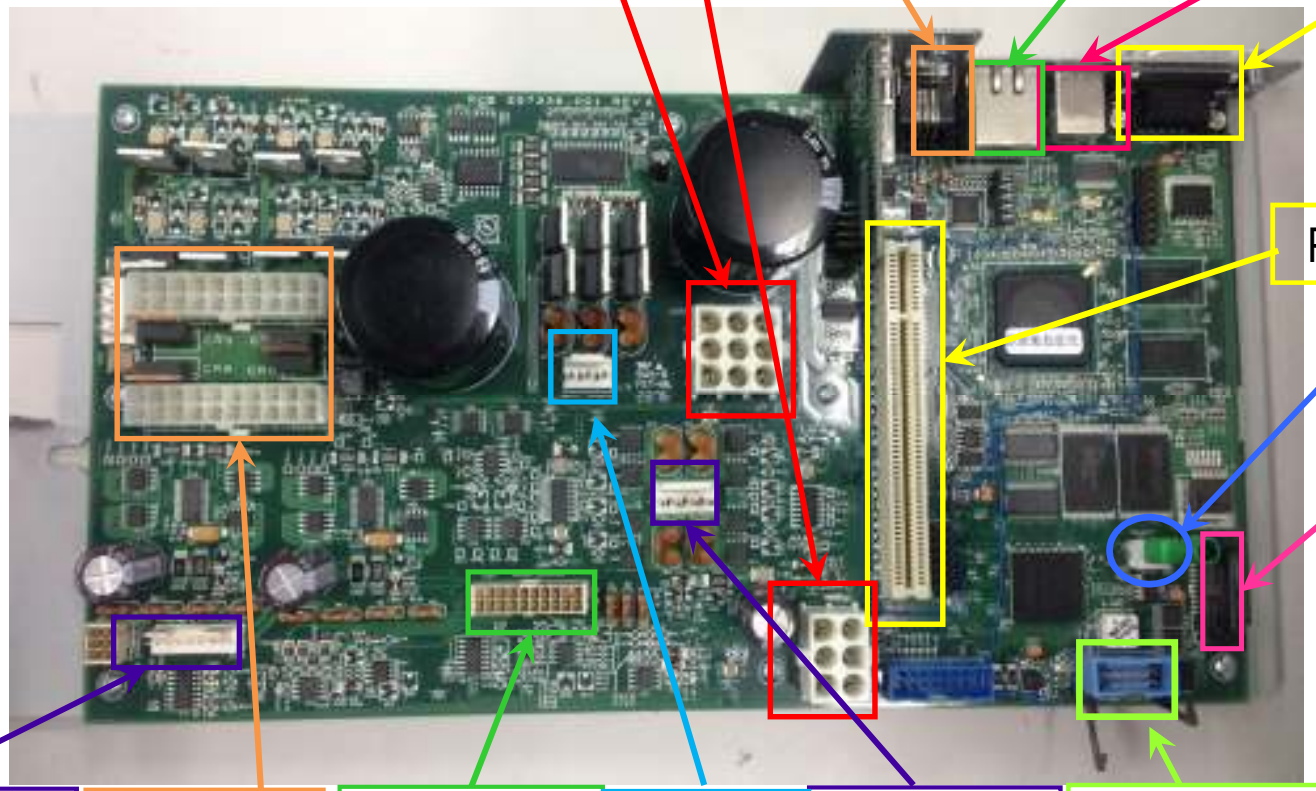
Controller SubAssy, LS

- P/N: 256443-901



Controller SubAssy, HS

- P/N: 257114-901



Security Key

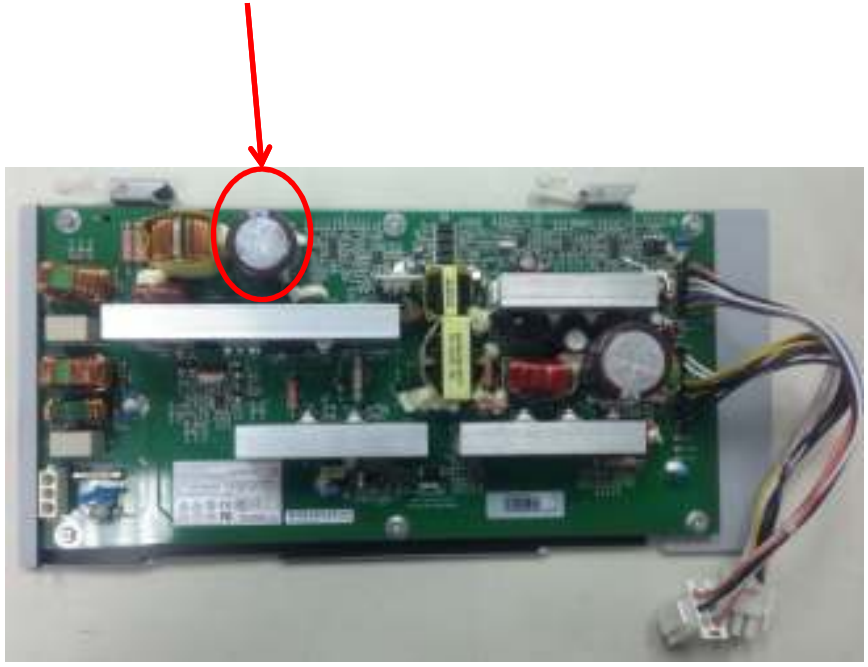
- Security Key
  - Programmable Key – 3 pin connector type
  - Installed at J9 on controller board

Power Supply

leadership by design

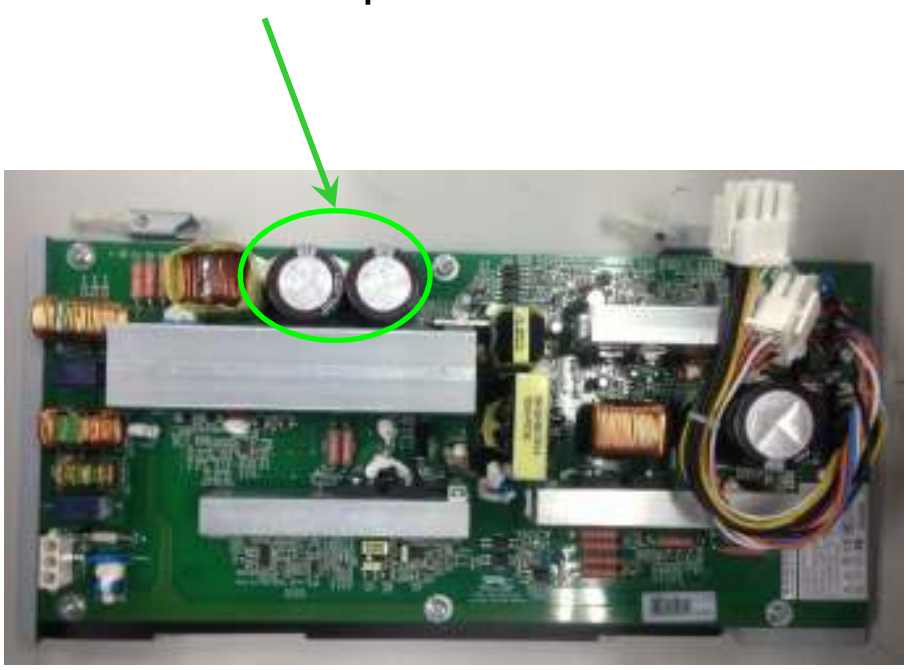
- P/N: 256227-901 (LS)

Single Capacitor



P/N: 256279-901 (HS)

Double Capacitors



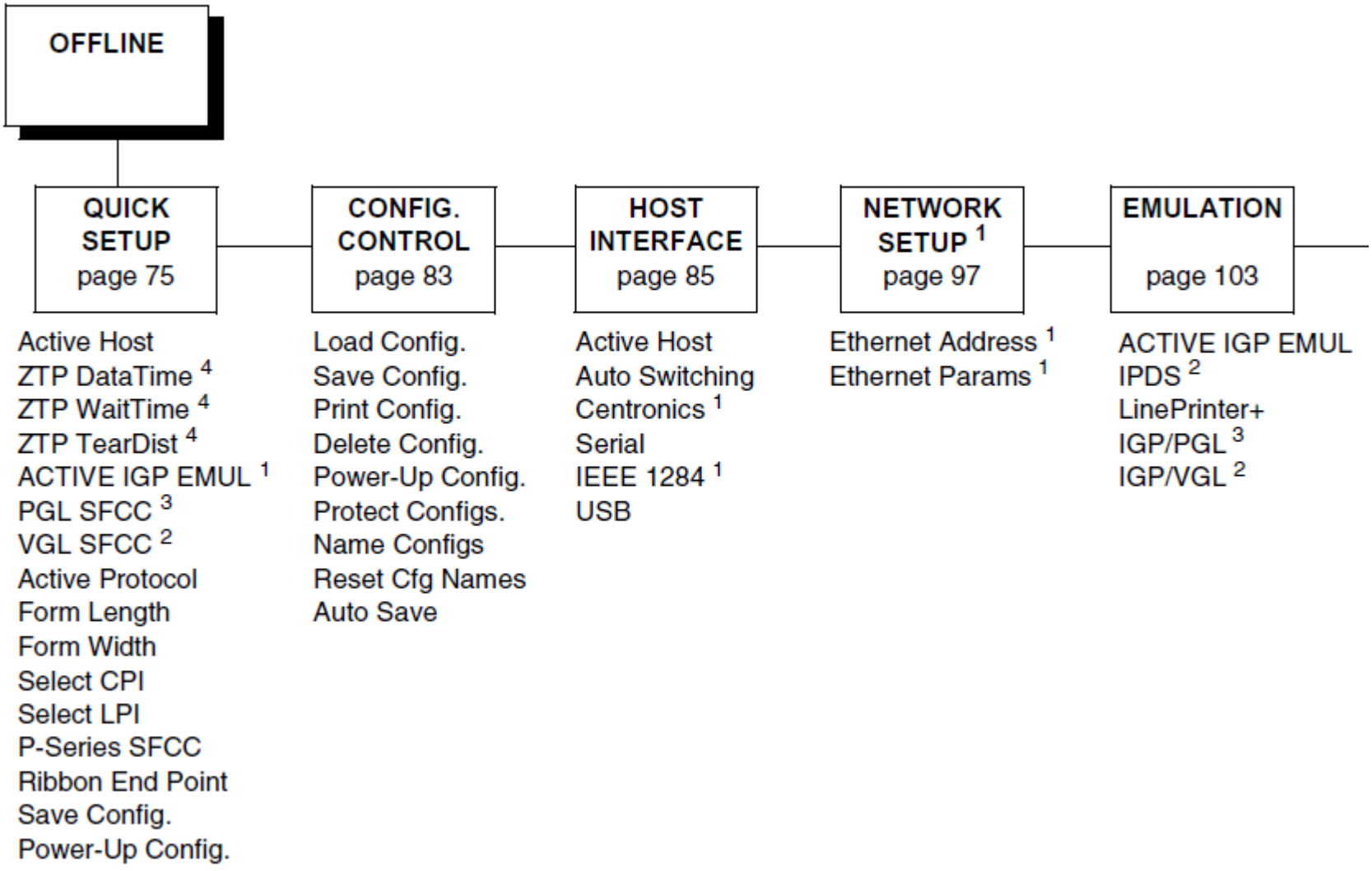
Technical Hands On

leadership by design

- Control Panel Familiarization
- Print Configuration
- Firmware Downloading
- Sub-assembly Removal
- Calibration/Adjustment

Control Panel Familiarization (Standard Firmware)

leadership by design



PRINTRONIX TallyGenicom

Control Panel Familiarization (Standard Firmware)

leadership by design

PRINTER CONTROL page 204	ADVANCED USER page 207	DIAGNOSTICS page 225
ZTP SETTINGS [4]	PTX_SETUP Option	Printer Tests
Ribbon End Point	Hex Dump Mode	Test Width
Open Platen @ BOF	Power-up State	Phase Value
Bar Code Quality	Downloaded Fonts	Paper Out Dots
Tear Bar Dist.	PMD Fault	System Memory
View Function [5]	Power Stacker [1]	Print Statistics
Unidirectional	Auto Elevator [1]	Software Build
Display Language	Auto Locking	Feature File [6]
Panel Display	Main File System	Shuttle Type
Accented Chars.	SD File System [1]	Auto Dump
	Set Sharing	Printer Mgmt
	Shuttle Timeout	
	Slow Paper Slew	
	Alarm	
	Power Saver Time	
	Pwr Save Control	
	Cancel Key	
	Rcv. Status Port	
	Ret. Status Port	
	Set Lock Key	
	RBN Low Warn@	
	RBN Low Action	
	RBN End Action	
	Print Energy [7]	
	Disp. Intensity	

[1] If installed.
[2] If VGL is selected from the ACTIVE IGP EMUL menu.
[3] If PGL is selected from the ACTIVE IGP EMUL menu.
[4] Available for Zero Tear Pedestal printers only.
[5] Available for pedestal printers only.
[6] If a Feature File has been downloaded.
[7] Available for 1000 lpm printers only.

PRINTRONIX TallyGenicom BY PRINTRONIX

Configuration Print

leadership by design

```
CURRENT CONFIGURATION

001  Program File        V1.02AB  06-Mar-13 #372984
002  DC/PPC              V1.01AB  06-Mar-13 #372979
003  BOOT/83xx           V1.00W  12-Nov-12 #372763
004  GRAPHIC PANEL       V1.00R 372701
005  SERIAL NUMBER
006  BUILD CONTENT       IPDS/PGL/VGL/LP+
007  FEATURES ENABLED    365109 (TN)
008                      365107 (ANSI)
009                      365110 (LG)
010                      365111 (PCL2)
011                      365105 (PGL/VGL)
012                      371533 (POSTSCRIPT)
013                      372219 (OKI)
014                      365122 (ALL LANGUAGES)
015                      368384 (ETHERNET)
016  SHUTTLE TYPE        500
017  SHUTTLE PHASE       64
018  FLASH               256 MB
019  DRAM                128 MB
020  Feature File            368012
021  ETHERNET VERSION    VER=2.1.37
022  CONFIGURATION CODE Pp8257
```

PRINTRONIX TallyGenicom

Firmware Download Methods

leadership by design

Firmware Download Method	File Type(s)	User FLASH Files
Web Page (Ethernet only). User needs the network option installed, a browser and know the IP address.	FILENAME.prg	Preserved
Windows Driver (any host IO). When the Windows Driver is installed, downloading firmware can be done easily through the About/Help tab.	FILENAME.prg	Preserved
Automatic download (any host IO). Using the FILENAME.exe, firmware can be downloaded from a Windows Command Prompt without having to manually put the printer into download mode.	FILENAME.exe	Preserved
Manual two-key download (any host IO). This two-key (ADVANCE+CANCEL) power-up sequence puts the printer into download mode. Firmware can be loaded through any host IO port.	FILENAME.prg FILENAME.exe	Preserved
Manual three-key download (USB or Parallel). This three-key power-up sequence should be used in situations in which a new controller is installed, the program in FLASH is corrupt, or a different firmware type will be installed. Firmware must be loaded via USB or parallel (if installed).	FILENAME.prg FILENAME.exe	Deleted
PrintNet Enterprise (Ethernet only). User must install the PrintNet Enterprise application from the PrintNet CD. This is the most versatile and powerful method to upgrade printers but requires your computer can run Java™ programs.	For a detailed description, refer to *PrintNet Ethernet User's Manual*	

User Flash Files consist of downloaded Fonts, Logos, Forms, Setup Files, Feature Files, and files that are specific to the user's setup or application (i.e CSTs). No .cfg files. These files are either preserved or deleted based on the Download Method used as shown in Table above.

Regardless of Download Method, any saved configurations will be erased. Before starting a Download Procedure, be sure that you have printed or saved configurations on your host computer so they can be restored after the download process is complete.

PRINTRONIX TallyGenicom

Automatic Download (.exe)

leadership by design

- Make sure the printer is powered up, in ONLINE mode, and that the applicable host IO cables are connected.
- Start a command prompt session. Navigate to the directory with the target firmware.
- Execute FILENAME.exe as below.

Connection Type	Enter Commnad
Parallel	FILENAME –a –pb <ENTER>
Serial	mode COM1;9600,N,8,1 <ENTER> mode LPT1=COM1 <ENTER> FILENAME –a –pb <ENTER>
USB	FILENAME –a –pbShareName <ENTER> where ShareName of the printer is the 'Share name' entered during installation
Ethernet	FILENAME –n xxx.xxx.xxx.xxx <ENTER> Where xxx.xxx.xxx.xxx.xxx represents the IP address

- After successfully loaded, the printer will reboot

PRINTRONIX TallyGenicom

Windows Driver Download

leadership by design

- Require firmware in the form FILENAME.prg
- Make sure the printer is powered up, in ONLINE mode, and that the applicable host IO cables are connected.
- Install the Windows driver.
- Once the Windows driver is installed on the PC, right-click the printer driver and select **Properties**.
- Click on the **About/Help** tab to access the software download option.
- Click the **Firmware Update** button.

Windows Driver Download *(cont'd…)*

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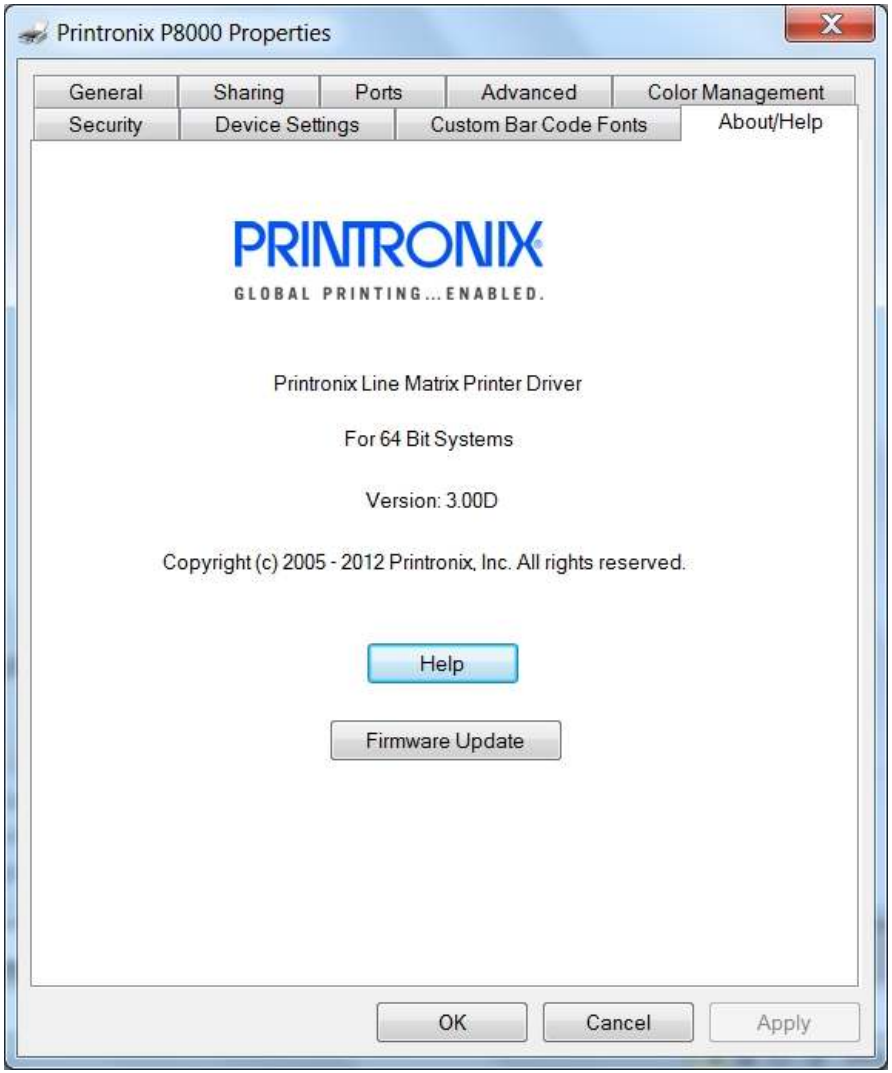

PRINTRONIX TallyGenicom

Windows Driver Download *(cont'd…)*

- Enter the full path and location to the printer software.
- Click **OK** to send the software to the printer.
- When the new software has successfully loaded into flash memory and the printer has reset itself, the process is complete.

Manual Two-Key Download

leadership by design

- Power down printer and unplug AC power cord
- Connected the applicable host IO cables.
- Reconnect AC power cord to printer
- Power up printer with both **ADVANCE** & **CANCEL** keys depressed
- Control panel LCD shows -

  PROGRAM DOWNLOAD
- Start a command prompt session. Navigate to the directory with the target firmware.
- Extract the FILENAME.prg file in the same directory where FILENAME.exe was executed.
- Send the firmware to the printer as described for various host IO options.

PRINTRONIX TallyGenicom

Manual Three-Key Download

- Power down printer and unplug AC power cord
- Connected the applicable host IO cables (USB or Parallel).
- Reconnect AC power cord to printer
- USB Download
  - Power up printer with both **ADVANCE, CANCEL** & **DOWN** keys depressed
- Parallel Download
  - Power up printer with both **TOP, CONFIG** & **UP** keys depressed
- Control panel LCD shows -

  DOWNLOAD MODE USB

Manual Three-Key Download *(cont'd…)*

- Start a command prompt session. Navigate to the directory with the target firmware.
- Extract the FILENAME.prg file in the same directory where FILENAME.exe was executed.
- Send the firmware to the printer as described for various host IO options.

Sending Firmware via Ethernet (LPR)

- Start a command prompt session. Navigate to the directory with the target firmware.
- Enter the following to start the LPR program.
  - lpr –S xxx.xxx.xxx.xxx –P d1prn FILENAME.exe

    where xxx.xxx.xxx.xxx is the IP Address of the printer
- The process is complete when the new software has successfully loaded into flash memory and the printer has reset itself.

Download Program Flash Code through USB

- Two ways to send raw data to the USB port on a PC.
  - Copy it directly to a shared printer that is set up for USB.
  - Use the NET USE command to redirect a port to the shared printer that is set up for USB.

- **Using USB port on a PC**
  1. Share the printer. Take note of the Printers Shared name.
  2. COPY /b <File Name> \\COMP_NAME\Printers_Shared_Name
     Eg. copy/b xxxxxx.prg \\hostname\P8USB

Download Program Flash Code through USB

- **Using NET USE**
  1. Share the printer. Take note of the Printers Shared name.
  2. In the command prompt type:

     NET USE LPT2 \\COMP_NAME\Printers_Shared_Name /Persistent:YES

     (It basically redirects output on LPT2 to the shared printer

     Comp_Name should be the computers name found in the system settings

     Printer_Shared_Name is the shared name found in the printers Properties\Sharing tab.
  3. To check status of connection type: Net View \\ComputerName
  4. Now the printer is ready. Use the 'COPY' command to send the file to the printer

Download Program Flash Code through USB

5. For Windows XP, use COPY/b <File Name> lpt2:
6. For Windows 7, use COPY/b <File Name> lpt2

Note :

(a) Ending without the : (colon). If the : (colon) is added, the PC will claim no such device exists.

(b) Can not use an existing Physical device. You should use LPT2

7. To stop using LPT2 for USB

   Net use lpt2 /DELETE

Download Program Flash Code through USB

leadership by design

- Add loop back adapter to PC.
- Set IP address to loop back adaptor.
- Add printer driver “P8000” to PC.
- Set the printer as share and assign a short name. Eg. “P8USB”
- Get the computers name or assign one.
- Select a port number that the PC hardware is not using. Eg. LPT2:
- At the command prompt enter the following command for the example above:

NET USE LPT2 \\COMP_NAME\Printers_Shared_Name /Persistent:YES

To send file COPY/B xxxxxx.PRG LPT2

PRINTRONIX TallyGenicom

Network Problem

leadership by design

- Using a standalone PC without a network connection, the network does not exist and the network shared printer goes away. It doesn't matter that the shared printer is connected to the PC because as far as Windows is concerned it's on the network and the network does not exist. This could be a real problem for the Customer Service guy who is trying to download to the printer using his laptop.

Install Microsoft Loopback Adapter

leadership by design

a) In Control Panel, double click on Add Hardware.
b) Click Next
c) When the scan finishes, select "Yes, I have already connected the hardware“
d) Click NeXT
e) Scroll to the bottom of the list and select "Add a new hardware device"
f) Click Next
g) Select "Install the hardware that I manually select from a list (Advanced)“
h) Click Next
i) Select "Network Adapters“
j) Click Next
k) Select "Microsoft" under the Manufacturer list.
l) Select "Microsoft Loopback Adapter" in the Network Adapter list.
m) Click Next
n) Click Next
o) Click Finish

Configure the Adapter

a) The loopback adapter is a virtual network adapter and can be configured the same as a regular network card.
b) Set the adapter to have a static IP address such as 192.168.1.1/ 255.255.255.0
c) At this point you should be able to use one of the above methods to send data to the printer.

Firmware Downloading – Parallel

- Start a command prompt session. Navigate to the directory with the target firmware.
- Copy the firmware to the printer by issuing these commands.
  - copy/b FILENAME.prg lpt1:

  Or
  - FILENAME.exe -pb
- The process is complete when the new software has successfully loaded into flash memory and the printer has reset itself.

Firmware Downloading – Serial

- Start a command prompt session. Navigate to the directory with the target firmware.
- Copy the firmware to the printer by issuing these commands.
  - mode COM1:9600,N,8,1,P
  - copy/b FILENAME.prg com1
- The process is complete when the new software has successfully loaded into flash memory and the printer has reset itself.

Recommended Tool List

leadership by design

1. Adapter, 1/4 in. hex to 1/4 in. square, Utica HW-18
2. Alcohol, anhydrous
3. Allen Wrenches, 1/16”,3/32”,5/32”,5/64”,7/64”
4. Canned Air or other clean air source
5. Clean, Dry Lint-free Cloth
6. ESD-Safe Service Vacuum
7. ESC Wrist Strap
8. Feeler Gauge, .010”, .011”, .012”, 0.13”, 0.40”
9. Force Gauge, (Chatillon NY, Gauge-r, 0-20 lb., CAT 719-20)
10. Force Gauge, “Fish Scale” type, 0-16 oz.
11. Hex Bits for Torque Screwdriver, 3/16”, 3/32”, 5/32”, 5/64”
12. Lubricant, Bearing (Printronix P/N: 211191-001)
13. Nut Driver, ¼”, 5/16”
14. Net Driver or Open End Wrench, 7/32”
15. Open End Wrench, 5/16”
16. Pliers, Grip Ring, External
17. Screwdriver, Flat Tip
18. Screwdriver, Philips - #1, #2
19. Screwdriver, Torque, Utica TS-35
20. Torx T-10, T-15 Bits
21. Shuttle Cleaner Kit – P/N: 254946-001
22. Shuttle Stabilizer Tool – P/N: 25544-001
23. Hammer Tip Alignment Tool Field Kits
    - P7X15/P7X06H – P/N:253650-901
    - P7220/P7X08H/HD – P/N:253651-901

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Recommended Tools (cont'd…)

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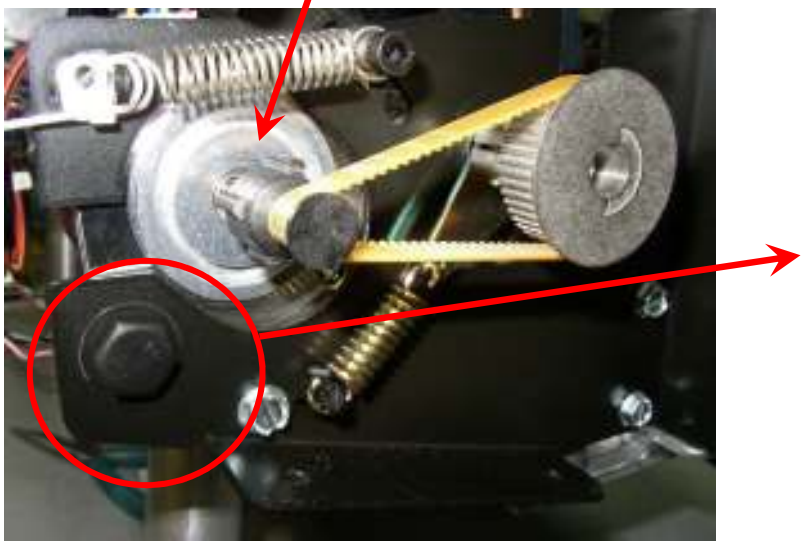
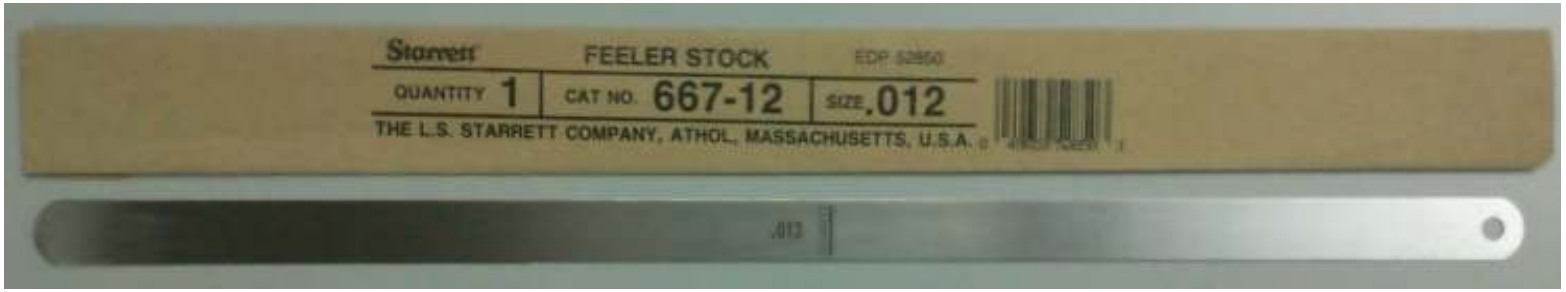
Platen Motor



Tools Specific for P8000

- Feeler Gauge, 0.010”, 0.011”, 0.012” and 0.013”



- Long Tip Alignment Tools

- Guide Tool

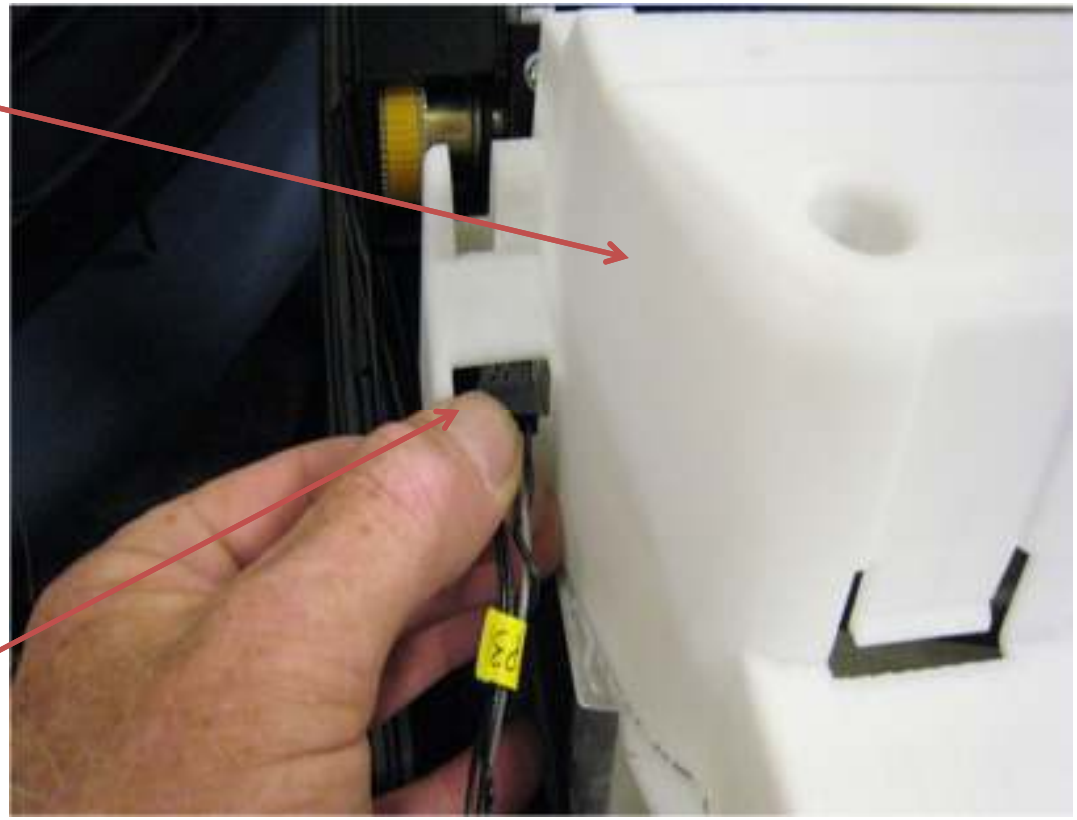
Sub-assembly Removal

1. Paper Path Assembly
2. Shuttle Cover
3. Ribbon Weld Sensor
4. Shuttle Frame Assembly & Hammer Bank Cover
5. Power Supply PCBA
6. Controller PCBA

Shuttle Cover and Weld Sensor

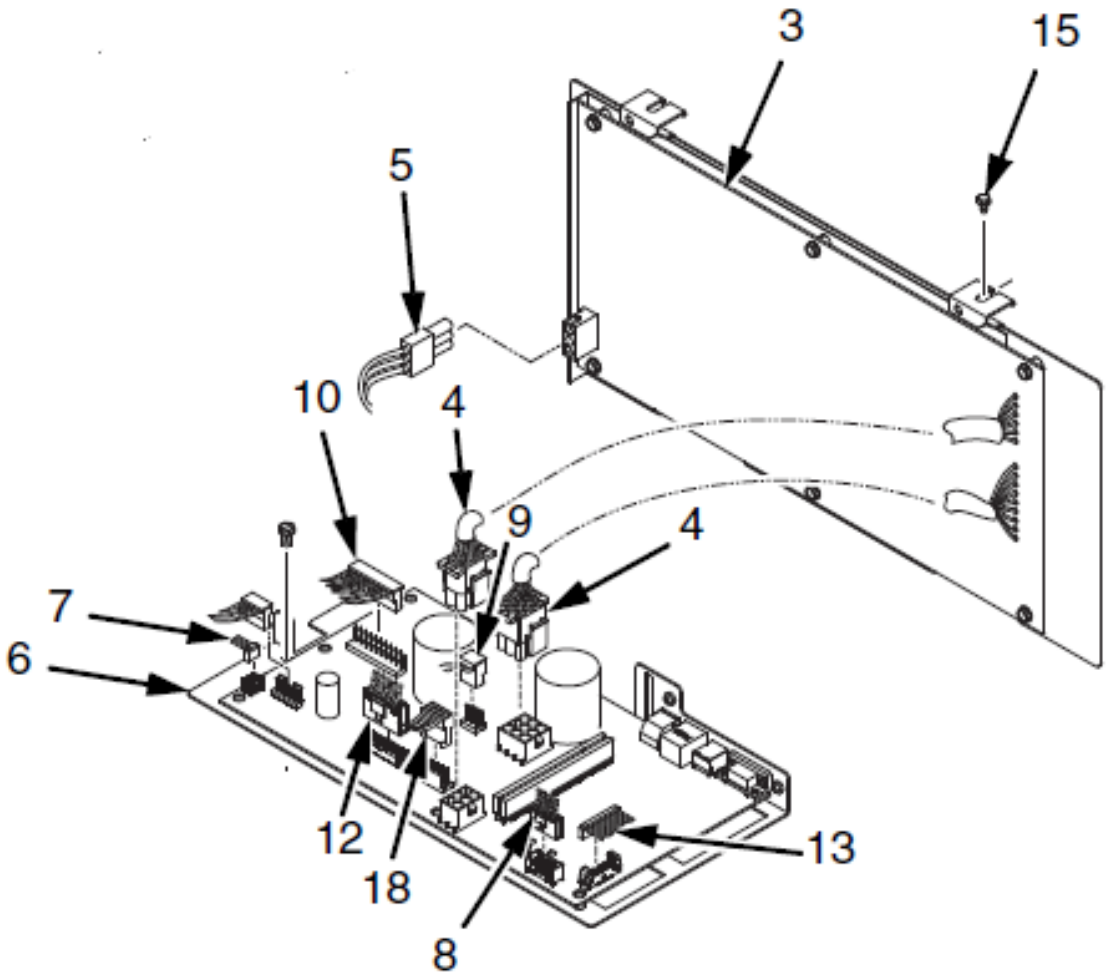
Air Shroud

Weld Sensor



(White Air Shroud
Shown for Contrast.)

Sub-assembly Removal (cont'd…)



4 – Power Cables
5 – AC-in, Power Supply
7 – CC/HB/EX Fan Cable Assy
8 – HB Logic Cable Assy
9 – Shuttle Motor Cable Assy
10 – Dual HB Power Long Cable Assy
12 – Sensor Cable Assy
13 – Control Panel Cable Assy
18 – Motor, Paper Feed

Controller PCBA

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Subassembly
Plate Fastener.

Two fasteners secure the I/O ports to the rear card cage wall.

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Power Supply PCBA

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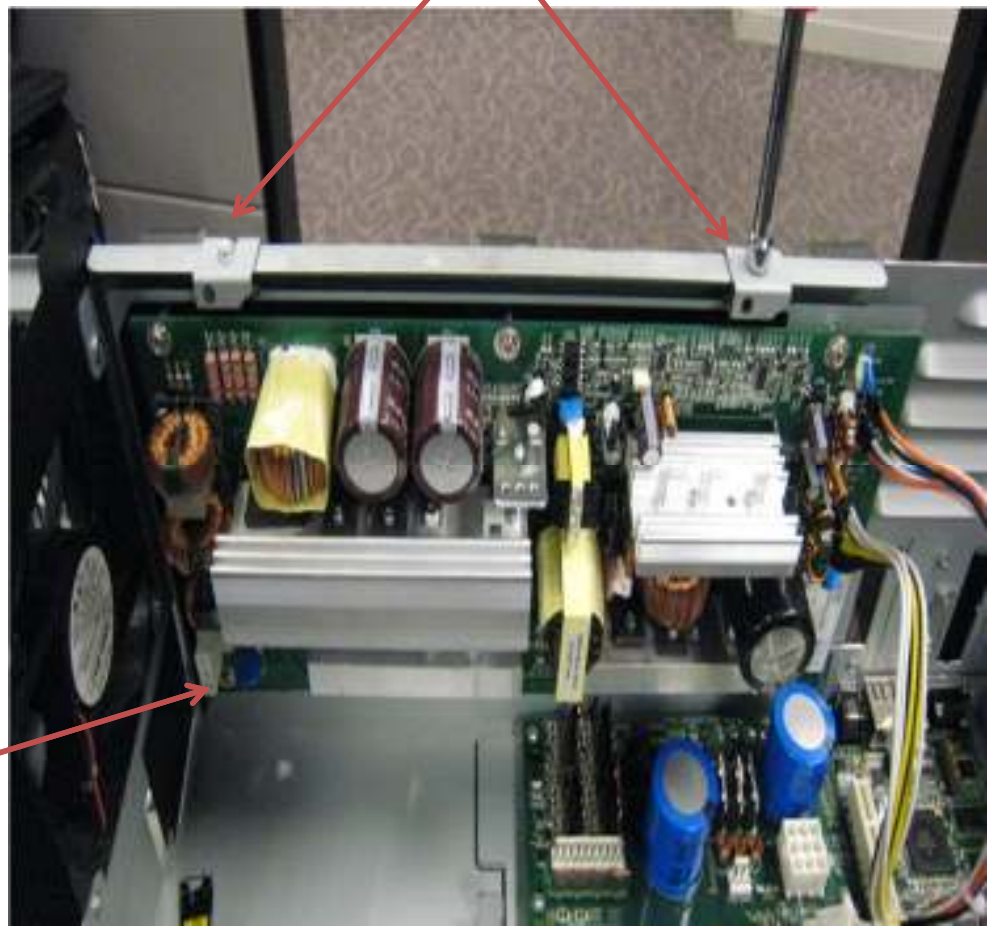
Fasteners.



AC Power Input on lower left of Power Supply where shown.

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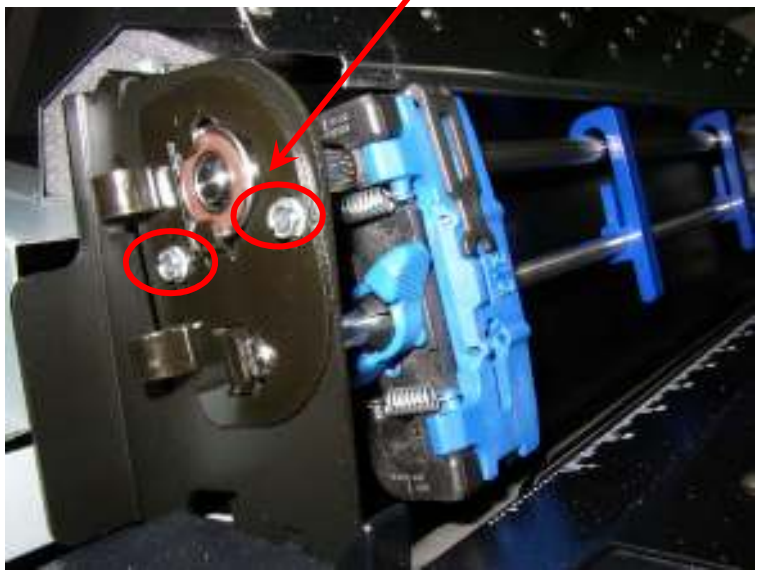
Sub-assembly Removal

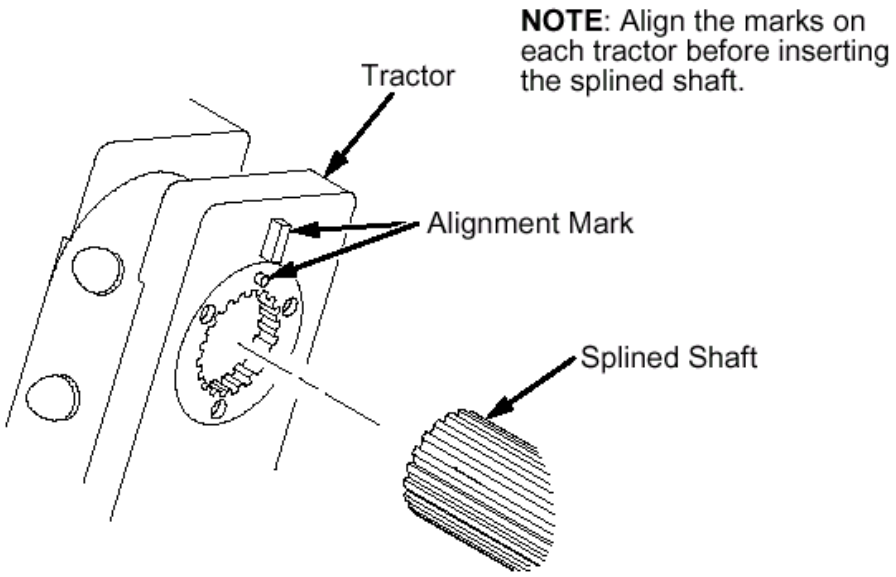
7. Plastic Barrier (Pedestal) & Barrier Shield
8. Cartridge Interface Board
9. Ribbon Motor
10. Paper Ironer
11. Paper Ironer Bracket
12. Platen Lever
13. Platen Interlock Switch
14. Platen Shaft
15. Platen Stepper Motor

Sub-assembly Removal (cont'd…)

16. Spline & Support Shafts

DO NOT LOOSEN OR REMOVE





Tips On Replacing Left/Right Tractors

Sub-assembly Removal (cont'd…)

17. Tractors RH/LH

Sub-assembly Removal (cont'd…)

18. Paper Stepper Motor
19. Paper Out Detector Switch
20. Hammer Bank Fan
21. Card Cage Cooling Fan
22. Exhaust Fan (Cabinet Only)

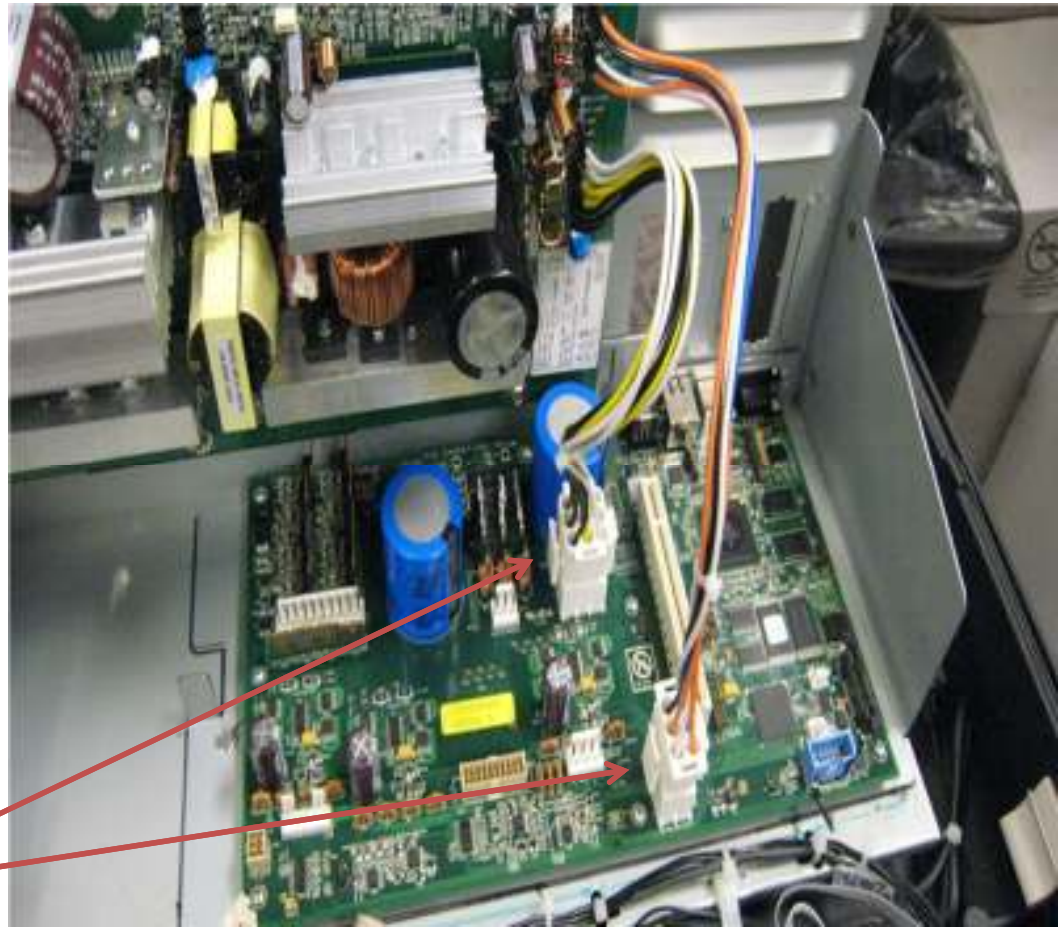
Controller and Power Supply Installation

The two DC connections from the Power Supply to the Controller are shown here.

The connectors are different in size and are polarized so they cannot be plugged in incorrectly.

Push connectors down onto Controller until they latch into place.

DC Connectors.

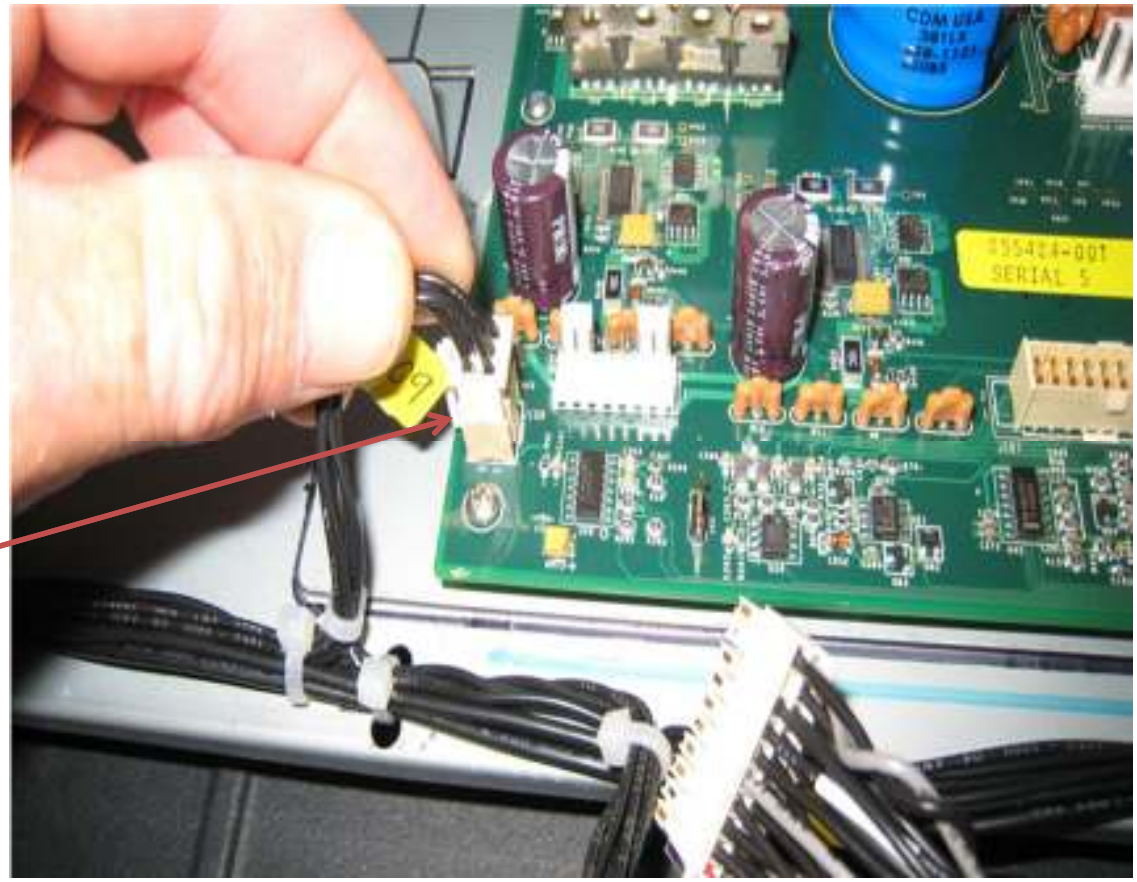


Motor and Sensor Harnesses

IMPORTANT

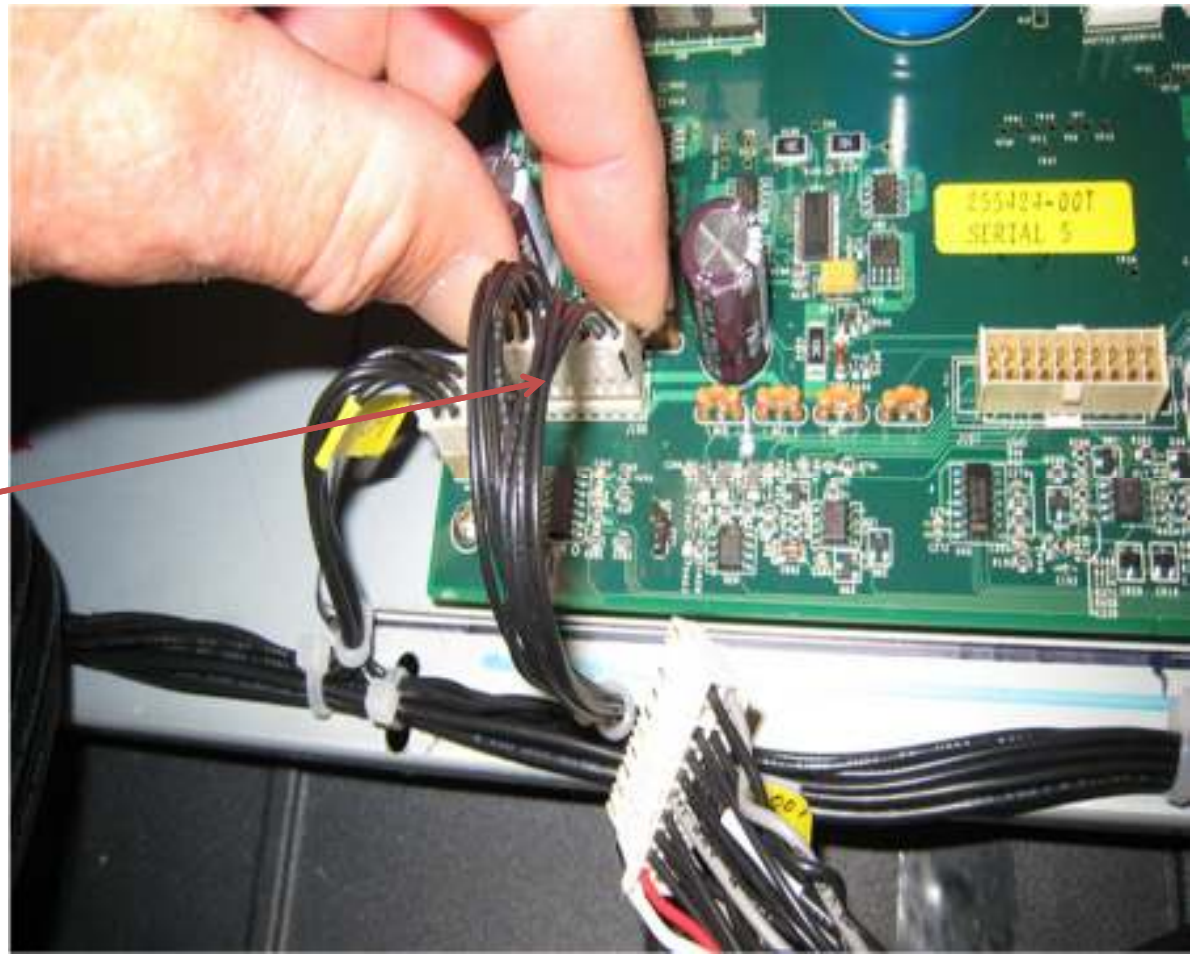
All plugs and receptacles are polarized so they cannot be plugged in incorrectly.

P109 Fan Connector.



Motor and Sensor Harnesses

P106 Platen Motor / Ribbon Motor Connector.

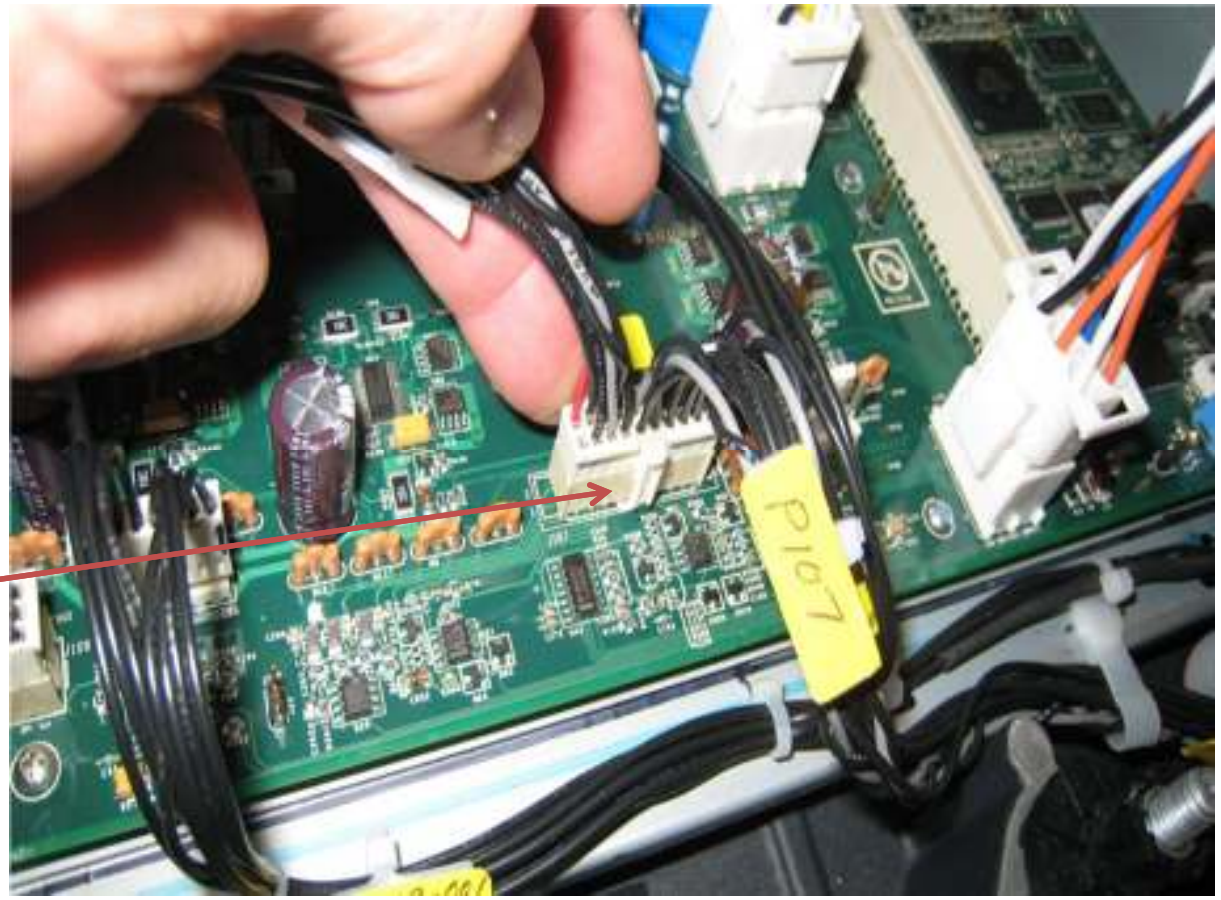


Motor and Sensor Harnesses

P116 Shuttle Motor Connector.

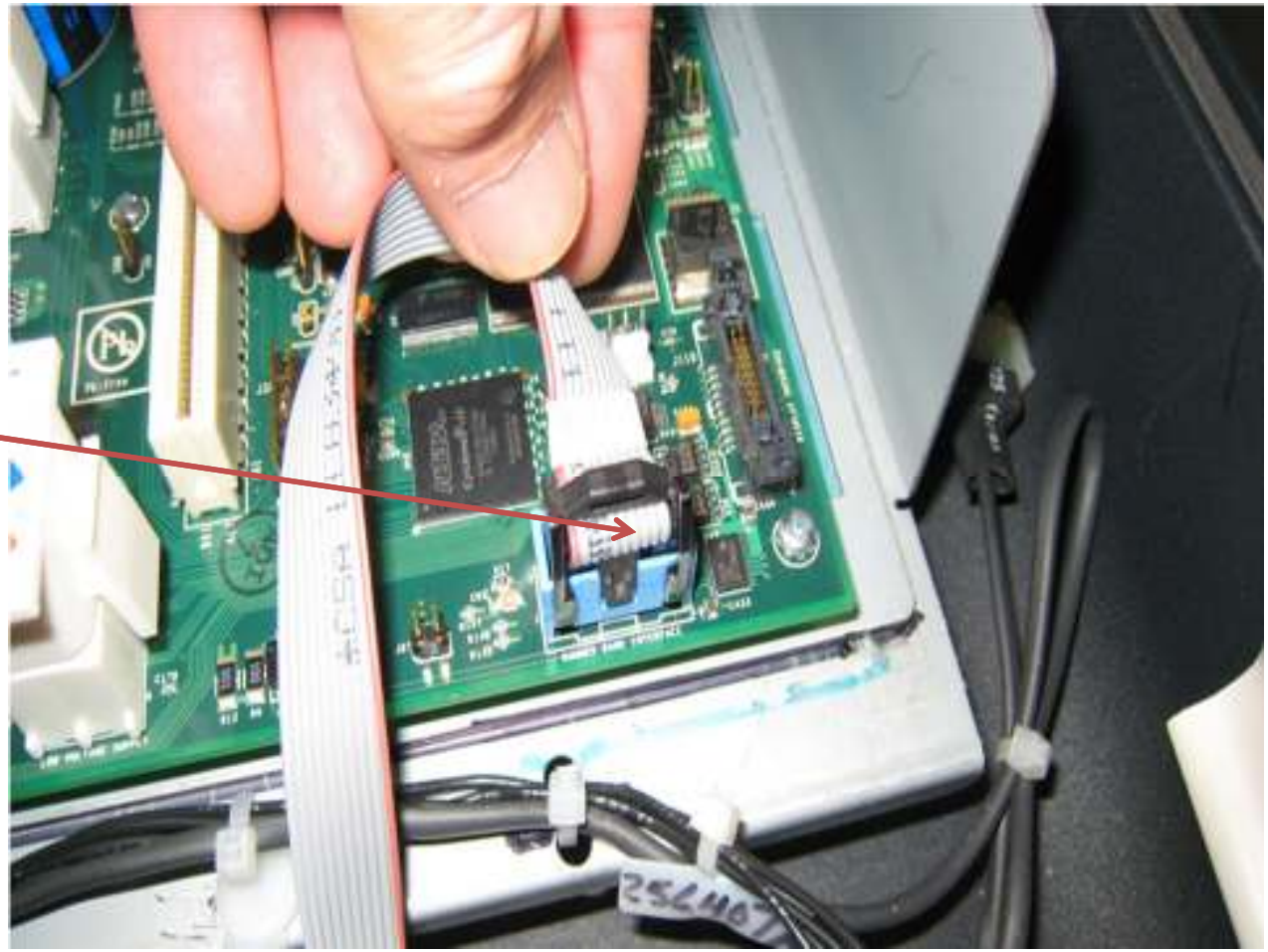
Motor and Sensor Harnesses

P107 Sensor Harness Input Connector.



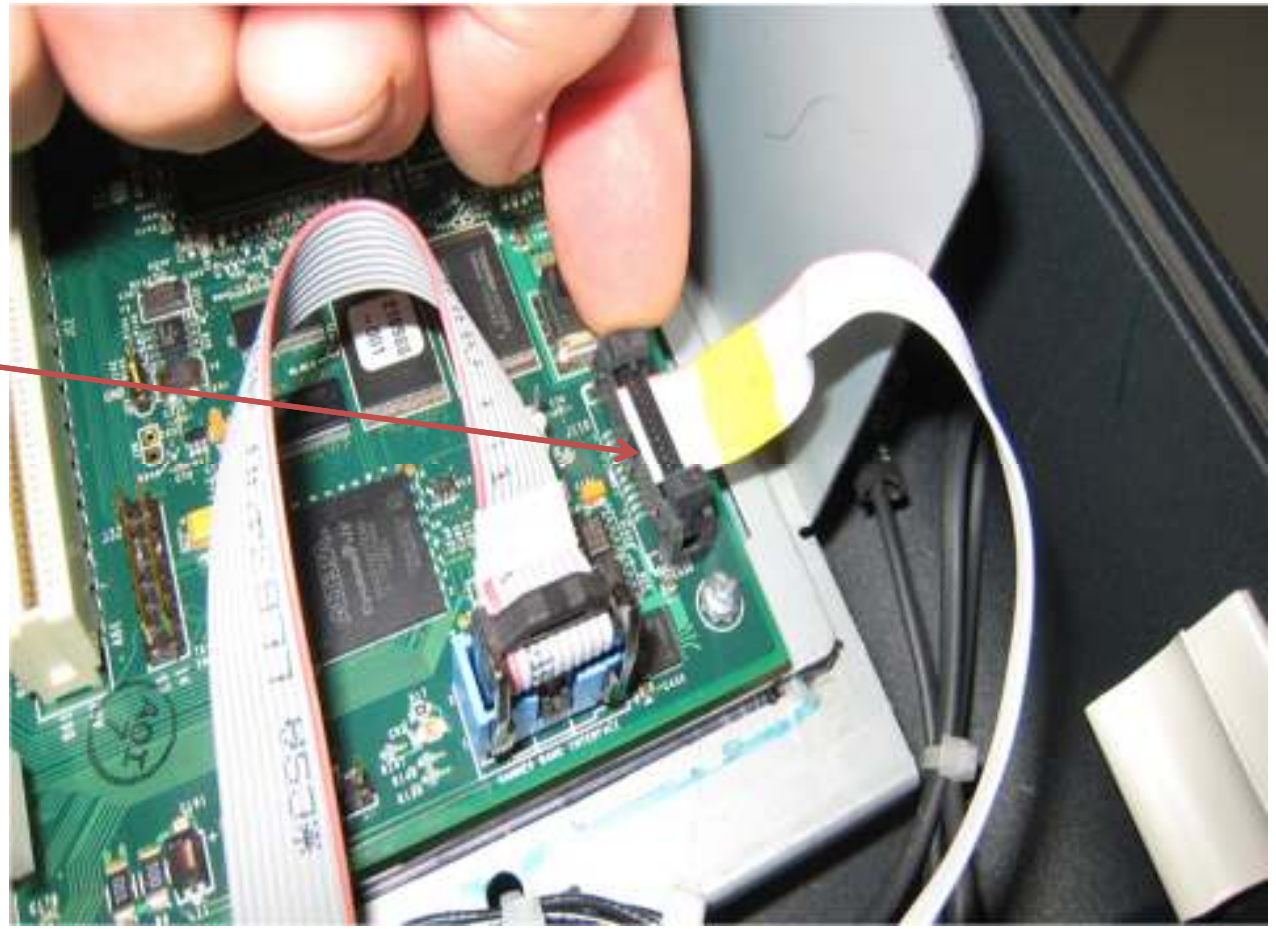
Motor and Sensor Harnesses

P108 Hammer Bank Logic Connector.



Motor and Sensor Harnesses

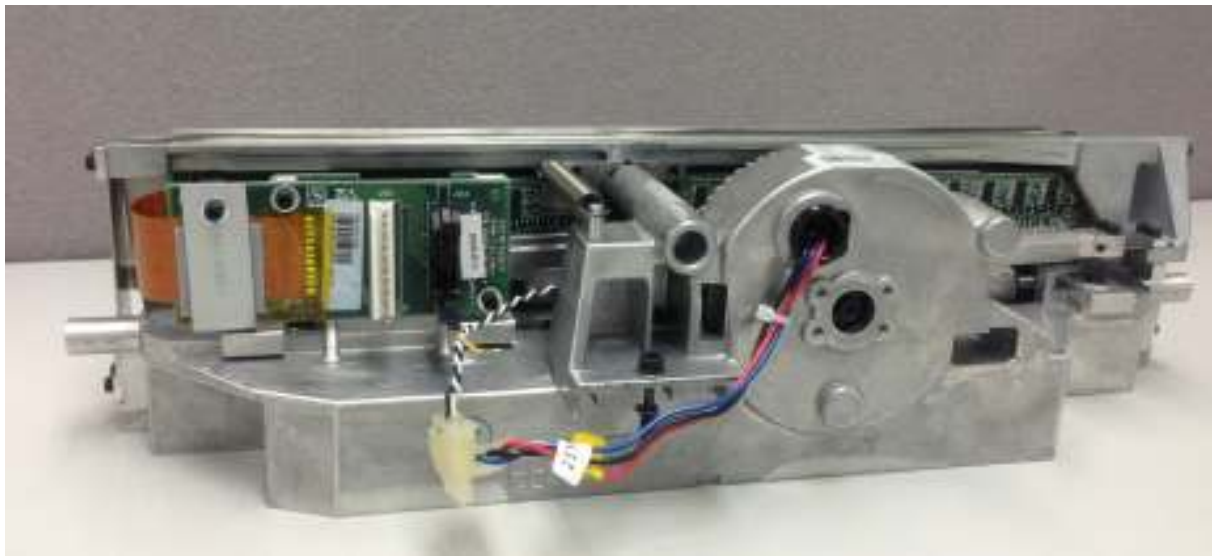
P110 Control Panel Connector.



Motor and Sensor Harnesses

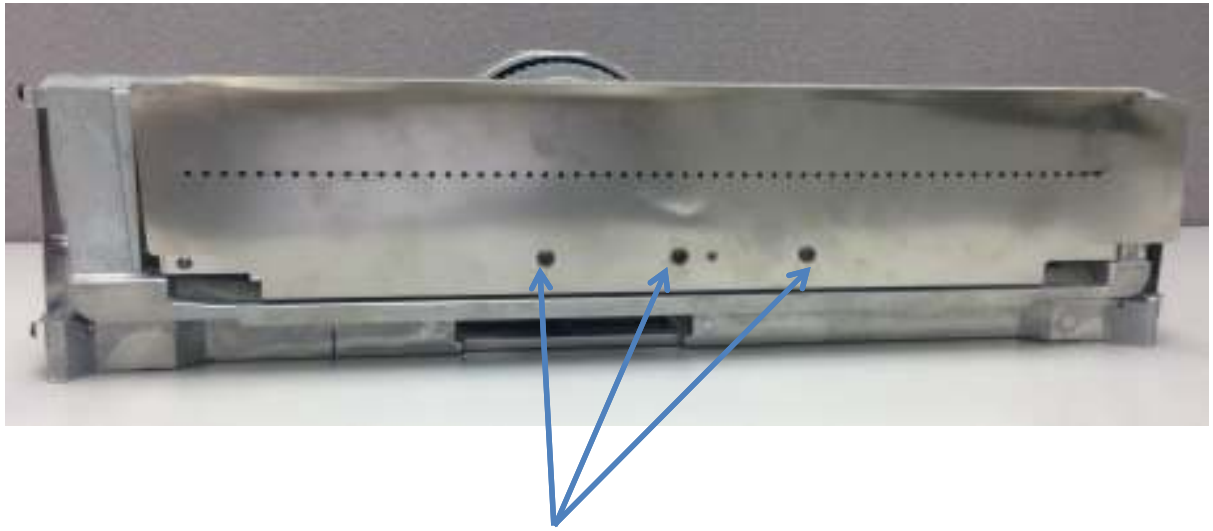
P3 Hammerbank Power Cable Connector for 05/10/03H.

Shuttle Assembly – P8000



Shuttle Assembly

P8000 Shuttle Assembly with Hammerbank Cover / Ribbon Mask attached

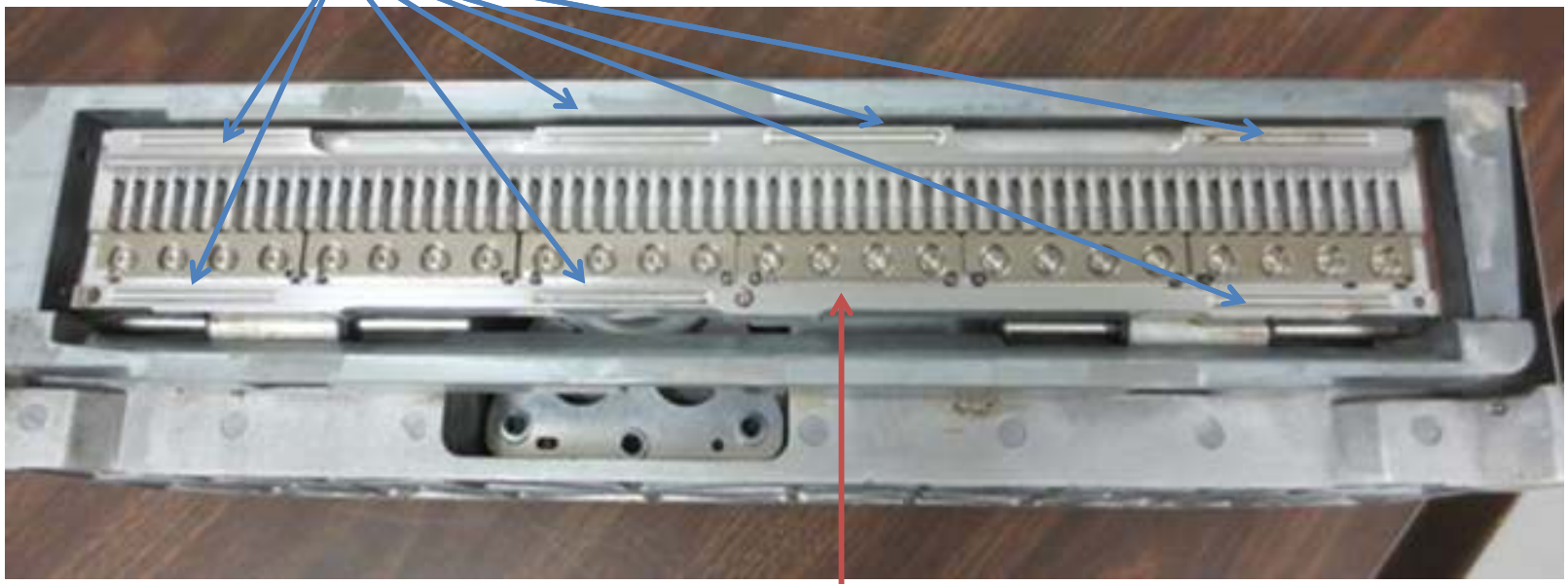


Cover is magnetically held in place and also has 3 button-head fasteners

Shuttle Assembly

P7X10 Shuttle Assembly

7 Hammerbank Cover Magnets



6 Hammerspring Frets.

Shuttle Assembly

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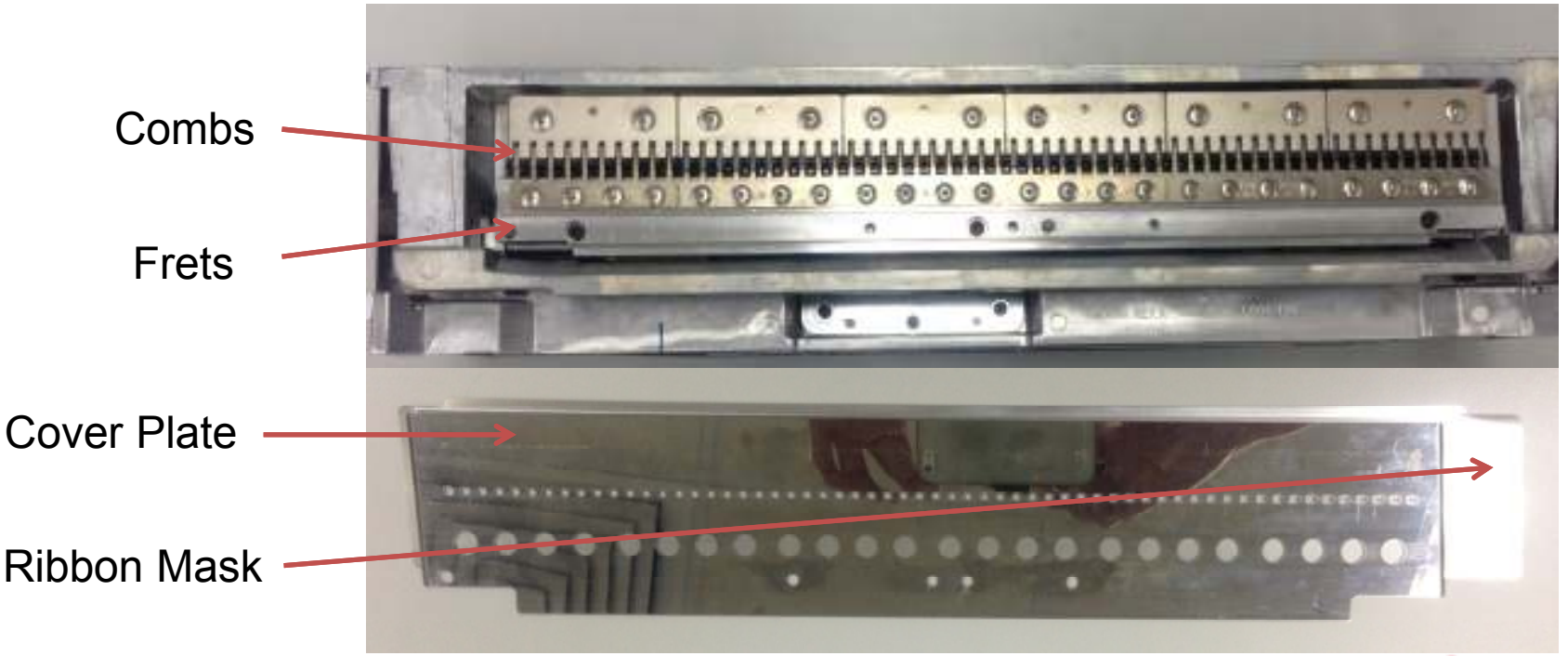
P8X10 Shuttle showing Frets and the Comb pieces that directs the magnetic field to the Frets. The Combs also provide the magnetic field to hold down the Hammerbank Cover/Ribbon Mask. ***The Combs require Precise Factory Alignment in Addition to the Frets***.



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Shuttle Assembly

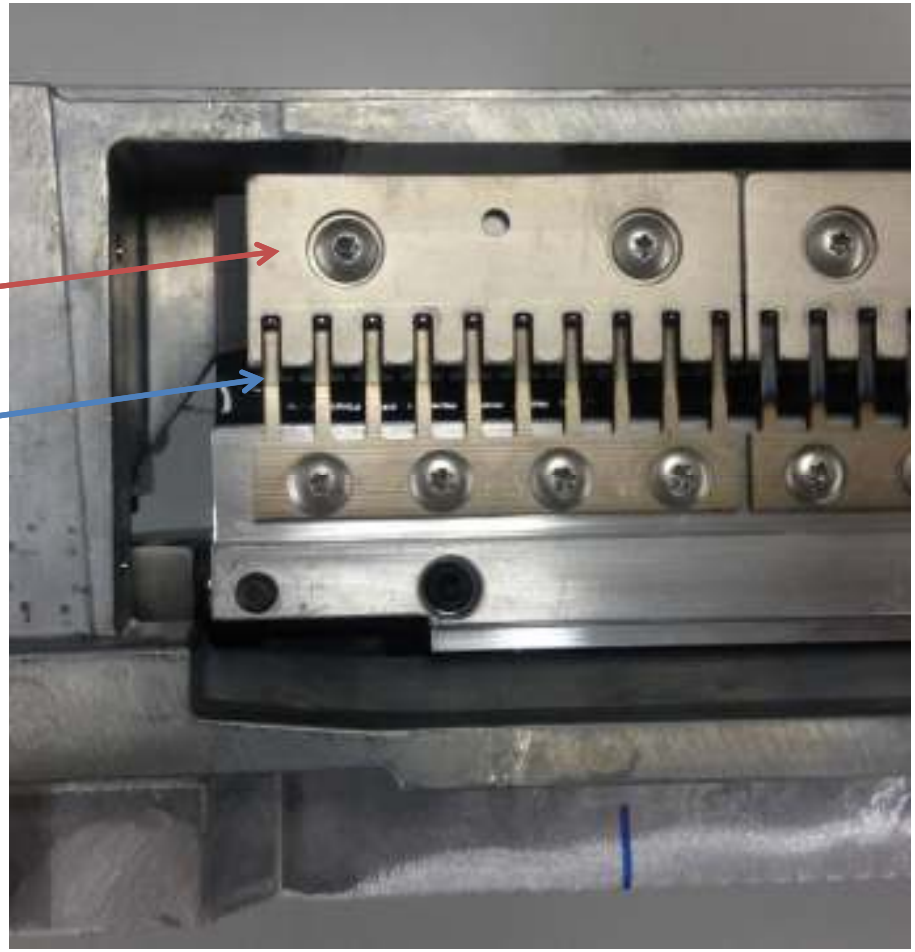
WARNING - The Frets are NOT Field Replaceable and can only be Realigned at the Factory. Without Proper Alignment, the Frets may/will Damage the Hammerbank.

Comb Surface

NOTE: **The Hammer Tips are Flushed with the Comb Surface** thus having Negative Tip Protrusion through the Hammerbank Cover Assy.

This Allows the Hammerbank to be Cleaned without the need to Remove the Frets by Wiping the Surface of the Combs and Frets without snagging the tips in the process.

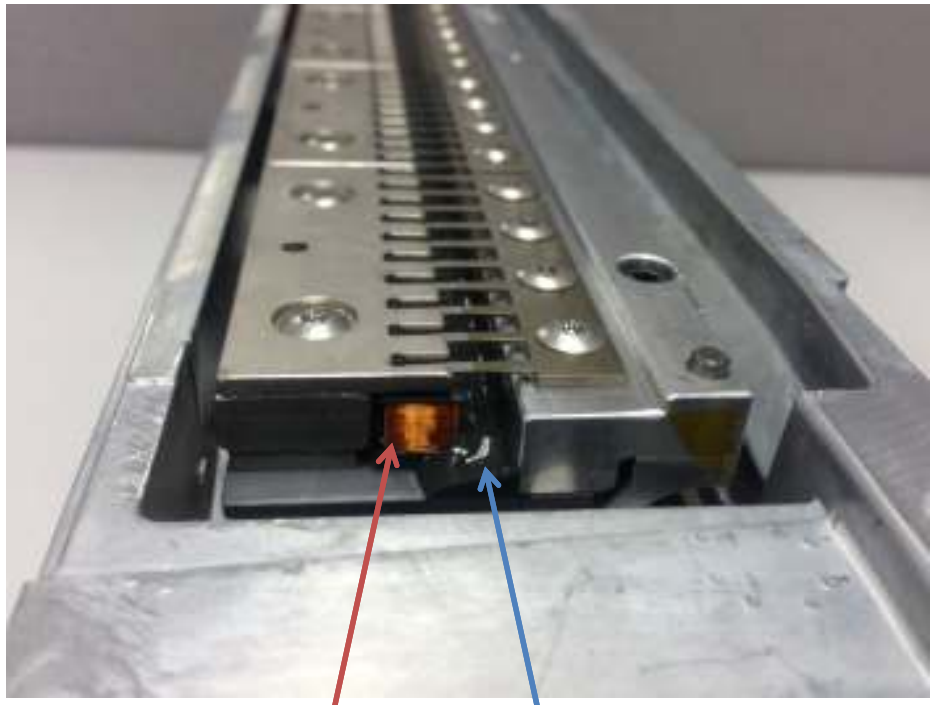
Use the Pure Alcohol (99.953%) Wipes found in Shuttle Cleaner Kit - p/n 254946-001 to Clean these Surfaces.



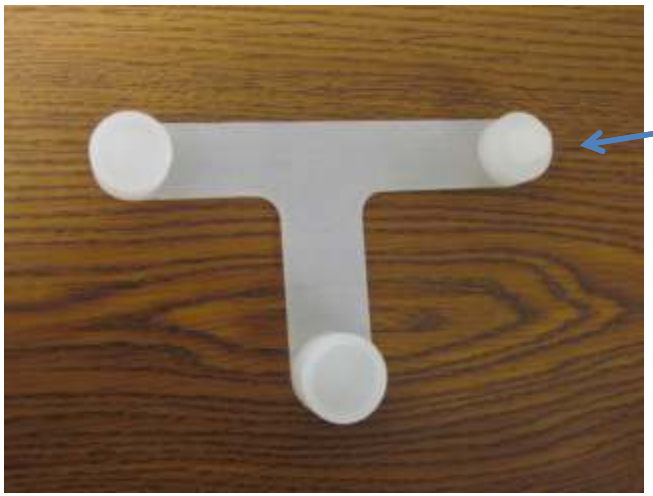
Shuttle Assembly

In this Side View of the P8X10 Shuttle with the HB Cover Assy removed, note the Coils are exposed just below both the Combs and the Frets and there is an absence of the Epoxy Potting Compound normally visible in the Hammer Mounting Surface in both P5000 and P7000 Shuttle Assemblies.

This design allows the use of Canned Air, ESD Vacuum or other Clean Air Source to be used to blow out debris that may become lodged in this now Empty Cavity.



Shuttle Assembly



Shuttle Stabilizer Tool – p/n 255447-001

The Shuttle Stabilizer Tool is recommended for use with all P8000 Shuttle types as well as all P7C Shuttles. This tool keeps the shuttle from rocking back and forth during both cleaning and hammer alignment where applicable.

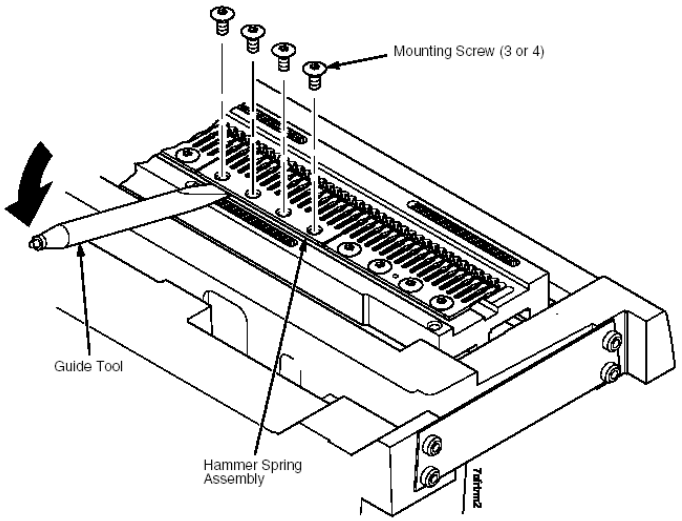
Please note that only the P8X05, P8X10 and P8X03H Shuttles shown on the previous pages use the new comb-style design that surrounds the frets.

The P8X15/P8X20/HDP8X06H/P8X08H Shuttles share the same design concept as the P7/P7C Shuttle-types.

Follow the same cleaning, alignment and platen gapping procedures for these P8000 High-Speed Shuttles as you would for the comparable P7/P7C Shuttle-types.

Remover of Hammer Spring Assembly

- **Only apply** to P8215/P8220/P8X06H/P8208H.
- Remove the screws securing the old hammer spring
- Using the beveled end of the guide tool, gently pry the old hammer upward and remove it
- Discard the old hammer spring assy and the screws

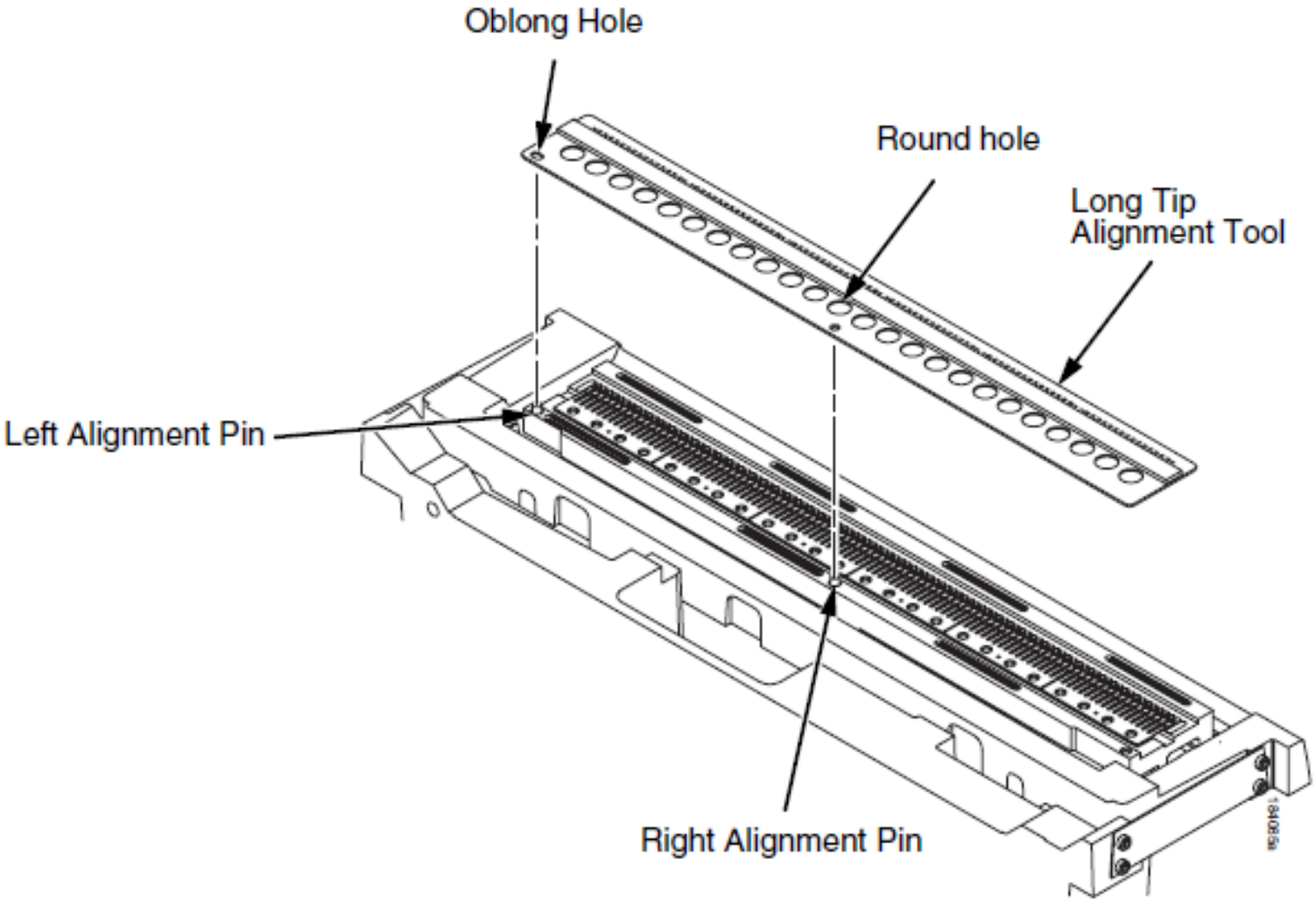


Installation Using The Long Tip Alignment Tool

1. Using a clean dry cloth, wipe the hammer spring mounting surface on the hammer bank
2. Handling the hammer spring assy by the mounting base, position it on the hammer bank and center it over the mounting screw holes
3. Gently position the Long Tip Alignment Tool so the right alignment pin on the hammer bank is in the round hole in the tool, and the left alignment pin is on the oblong hole

Installation Using The Long Tip Alignment Tool

(cont'd…)



Installation Using The Long Tip Alignment Tool

(cont'd…)

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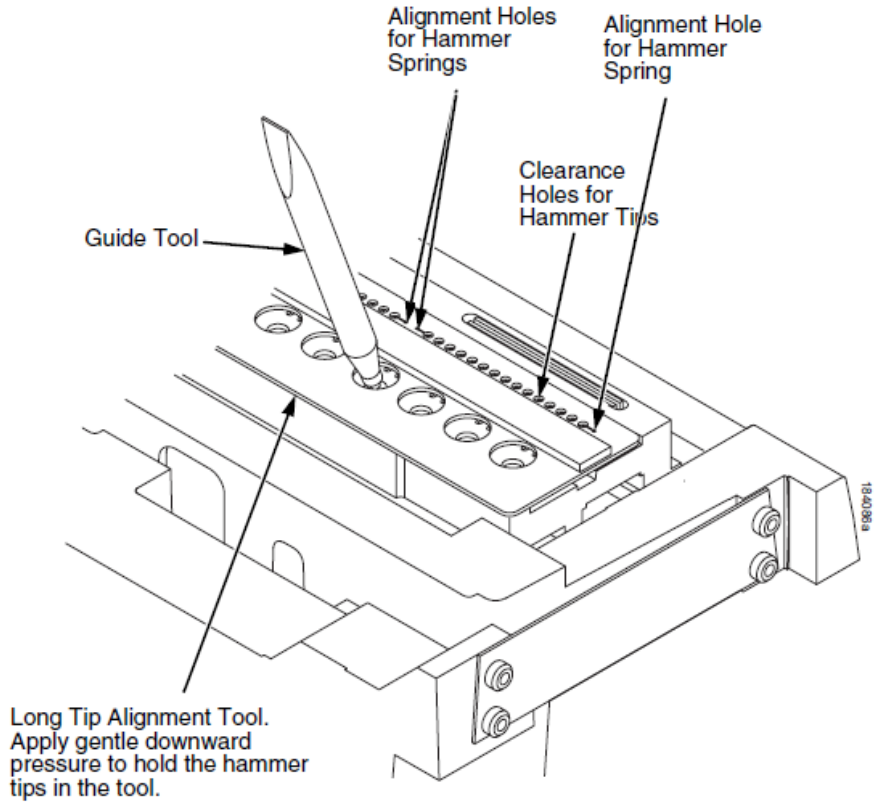
4. Apply a gentle, continuous downward pressure to the alignment tool and gently swivel the guide tool in the hammer spring mounting holes to maneuver the hammer tips into the clearance and alignment holes in the alignment tool.
5. Feel/hear a small 'click' when the hammer tips slip into the holes



Installation Using The Long Tip Alignment Tool

(cont'd…)

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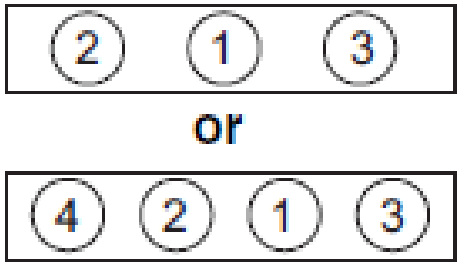
6. Install the mounting screws
7. Torque the screws to 14 in-lbs in the sequence

Torque Sequence
14 inch-pounds (1.58 N•m)



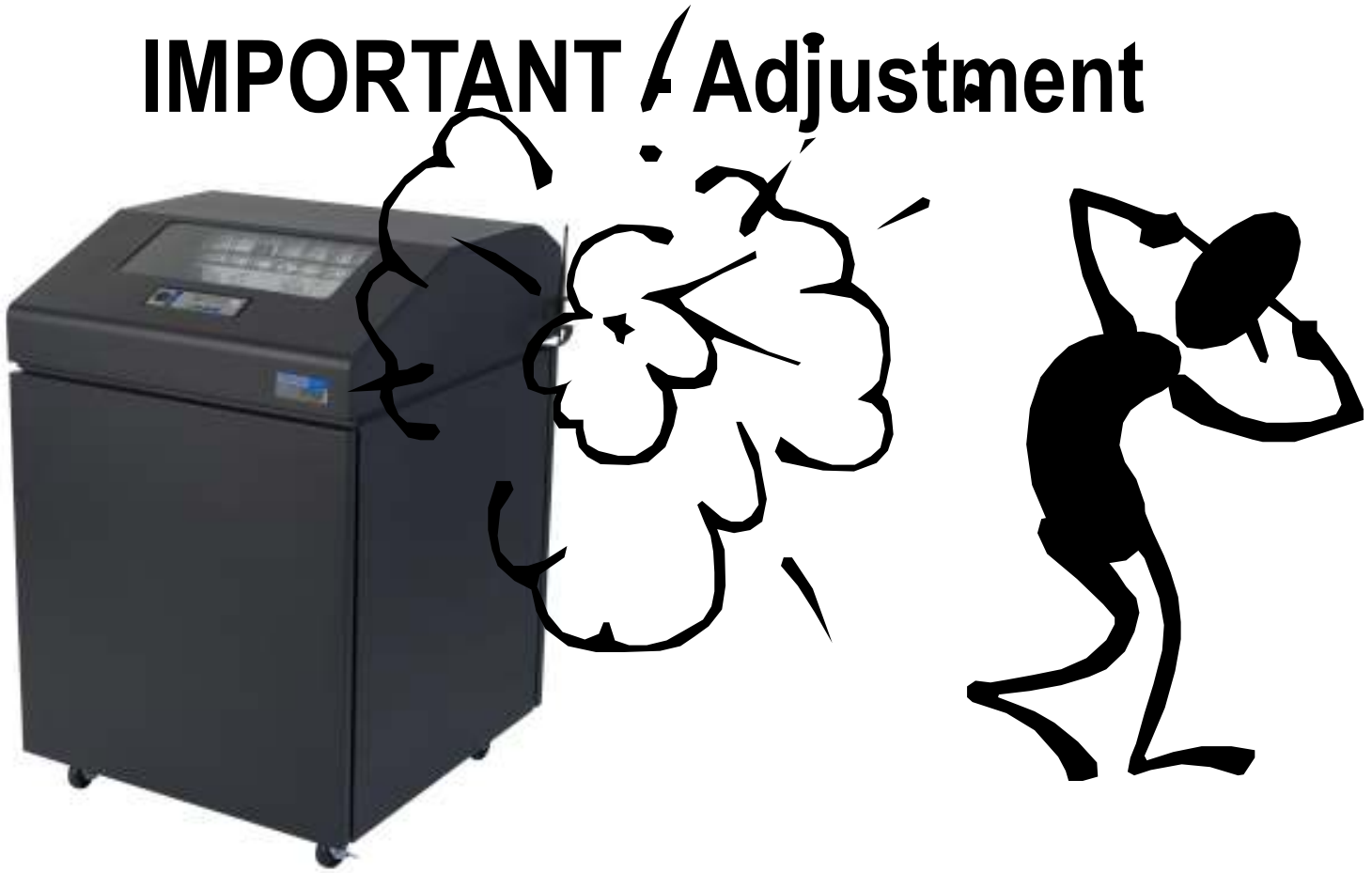
8. Lift the tip alignment tool off the hammer spring

Useful Guideline

- Always use Guide Tool provided for removal of Fret assembly
- Do not use any sharp metal object or screw driver. It may damage Fret/Tip
- To avoid damaging threads, never insert any metallic tool into the hammer spring mounting holes in the hammer bank

- Do not over-tighten the shuttle frame assembly clamp screws. Torque the screws to 20 inch-pounds.

Adjustment

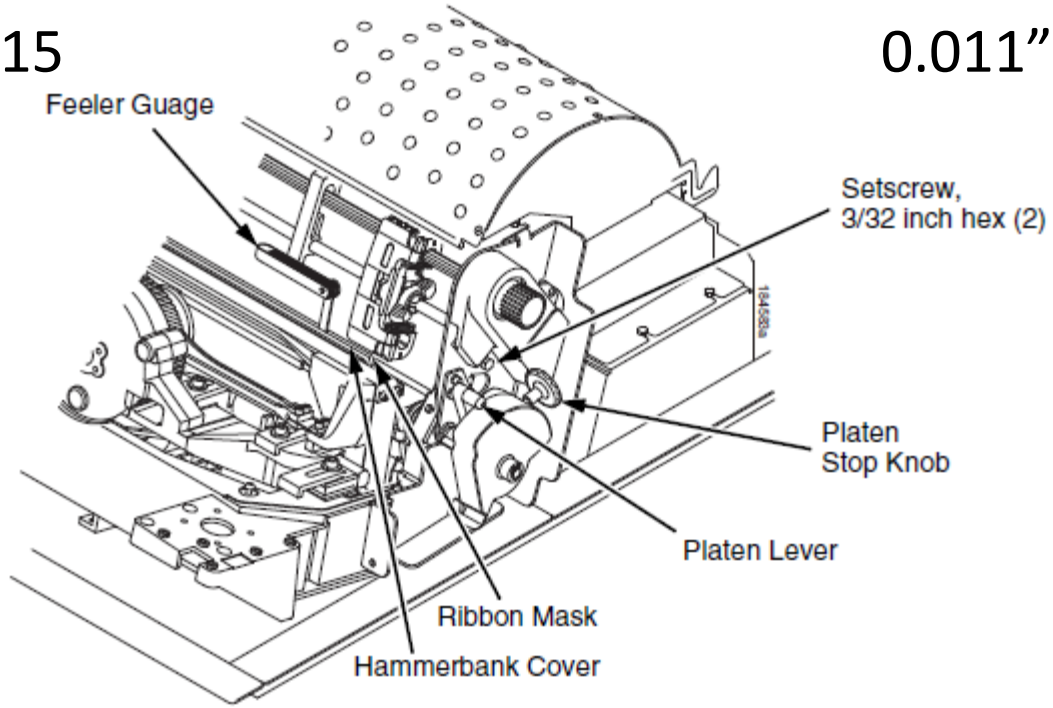


IMPORTANT - Adjustment

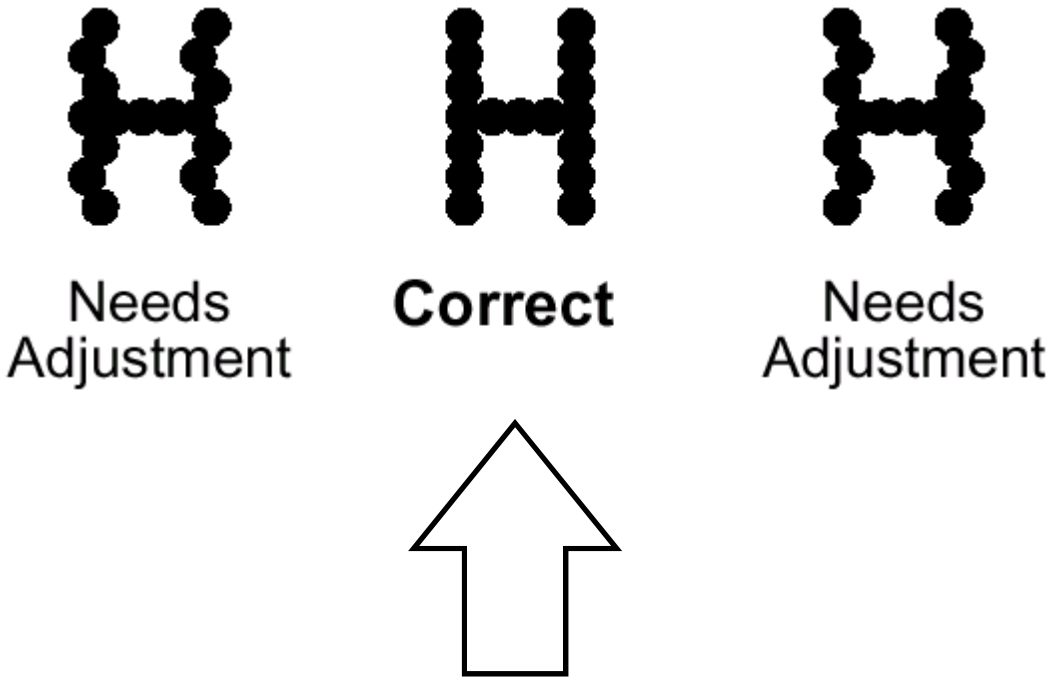
1. Platen Gap adjustment (Feeler Gauge)
2. Hammer Phasing adjustment
3. Paper Out Dots adjustment
4. Coil Temperature Adjustment

Platen Gap Adjustment

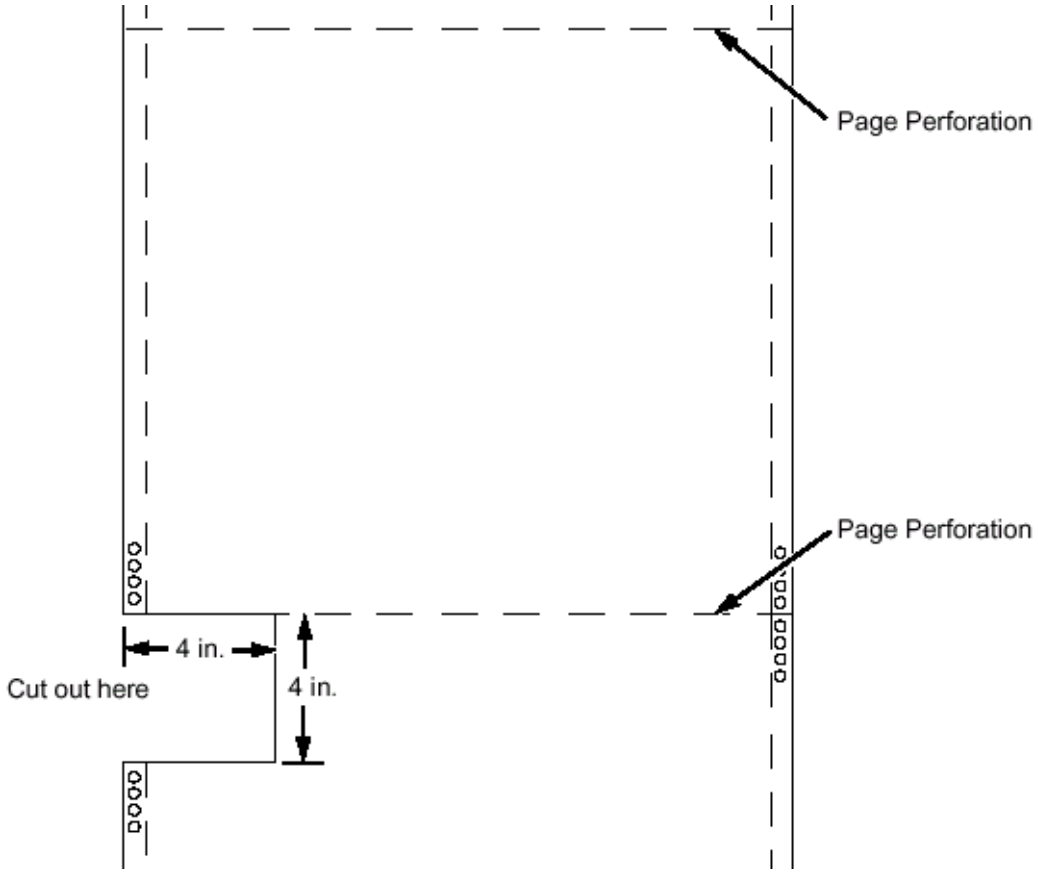
- Platen Gap Setting
  - P8X05/P8X10/P8X03H 0.012”/0.30mm – 0.013”/0.33mm
  - P8220/P8X06H/P8000HD 0.012”/0.30mm
  - P8X08H/P8200HD 0.013”/0.33mm
  - P8215 0.011”/0.28mm



Hammer Phasing Adjustment



Paper Out Dot Adjustment



Coil Temperature Adjustment

- Require when replaced the controller board or shuttle assembly
- Shuttle assembly must be at room temperature
- Power off the printer and let it cool for at least one hour

Coil Temperature Adjustment (cont'd…)

1. Power on the printer.
2. Put the printer to Offline.
3. Unlock the ENTER key.
4. Press the UP + DOWN + LEFT + RIGHT keys together to enter factory menu. "Factory/Set Coil Temp" appears on the display.
5. Press the ENTER key to set the coil Temperature.

DIAGNOSTIC PRINTER TESTS

Diagnostic Printer Tests

- A set of printer tests is included in the DIAGNOSTICS configuration menu is use as diagnostic tools. Use these tests to check the Print Quality and Basic Operation of the printer. You will also use some of the tests in some adjustment procedures.

The diagnostic tests are summarized below:

- **Shift Recycle** — A “sliding” alphanumeric pattern useful for identifying missing or malformed characters, improper vertical alignment, or vertical compression.
- **All E’s** — A pattern of all uppercase letter E’s useful for identifying missing characters, misplaced dots, smeared characters, improper phasing, or light/dark character variations.
- **E’s + TOF** — A pattern of all E’s repeated for ten lines and followed by a form feed to the top of the next page. This test is useful for identifying paper motion or paper feed problems.
- **All H’s** — A pattern of all uppercase letter H’s useful for detecting missing characters or dots, smeared characters, or improper phasing.
- **All Underlines** — An underline pattern useful for identifying hammer bank misalignment.
- **All Black** — A condition where all dot positions are printed, creating a solid black band.
- **Shuttle Slow** — Exercises the shuttle and ribbon mechanisms at low speed. You can also use this test to check ribbon tracking and reversing.
- **Shuttle Fast** — Exercises the shuttle and ribbon mechanisms at high speed. You can also use this test to check ribbon tracking and reversing.
- **Shuttle Only** — Runs the shuttle mechanism with no ribbon movement.

Diagnostic Printer Tests

- **Phase Printer** — A hammer timing test that permits you to adjust the hammer phase value. The hammer phase value is a timing parameter that controls the vertical alignment of dots in character printing. The numerical units are relative, they do not represent a physical measurement or value. There is no “correct” value or range. The factory prints the initial phase value on the casting of the shuttle assembly, next to the motor housing. Use this value as your starting point when adjusting hammer phasing.
- **Paperout Adj.** — Prints a vertical comb pattern. You use this pattern when you do the end of forms (paper out) adjustment procedure. The comb pattern lets you measure the number of dot rows from the completion of a paper out fault to the end of the paper.
- **Burnin Test** — Do not use. This test is used by the printer manufacturer to burn in the printer prior to shipment and has no value as a maintenance tool.
- **Ethernet Test —** Prints the ethernet statistics stored on the ethernet interface (if present).
- **Acoustics** — A test used by the manufacturer to measure acoustic properties of the printer. This test has no value as a maintenance tool.
- **Demo** — Prints representative lines of the various CPI available and some sample bar codes.
- **Dice 5** — Prints all dot positions, creating a solid black band across the page. Used to detect dark and light hammer springs.
- **Prnt Ribbon Log** — Prints information for the currently installed ribbon, such as installed ribbon (ribbon part number), ribbon brand name, ribbon life, and ribbon end point.

Diagnostic Printer Tests

- **Checker**. This pattern helps identify marginal printhead elements, quality of edge sharpness, and uneven print quality.
- **Weld Patch Log**. Prints log times for ribbon starts, welds, and ribbon stops.
- **Novram Err Log**. Prints detailed information about the most recent Novram related failure that has occurred. It is useful when the front panel reports "BAD NVM" or "ILL NVM" error types. Contact the Customer Solutions Center and provide this information if such an error occurs.

Diagnostics for EXX, BAD NVM, or ILL NVM Errors

If the printer displays LCD error messages such as 'E03E DSI CXIWX", "BAD NVM", or "ILL NVM", reboot the printer (turn power on and off) and continue. If the problem persists, then invoke a diagnostic option that will capture the failure dump in a flash file that can be later uploaded from PrintNet Enterprise Suite and send to Printronix Customer Support Center for analysis.

This diagnostic option must be enabled for the printer to capture the information. If you choose to perform this diagnostic perform the following procedure:

1. Within the DIAGNOSTICS section, set the menu Auto Dump to Enable..
2. When the failure happens, reboot the printer and wait for it to power up again.
3. Within the ADVANCED USER section, go to Main File System submenu and then to View File List.
4. Verify that files 'autodmp1' or 'autodmp2' are present in the file list.
5. If present, use PrintNet Enterprise Suite to upload these files to your host computer.

Changing Controller Board

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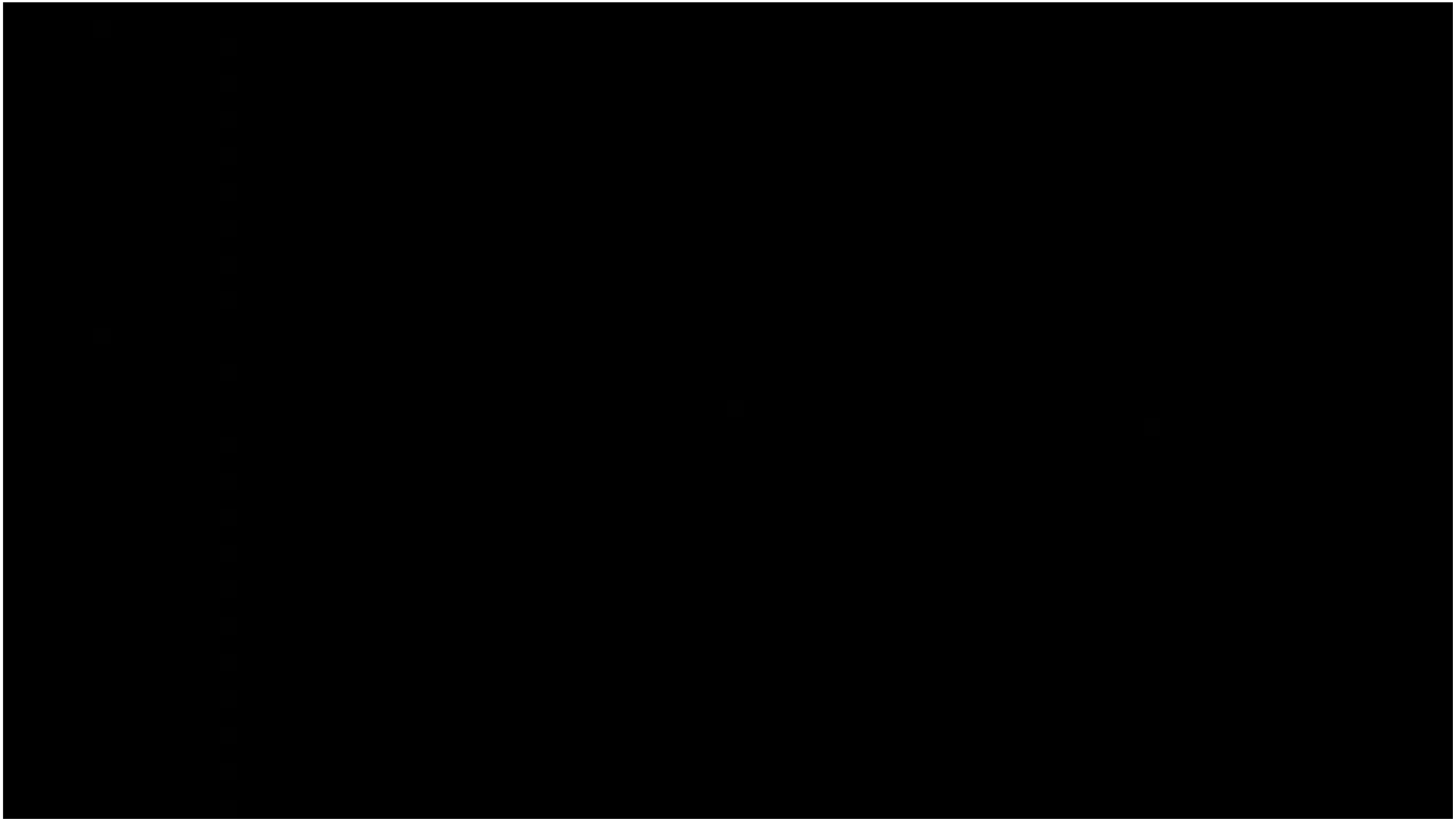
- Changing/Replacing Controller board
  - Install Security Key
  - Reload Printer firmware
  - Calibrate Hammer Phasing
  - Paper Out Adjustment
  - Set Coil Temperature

Cleaning Shuttle Assembly

- Hammer Bank Cover Cleaning
  - Moisten a clean, soft cloth with alcohol. Wipe the hammer bank cover and ribbon mask to remove lint, ink, paper residue.
- Hammer Spring / Fret Cleaning
  - Do not use any Solvent or liquid to clean hammer tips.

Cleaning Shuttle Assembly

leadership by design



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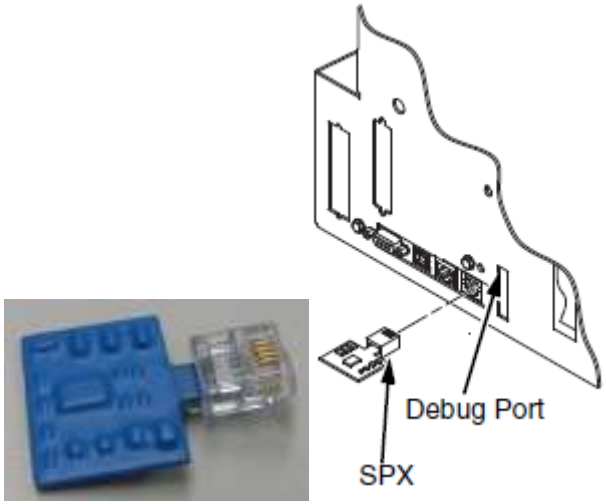
SPX Upgrade Security Key

- Power Off the printer.
- Insert the SPX into the debug port.
- Power On the printer. The printer will begin its boot-up sequence.
- When the printer detects a valid SPX, the control panel display

  "NEW SPX DETECTED
  PRESS ENTER"
- Press the ENTER key.

  "DO NOT POWER OFF
  Upgrading…"



SPX Upgrade Security Key (cont'd…)

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- When the security key is reprogrammed, the display will read:

  "REMOVE SPX
  THEN PRESS ENTER"

- Remove the SPX and then press the ENTER key.
- Printer will reboot .

Hidden Menus

- Factory Menu
  - Put the printer to offline.
  - Press the UP + DOWN + LEFT + RIGHT keys together to enter factory menu.
- Boot Diagnostics Menu
  - Power up the printer while holding down the LEFT + DOWN keys together.

Hex Dump

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- **Sample Hex Dump Print Out**

```
 !"#$%&'()*+,-./ 20 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E 2F
0123456789:;<=>? 30 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F
@ABCDEFGHIJKLMNO 40 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F
PQRSTUVWXYZ[\]^_ 50 51 52 53 54 55 56 57 58 59 5A 5B 5C 5D 5E 5F
`abcdefghijklmno 60 61 62 63 64 65 66 67 68 69 6A 6B 6C 6D 6E 6F
pqrstuvwxyz{|}~  70 71 72 73 74 75 76 77 78 79 7A 7B 7C 7D 7E 20
!"#$%&'()*+,-./0 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E 2F 30
123456789:;<=>?@ 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F 40
ABCDEFGH. . !"#$%& 41 42 43 44 45 46 47 48 0D 0A 21 22 23 24 25 26
'()*+,-./0123456 27 28 29 2A 2B 2C 2D 2E 2F 30 31 32 33 34 35 36
789:;<=>?@ABCDEF 37 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43 44 45 46
GHIJKLMNOPQRSTUV 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53 54 55 56
WXYZ[\]^_`abcdef 57 58 59 5A 5B 5C 5D 5E 5F 60 61 62 63 64 65 66
ghijklmnopqrstuv 67 68 69 6A 6B 6C 6D 6E 6F 70 71 72 73 74 75 76
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./0123456789:;<= 2E 2F 30 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D
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NOPQRSTUVWXYZ[\] 4E 4F 50 51 52 53 54 55 56 57 58 59 5A 5B 5C 5D
^_`abcdefghijklm 5E 5F 60 61 62 63 64 65 66 67 68 69 6A 6B 6C 6D
nopqrstuvwxyz{|} 6E 6F 70 71 72 73 74 75 76 77 78 79 7A 7B 7C 7D
~ !"#$%&'()*+,-. 7E 20 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E
```

PRINTRONIX Tally Genicom

Useful Software

- Hex Editor
- Wireshark

Windows Driver

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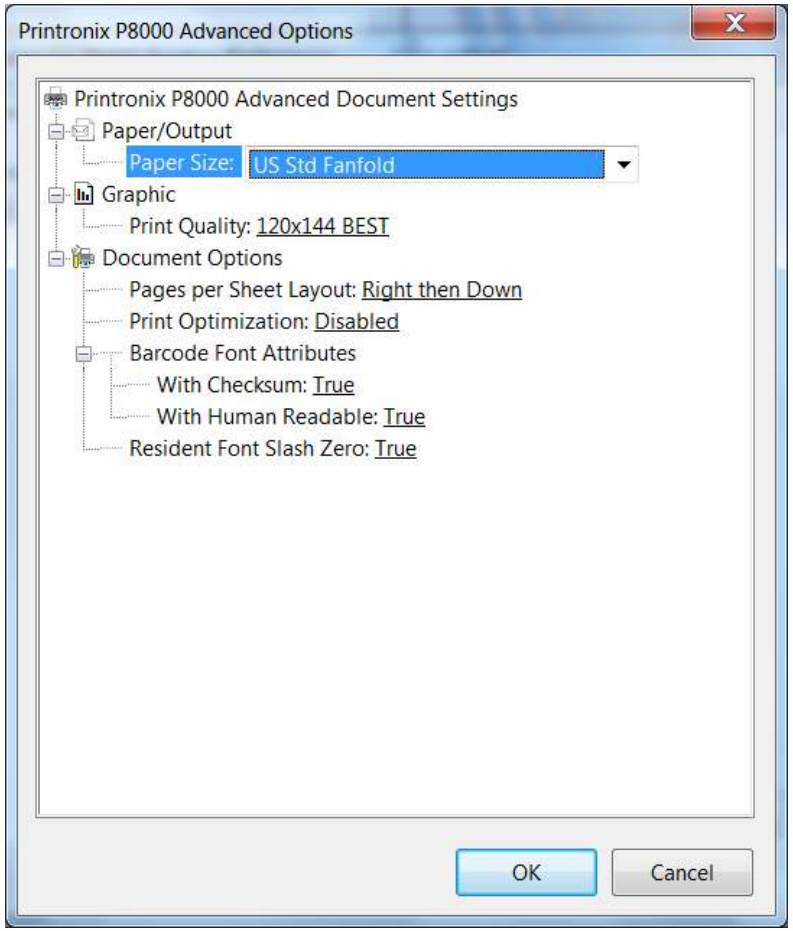
- Download from www.printronix.com



PrintNet

Network Interface Card

PRINTRONIX TallyGenicom

Features

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- Build in HTML – Ease Cross Platform Configuration
- Printer Management Utility
- Build-in Security with Password Access
- Multiple Destination/Queues
- Delivers fully bi-directional communication
- Telnet Client And FTP
- Network Protocol Support
  - TCP/IP
  - NetBIOS over TCP/IP

PrintNet Home Page

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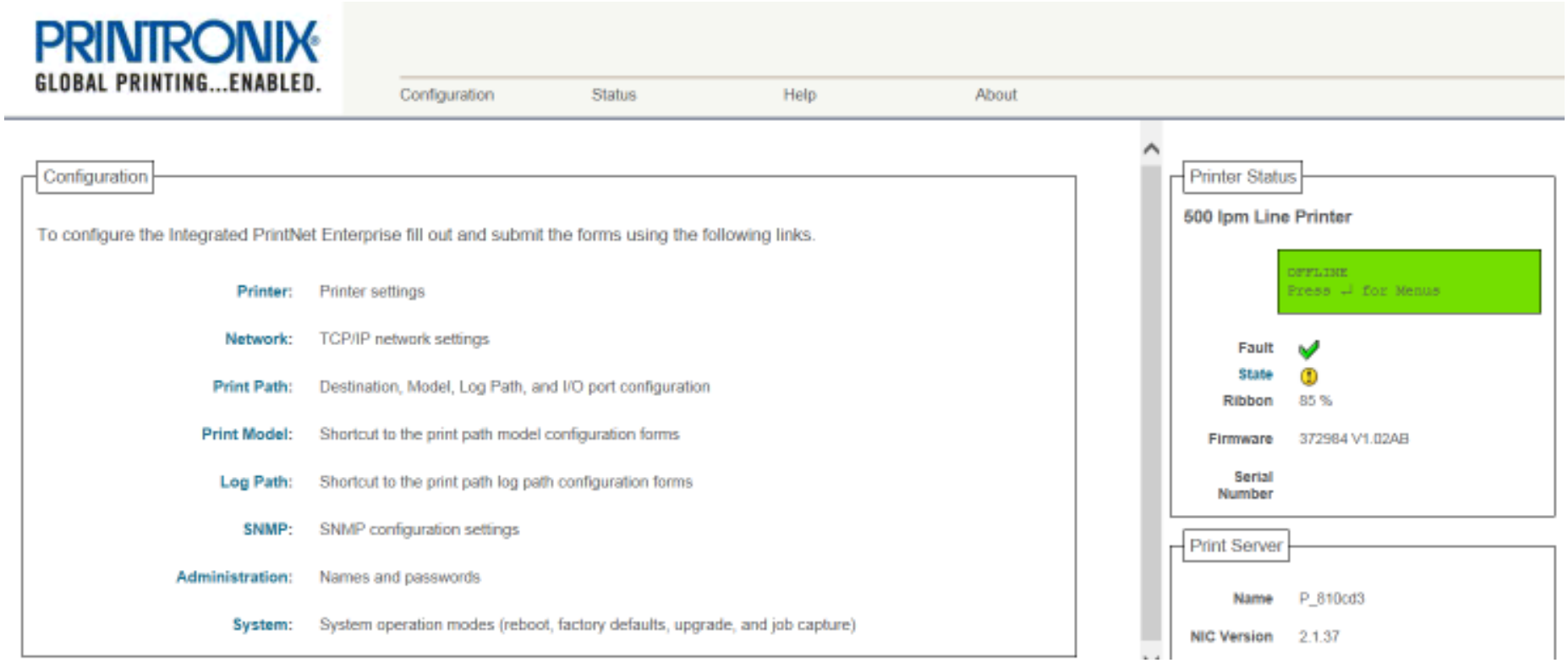

PRINTRONIX TallyGenicom

Network Printer Management Software

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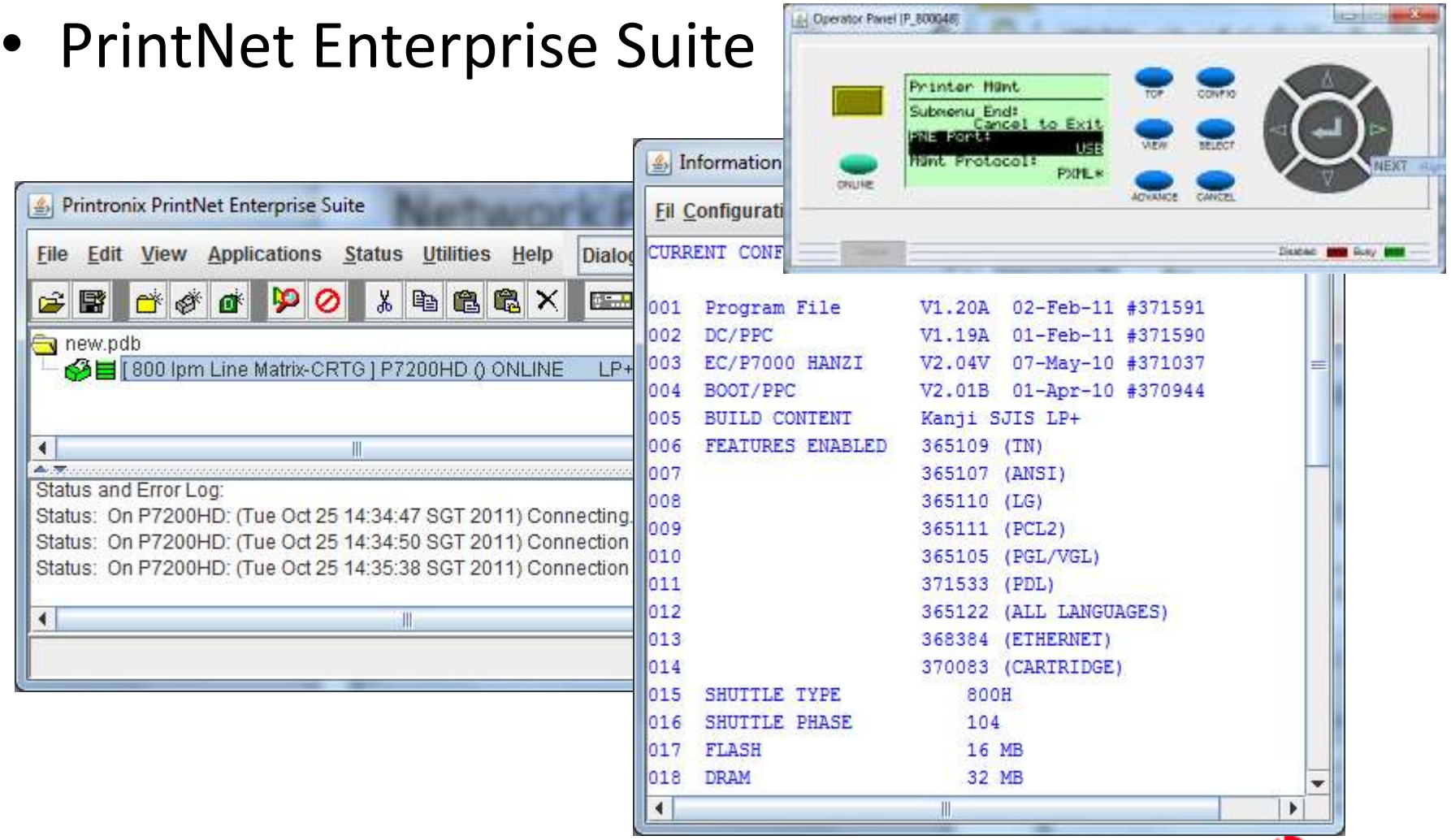
- PrintNet Enterprise Suite



PRINTRONIX TallyGenicom




DOCUMENTATION

Documentation

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Part Number	Description
256382-001	Quick Start Guide, P8000
256381-001	User's Manual, P8000
257367-001	User's Manual, Printnet Ethernet, P8000
256384-001	Programmer's Reference Manual, LP+, P8000
256385-001	Programmer's Reference Manual, ANSI, P8000
256386-001	Programmer's Reference Manual, IPDS, P8000
256387-001	Programmer's Reference Manual, PGL, P8000
256388-001	Programmer's Reference Manual, VGL, P8000
257400-001	Programmer's Reference Manual, PCL2, P8000
257401-001	Programmer's Reference Manual, LG, P8000
257273-001	Programmer's Reference Manual, KS, P8000H
257274-001	Programmer's Reference Manual, KSSM, P8000H
257275-001	Programmer's Reference Manual, LQ1600K, P8000H
256389-001	Maintenance Manual, P8000

Questions