

FPF 35 Flat Pack Feeder Operator Manual

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Technical Publications

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438 FPF35 FLAT PACK FEEDER OPERATOR MANUAL

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1 RELATED MANUALS

The following manuals are available for the FPF 35, 438A, & 438B.

- 071-29270-400 438A & 438B PARTS MANUAL
- 071-30586-400 FPF 35 PARTS ADDENDUM MANUAL
- 071-28558-400 438A & 438B OPERATOR & SERVICE MANUAL
- 071-30588-400 FPF 35 SERVICE ADDENDUM MANUAL

2 INTRODUCTION TO THE MANUAL

This manual should be used in conjunction with the 438A / 438B OPERATOR & SERVICE MANUAL. It is intended for operator and service technicians and is organized to enhance operation of the FPF 35 Flat Pack Feeder.

3 MACHINE SPECIFICATIONS

Output:

Up to 35 sheet flat packs (20 lb bond)

Speed:

Up to 40,000 sheets per hour

Paper Supply:

Min. / Max. Paper Size: 7"W x 5.5L / 11.75"W x 9"L
Paper Weight: 20-24 lb. bond
Total Paper Capacity: 1,500 sheets

Power Source:

208/220 volts, single phase, 50/60 Hz
208/380 volts, three phase, 50/60 Hz

System Dimensions:

70"L x 26"W x 52"H

System Weight:

Approximately 750 lbs.

Read Systems:

Line Code Read System (OMR)
Industry standard 1-D barcodes: 3 of 9, 128, and 2 of 5 interleaved
2-D barcode – Datamatrix; OCR/2-D barcode

Other Features:

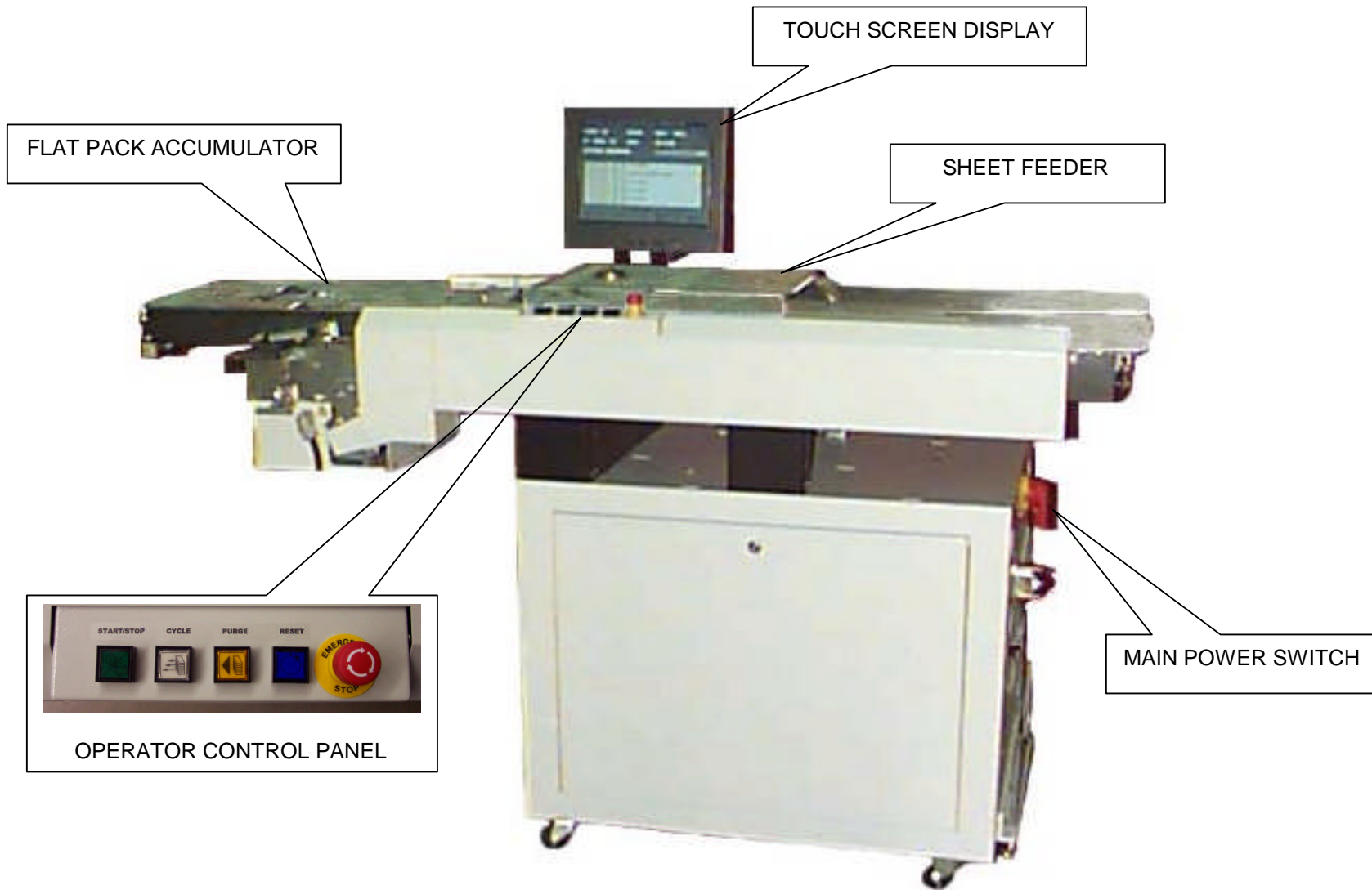
Continuous loading for non-stop operation
Runs on-line with intelligent flat sheet inserters
Advanced operator touch screen
Double detect monitor
Non-read, fixed count operation
Intelligent error display including mis-feed and jam detection
Counter modes: total count, batch count, re-settable count

The FPF 35 Smart Feeder/Collector is designed to intelligently accumulate flat packs for mail production. The FPF 35 reads and collates up to 35, 20 lb. flat sheets at throughputs of up to 40,000 sheets per hour, depending on set size and inserter cycle speed.

The system has an advanced touch screen for operator programmable line code and barcode job set-up and recall.

The FPF 35 interfaces with many intelligent and non-intelligent flat sheet inserters that have open feed stations. With intelligent inserters capable of subsets, it can deliver to the inserter track as many sheets as the inserter can handle. With non-intelligent inserters, the FPF 35 can make them intelligent with station selection and other typical intelligent inserter functions.

4 INTRODUCTION TO THE MACHINE



3a Flat Pack Accumulator Section

The accumulator is fed paper from the singulator, assembling groups of one to seven documents. When the document package is complete, it is fed to the folder.

Stacking Ramps

Stacking Ramps are the plastic wedges which position successive pages of a document package in order.

Stacking Rollers

These are used to stop the paper and hold it in position. When released, the Stacking Rollers drive the collected pages out of the accumulator.

Dump Brake

This prohibits the rollers from releasing paper from the accumulator.

Dump Clutch

This activates the stacking rollers, releasing the accumulated pages.

Accumulator Sensor

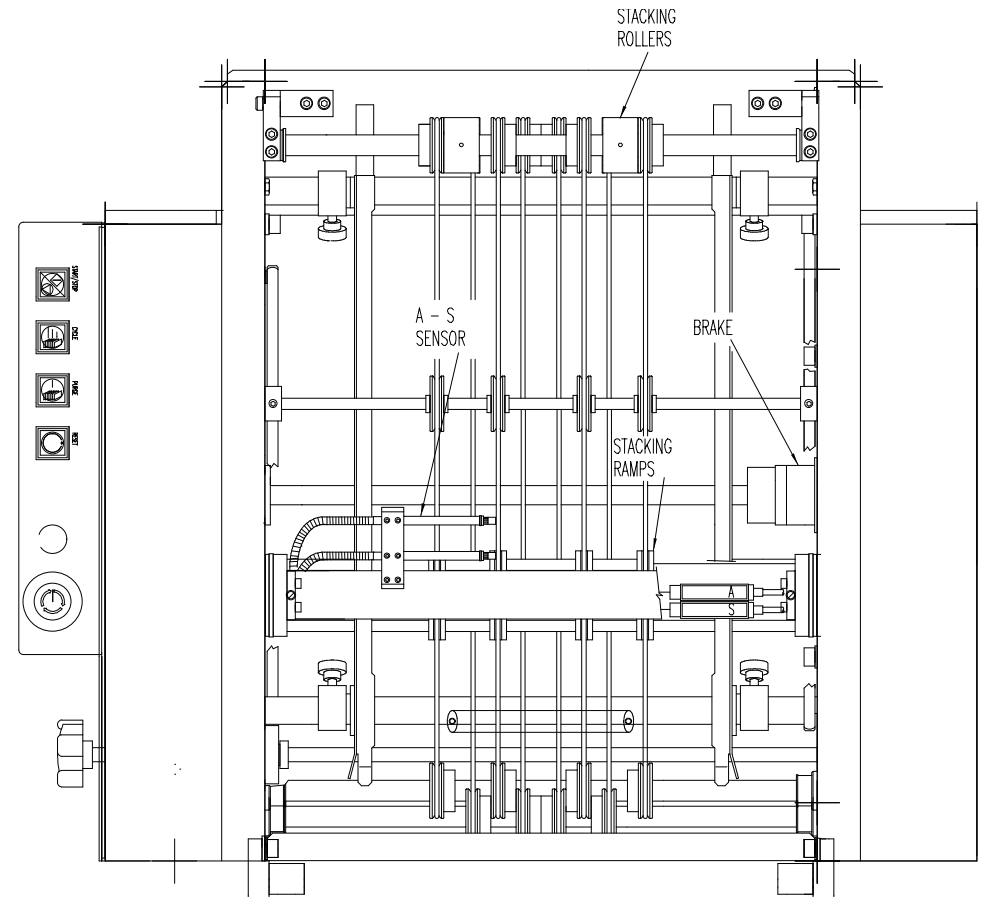
The Accumulator Sensor indicates presence or absence of a package in the accumulator. It also monitors package discharge when the dump clutch has been engaged.

Stack Sensor

Located at the edge of the ramps, the stack sensor indicates the document has cleared the stacking ramps.

Sensor Modules

The Sensor Module for the Accumulator and Stack Sensors are accessible by removing the right side accumulator cover.



Accumulator Section Figure

3b Emergency Stop Interlocks

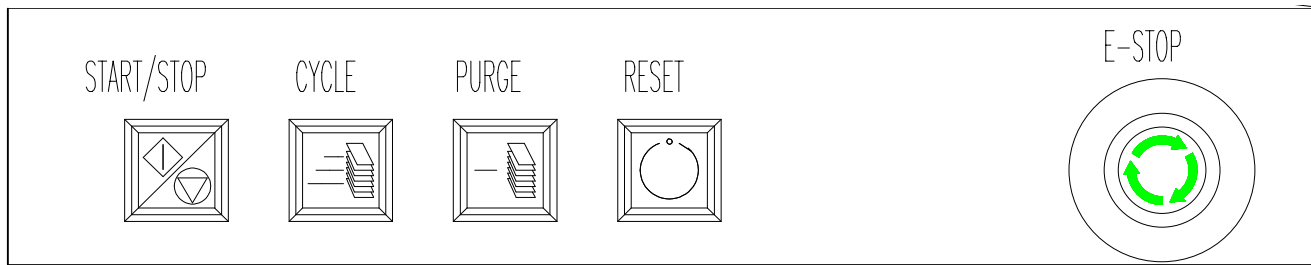
The main E-stop located on the operator panel will interrupt power to the accumulator and feeder when pressed down. This switch must be twisted to bring it back to its original upper position.

An extra contact is provided on this E-stop switch which is routed to pins 30 and 33 of the Inserter Connector located on the adaptor plate on the end of the cabinet. This will affect an E-stop to an external device when these contacts are wired to the E-stop circuit on that external device (e.g. Pinnacle). A connection to the FPF35 interlock string has been provided on pins 28 and 29 of the same Inserter Connector which allows an external device (e.g. Pinnacle) to E-stop the FPF35. For this E-stop string to be functional a blue jumper across pins 24 and 25 of Module #7 on the I/O Board must be removed. If this E-stop string is not used this jumper must be in place.

Pin 11 of this connector also provides an "Interlock Sense" signal to an external device.

There are five (5) safety interlock switches located on the 438A folder and transfer conveyor that will interrupt power to the conveyors and folder whenever a cover is opened. There are additional interlocks on the Bell & Howell TOS system, refer to the B&H manual for their locations. The five interlocks on the 438A are located:

Section 6 KEYBOARD OPERATION



START / STOP

Press to start all motors and enter ready mode
Press while in ready mode to shut down the FPF35

CYCLE

Press quickly to feed one sheet
Repeat until **EOG** on display is "1", **DUMP**
Press and hold **CYCLE** to start continuous feeding

PURGE

Press after manually filling the accumulator to discharge package into the folder

RESET

Press after interlock is broken or E-stop condition

E – STOP

Press to shut down all motors on the FPF35 in emergencies
E-Stop must be twisted to bring back to original position
Lifting any cover will also shut down all motors on the FPF35

Section 5 RUN SCREEN

This screen is displayed continuously for informational purposes until “Test” or “Setup” is selected.

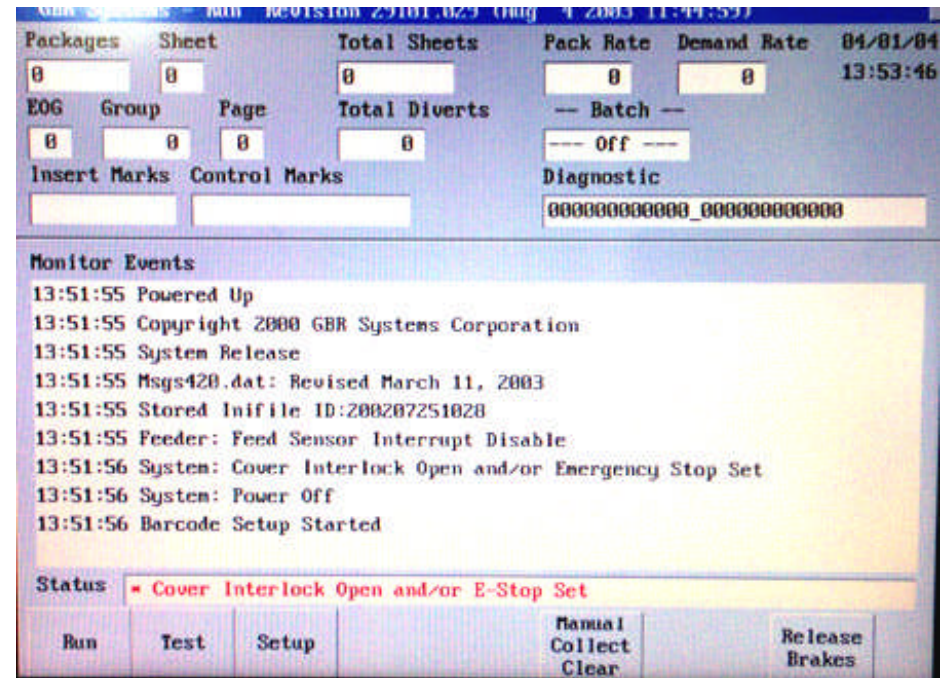
-See Section A7 for “Setup” Screens

-See Section D “Problem Analysis” for “Test” screens.

- **Run** -
- **Test** – Press to enter diagnostic screens
- **Setup** – Press to enter setup screens (for more information, refer to Section A7).
- **Release Brakes** – Releases/Applies Accumulator and Feed Brakes to allow jam clearing.

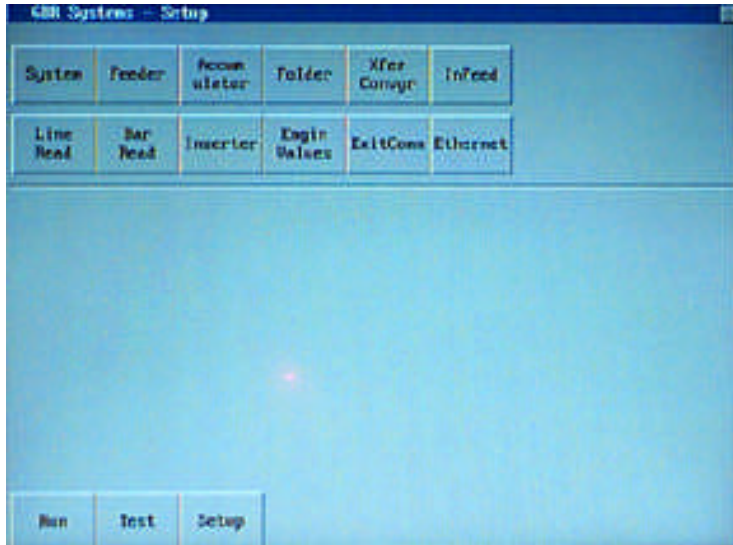
Information Displayed:

- **Revision** (Software) and **Build Date** – top line
- **Packages** – Total package counter. Reset in **System Setup**. Also resets during bootup.
- **Sheet** – Displays the # of sheets in the accumulator.
- **Total Sheets** - resets on machine power down
- **Package Rate** – Used to monitor throughput of the FPF35. Calculated at every pack dumped from accumulator (not averaged).
- **Demand Rate**– Displays the package demand rate from the inserter. Calculated at every demand signal transition (not averaged).
- **EOG** – Displays end of group (ready for dump).
- **Group** - Displays group #
- **Page** - Displays page #
- **Total Diverts** -
- **Batch** - displays “Batch Sheet” or “Batch Package” count, resets on sequential stop
- **Insert Marks** - Displays insert station selections
- **Control Marks** - Displays other control marks (i.e. ink mark)
- **Diagnostic** -
- **Monitor Events** – Displays event history, however, entire list is lost when power is turned off.



Section 7 **SETUP SCREENS**

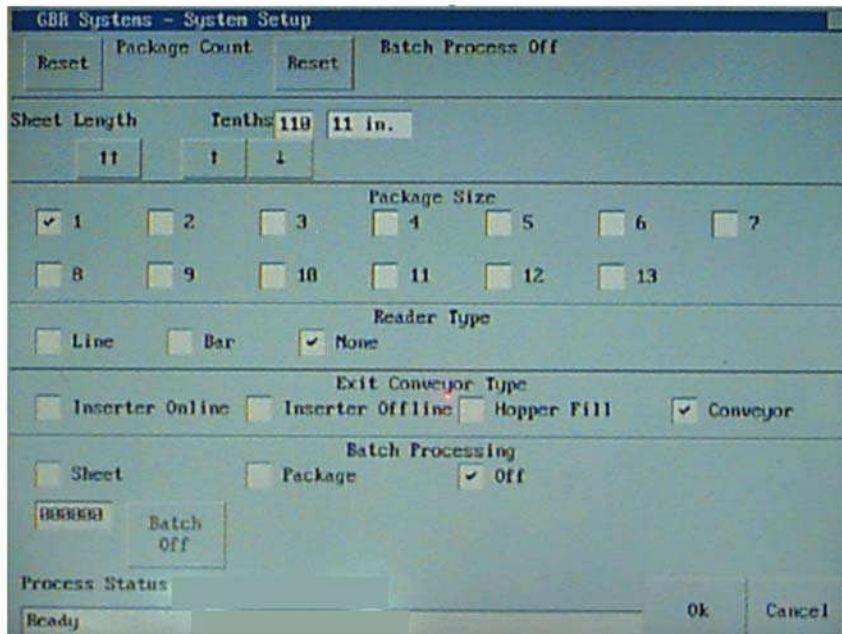
Press **Setup** while in the **Run** screen.



This screen provides access to all FPF35 setup screens.
Press **Run** to return to the "Run" screen.

Note: In this manual normal factory settings are in bold font.

Section 7a System Setup



Package Count “Reset”

Resets total package count (“Packages”) found in Run screen. This value will also reset automatically on power down of machine.

Batch Process “Reset” (On/Off status is also displayed)

Resets the “Total Sheets” or “Total Packs” (depending on which option was selected) found in the Run screen. This value will also reset automatically after the sequential stop determined by the batch size entered. A sequential occurs when the last pack is accumulated, the machine stops feeding, purges the accumulator and transfer conveyor to the inserter, then powers down.

Sheet Length

- Double Arrow Up” button increments to standard sheet sizes
- 7”, 8.5”, **11”**, 14”, A4, and A5
- “Single Arrow” buttons adjust sheet length in tenths of an inch

Package Size

- Max Pages in Accumulator. 1 to 13
- For Read, 1 greater than max expected (5 for the LineCode test set). Or number of fixed pages with no read.

Reader Type.

- Line, Bar, None/Off. See Package Size in “System Setup” screen.

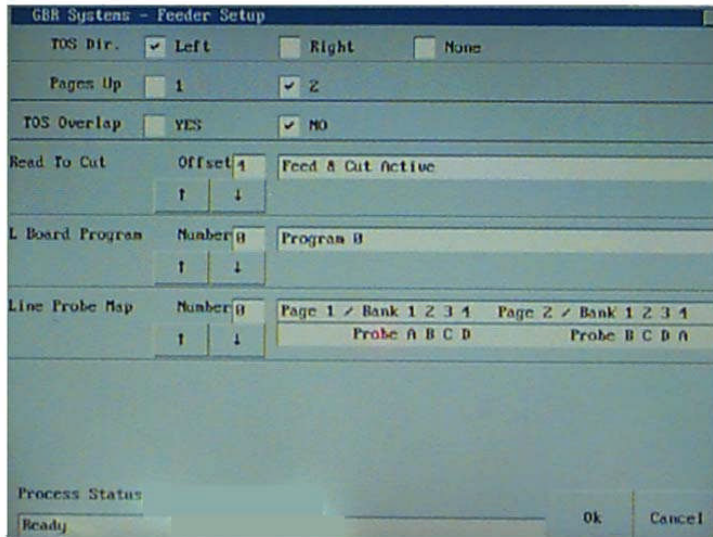
Exit Conveyor Type

- **Inserter Online.** By demand. See Inserter Setup 1 for Open or Gripper setup.
- **Inserter Offline.** Selecting this allows the inserter to run independent of the FPF35 without physically detaching.
- **Hopper Fill.** Select “HOPPER FILL” when the inserter will be taking the folded documents from a hopper. With or without demand. See Eng. Value 20. With no Inserter.
- **Conveyor.** with or without demand. See Eng. Value 20. With no Transfer Conveyor (Xcvy). Exit at Folder with Folder Exit Sensor.

Batch Processing

- **Sheet**
Select job size by entering the number of sheets to run. When selected the “Batch Off” button changes to “Set Sheets”. When “Sheet” is selected and a batch size entered, the machine will complete the package containing the last sheet.
- **Package**
Select job size by entering the number of packages to run. When selected the “Batch Off” button changes to “Set Packs”
- **Off**
Disables Batch Processing
- **“Batch Off” Button**
Changes to “Set Packs” or “Set Sheets” depending on the option selected. Press to enter batch value, a numeric keyboard is displayed, then press “=” to set. Batch value is displayed to the left of the button. This button is not available when Batch Processing “Off” is selected.

Section 7b Feeder Setup



TOS Dir

- Select the direction of your TOS unit. If you are standing upstream watching the documents move away from you, if the documents turnover to the left, choose “Left”. If they flow to the right, choose “Right”. “None” is currently unavailable.

Pages Up

- Select “1” if your document is not being slit.
- Select “2” if you are slitting the document in half.

TOS Overlap

- Select “Yes” to improve the output performance of your system.
- Select “No” if there are performance issues with “Yes” selected.

Read To Cut

- Enter the number of documents physically located between the reader and the cutting point. This will vary depending on the length of the document.

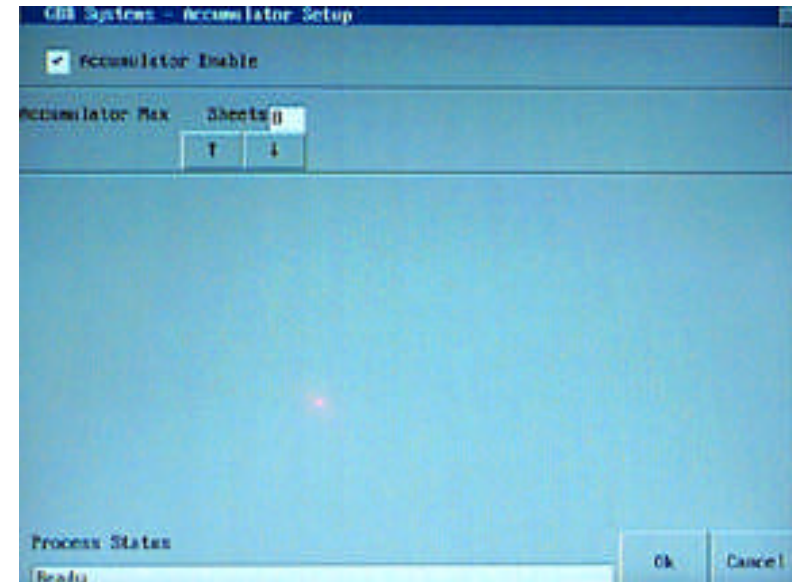
L Board Program

- Refer to the Bell & Howell manual for selections.

Line Probe Map

- Each reader on the 438C/438D is assigned a “Probe” letter by default (A, B, C, or D) Each “Probe” can be mapped to a “Bank” number in this screen. Bank numbers are then configured in the Line Read Setup screens.

Section 7c Accumulator



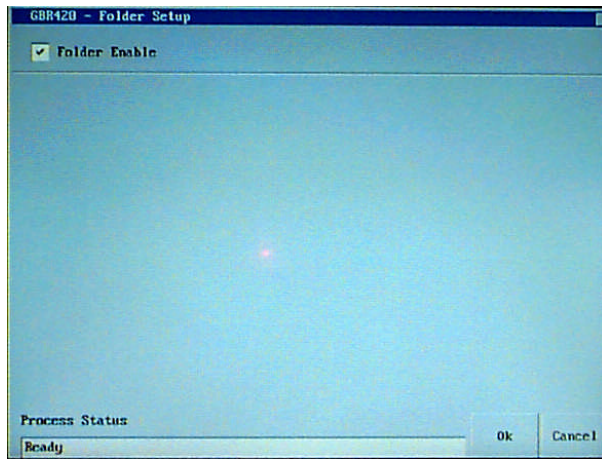
Accumulator Enable

- Select “Accumulator Enable”

Accumulator Max

- Select up to 12 sheets maximum, the FPF35 will shut down on the 13th sheet fed into the accumulator. This function prevents damage to the folder.
- 13 may be selected when it is not desirable to have a package split into subsets. The FPF35 will still shutdown on the 13th sheet. The operator must clear the accumulator and manually process the package.

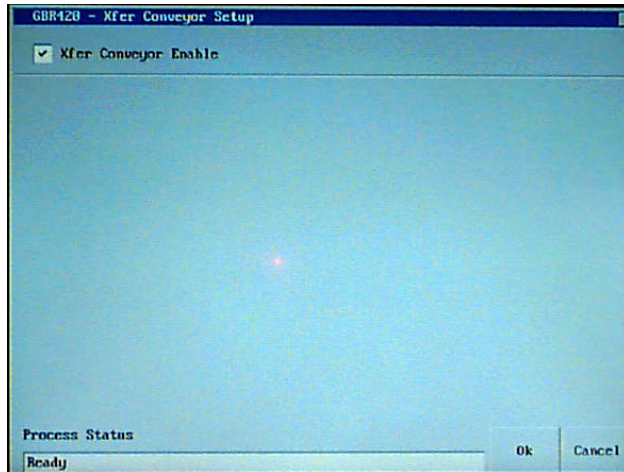
Section 7d Folder



Folder Enable

- Leave selected (not functional at this time).

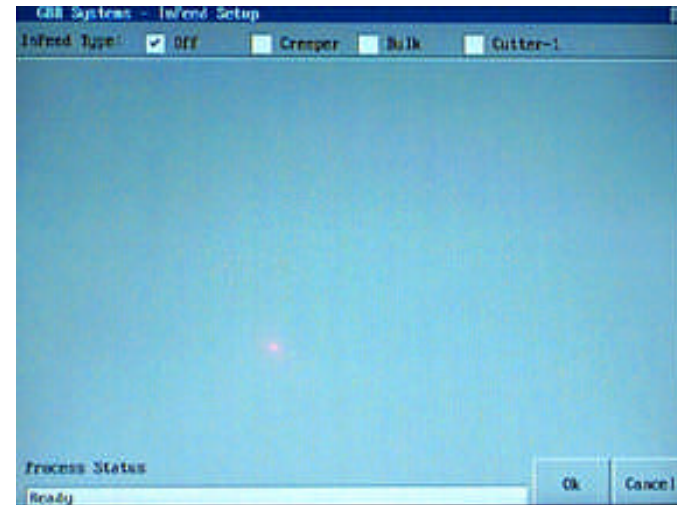
Section 7e Xfer Cvyr (Transfer Conveyor)



Xfer Conveyor Enable

- Leave selected (not functional at this time).

Section 7f Infeed



Select the type of infeed:

Off

Creper

- Select when using the standard 2000 sheet creper conveyor.

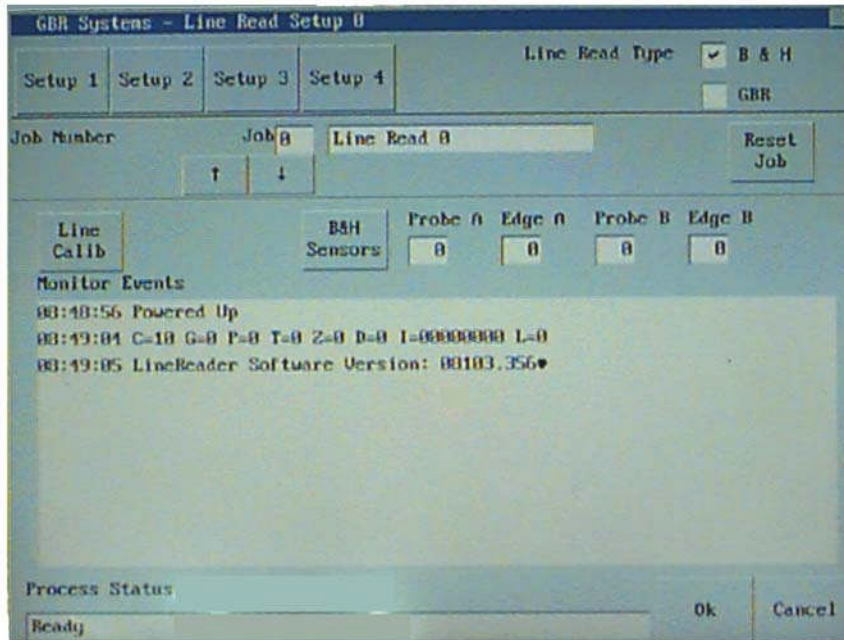
Bulk

- 470 type bulk loader with on/off control by software monitoring the paper demand switch.

Cutter - 1

- Select "Cutter - 1" for the FPF35 system.

Section 7g Line Read Setup 0



Note: Refer to Section A.9 for an explanation of Line Code Read.

- Setup 1** – Refer to Section A.9
- Setup 2** – Refer to Section A.9
- Setup 3** – Refer to Section A.9
- Setup 4** – Refer to Section A.9

Select **Line Read Type:**
B&H Read

Job Number

System will save all the parameters for up to 10 line code jobs. To program select a job number, set all settings for the job in Line Read Setup 1, 2, and 3 screens. Pressing the OK button in each setup screen saves those parameters to the job number selected.

Reset Job

Press this button to reset the job parameters for the job selected.

Line Calibration

This function will calibrate the line code reader for proper location of marks for interpretation of code. Before pressing “Line Calib” make sure Reader Type “Line” in System Setup screen is selected. “Read” must be selected in Feeder Setup and all sensors must be properly adjusted. All Line Read Setup screens must be setup. Select Calibration “On” in Line Read Setup 2 before starting and “Off” when finished.

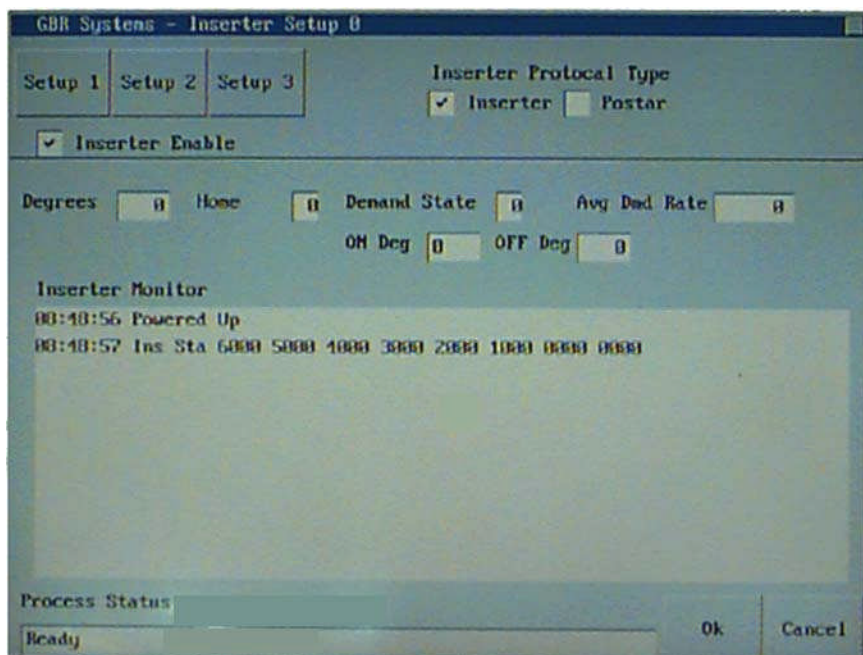
B+H Sensors

Enables viewing the action of the sensor signals for diagnostic purposes.

Section 7h Bar Read Setup

Refer to Section A.9d for setup information.

Section 7i Inserter



- **Inserter Enable** - Select when connected to an Inserter.

Inserter Protocol Type

Select either "Inserter", or "Postar"

The following I/O points have dual usage depending on Protocol selected and interface PCB used (002D-08138 or 002D-07599).

I/O Rack #1 (RIGHT)

INSERTER

POSTAR

(U.S. Application)

(Typical European Application)

- | | |
|----------------------------------|---------------------|
| 1-04 = Separation Sol #7 ----- | Postar Data Bit #1 |
| 1-05 = Separation Sol #1 ----- | Postar Data Bit #2 |
| 1-06 = Separation Sol #8 ----- | Postar Data Bit #3 |
| 1-07 = Shingle Conv Motor ----- | Postar Kicker |
| 1-08 = Separation Sol #2 ----- | Postar Data Bit #4 |
| 1-09 = Separation Sol #3 ----- | Postar Data Bit #5 |
| 1-10 = Separation Sol #4 ----- | Postar Data Bit #6 |
| 1-11 = Separation Sol #5 ----- | Postar Data Bit #7 |
| 1-12 = Separation Sol #6 ----- | Postar Data Bit #8 |
| 1-13 = Separation Sol Env ----- | Postar Data Bit #9 |
| 1-14 = Ink Marker Sol ----- | Postar Data Bit #10 |
| 1-15 = Env Flap Sns Dis ----- | Postar Data Bit #11 |
| 1-16 = Emergency Stop ----- | Postar Data Bit #12 |
| 1-17 = Ins Station 1 Error ----- | Postar Error Bit |
| 1-19 = Postal Meter Divert ----- | Postar Strobe Bit |
| 1-22 = Cutter Jam Sensor ----- | Postar Kick Sensor |

- **Degrees** – Encoder Updated as Inserter runs.
- **Home** – Encoder Updated as Inserter runs.
- **Demand State**
Operates in Demand Type "Switch" or "Degree" (see Inserter Setup 1), 3=ON, 0=OFF
- **Average Demand Rate**
Diagnostic - averages Demand Rate over three cycles
- **ON Degrees**
Degrees where demand goes on by either "Switch" or "Degree" demand
- **OFF Degrees**
Degrees where demand goes off by either "Switch" or "Degree" demand
- **Inserter Monitor Event List**

Inserters Setup 1

Rate x1000	0	2	4	6	8	10	12
ON Deg	1	350	330	310	290	270	250
Window	150	130	120	110	100	100	80

Ins Stations

- 4, 6, 4+4 Choose Inserter configuration.

Open Stations

- Select "0" for GRIPPER, "1" - "9" for Open feed.
- Normally set to "GRIPPER" (Inserter takes the folded document from the 438A Folder)
- Select "OPEN FEED" when the FPF35 will be placing the folded documents directly on the inserter track. When using open feed, selected number represents the number of stations prior to the first insert station the package was placed.

Encoder Type

- 100 Tick or 36 Tick

Demand Type

- Switch
Select when demand signal is provided by a magnetic switch
- Degree
Select when demand signal is provided by an encoder

Logic Type

- 775 – control of 775 Inserter functions, station Select, Envelope Disable, Envelope Flap Detect Disable, InkMark, Divert, Postal Meters.
- AC/DC – control of non-775 Inserter functions, station Select, Envelope Disable, Envelope Flap Detect Disable, InkMark, Divert, Postal Meters.

Bad Pack Stop Enable

This box is defaulted "on" or "checked". The machine will stop on a bad pack and energize the bad pack indicator light on the inserter. If unchecked or "off", the machine will not stop on a bad pack.

Station Setup

Note: Insert Station positions are referenced from the station at which the documents are inserted into the envelope ("Insert Sta: 0"). Insert Station 1 would be the station downstream from Insert Station 0. Insert Station -1 is the Insert Station upstream from Insert Sta 0.

When set to "0" the station is always off.

When set to "9" the station is always on.

If a station is down the next station in line can be programmed to take its place.

- Station Setup 1-4
- Station Setup 5-8

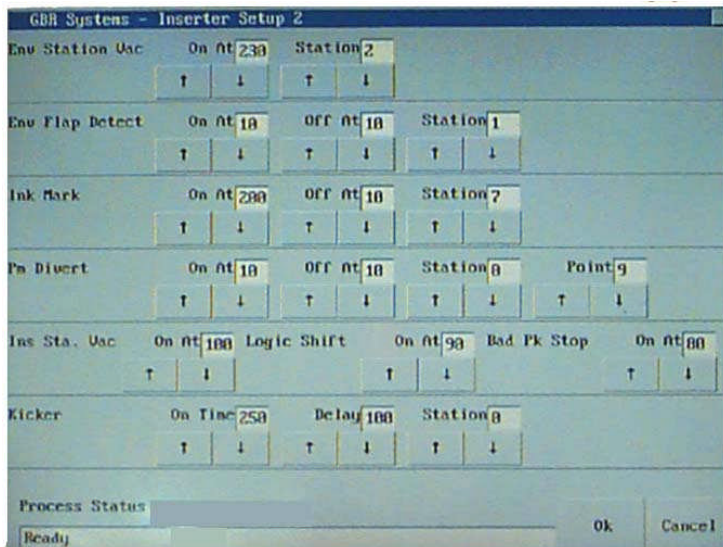
Demand Degree

This is similar to setting dwell time on an engine. As the speed of the machine is increased, home may be programmed at a position prior to 0 degrees allowing for lag time in components at higher speeds.

Degrees may be set for 0 thru 12,000 cycles per hour in 2,000 increments.

Note: Inserter degrees are reset to zero at the occurrence of a home pulse for either inserter encoder.

Insertor Setup 2



Envelope Station Vacuum is normally enabled at "230". This is the position of the encoder (in degrees) at which vacuum is applied to the envelope hopper. Insert Sta -: is normally set at -2.

Envelope Flap Detect is normally set On at: 010, Off at: 350, and Insert Sta -:1(this is the location of the flap detect).

Ink Mark is an optional device that places an ink mark in varying locations to sort zip codes visually. "OFF" is the number of chain movements AFTER envelope insertion. Ink Marking is normally located at Station 7.

Im Divert - select when using divert function.

Insert Station Vacuum is normally enabled at "100". This is the position of the encoder (in degrees) at which vacuum is applied to the insert station.

Logical Shift is normally set to "On At:: 90". This is used to carry the data with the physical document.

Bad Package Stop is normally set to "On At:: 80".

Kicker is normally set to "On" Time: period of time in milliseconds that the Kicker will be ON or energized. "Station" must be set to greater than "0".

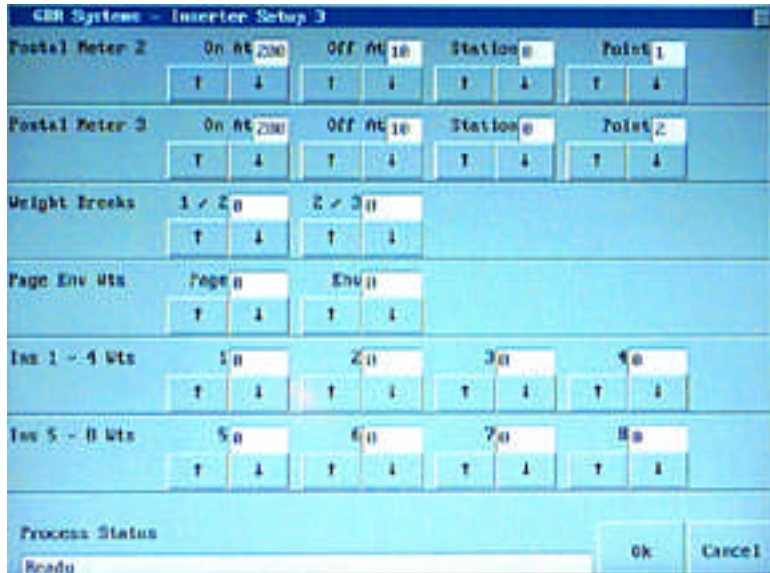
On Time (0 to 990).

Delay: period of time in milliseconds to delay the Kickers ON time from occurring. Ranged (0 to 990).

Station: location on the deck of the insertor the Kicker will operate from when if selected. Range (0 to 25). "0" disables the kicker routine. Station is referenced from the envelope insertion station in "Insertor" and from the first station in "Postar" outside of the transfer conveyor.

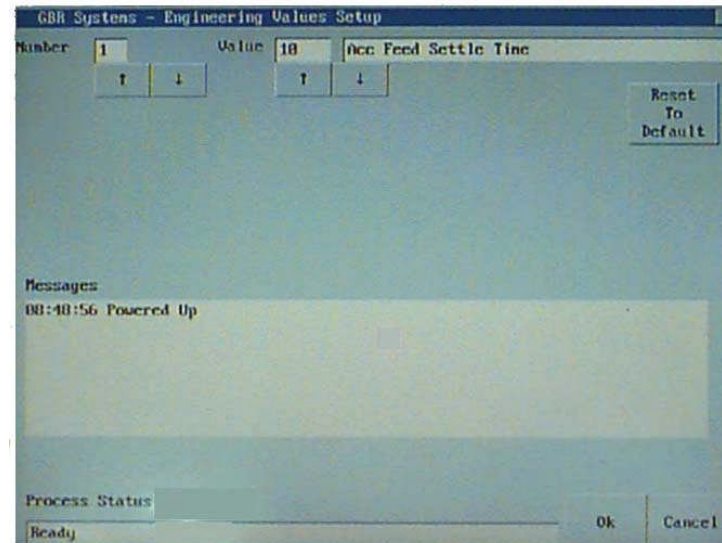
The Kicker routine is initiated by the extraction of an Ink Mark from read data.

PM Divert, Postal Meter 2, and Postal Meter 3



NOT USED IN B+H APPLICATIONS

Section 7j Engineering Values (Password Protected)



Number

Refer to Section A.8

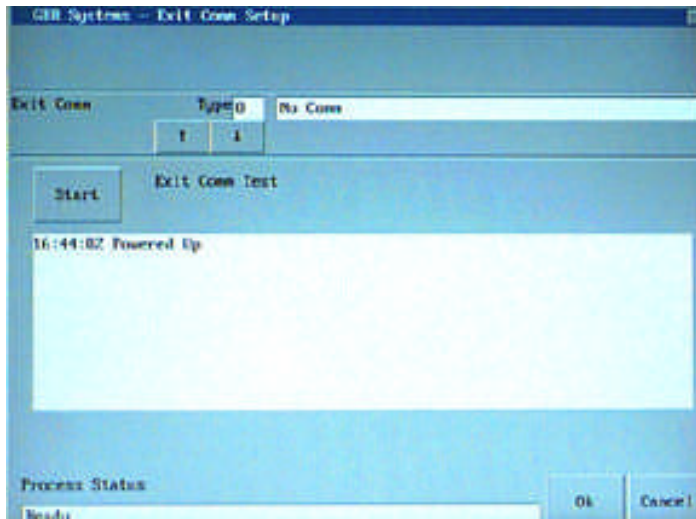
Value

For settings refer to Section A.8 for the Engineering Values List.

Reset to Default

Press this button to reset only the Engineering Values displayed back to its default values. This value is changed on the display only. Pressing the "OK" button saves the default value, "Cancel" exits and returns the Engineering Value to the prior value.

Section 7k ExitComm



Type

- 0 No Comm
- 1 RR Donnelly 1
- 2 RR Donnelly 2
- 3 Pinnacle 1
- 4 Pinnacle 2
- 5 General
- 6 Tampa 1
- 7 Zaandam 1
- 8 Friedberg 1

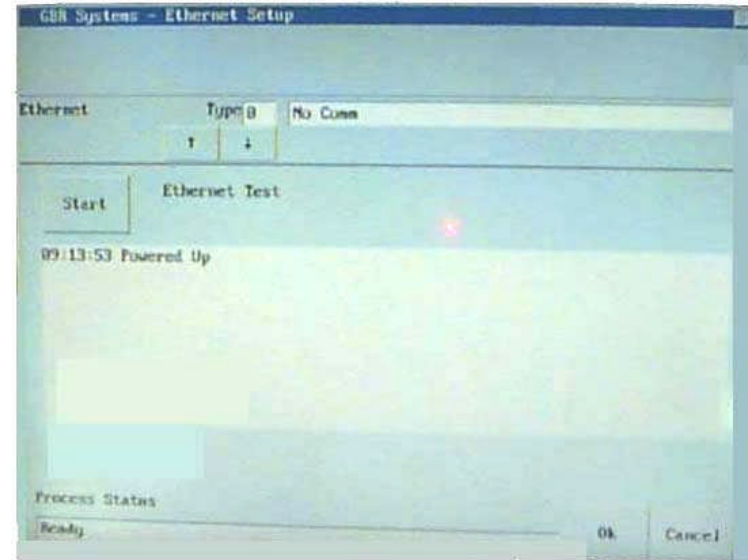
Start Button

– Xmits test data in type selected. Displays response terminated by a CR, LF. Press again to stop.

Event List

Section 7l Ethernet

Not available at this time.



Section 8 ENGINEERING VALUES

These values are to be used as a starting point. These values may vary, depending on type and weight of paper being processed, environmental conditions, and system tolerances, in order to obtain optimal performance. The password to enter this screen is factory set to "4444". This password may be changed at Engineering Value #27.

Number	(Eng. Software Version) (29101.005) (xxxxx.xxx)	
01	20→30	Acc Feed Settle Time <ul style="list-style-type: none">Time(msec) after trail edge of last page passes Accumulator stack sensor into Accumulator until Accumulator clutch is fired.
02	20	Acc Dump Done Time <ul style="list-style-type: none">Advance Feed ON: Time(msec) from "Accumulator is going to dump" until next feed is started. A short value advance feeds, before the pack moves from the Accumulator. A longer time allows pack movement detected at the Accumulator presence sensor to start the next pack feed. Higher is safer, lower is faster, but assumes pack leaves Accumulator.Advance Feed OFF: Time(msec) from pack movement at the detected at the Accumulator presence sensor to start the next pack feed.
03	80	Bar Read Time <ul style="list-style-type: none">Time(msec) waiting for reader response.
04	250	Folder Exit Time <ul style="list-style-type: none">Time(msec) allowed for pack to reach the folder exit sensor.
05	150	Line Read Time <ul style="list-style-type: none">Time(msec) waiting for reader response.
06	10	Xcvy Dump To Acc Dump Time <ul style="list-style-type: none">Time(msec) from "Xcvy is going to move" until next Accum dump is started.
07	100	Xcvy Clutch On Time <ul style="list-style-type: none">Time(msec) Xcvy clutch is on adjusted for number of stations. Adjust up/down to place the last pack at the Xcvy exit.
08	300	Xcvy Into Station 1 Time
09	50	Xcvy Outof Station 1 Time
10	400	Folder Start To Conveyor Time <ul style="list-style-type: none">Should be greater than Eng Value 04, Folder Exit Time when Exit Type is Conveyor and not in test.
11	0	Test Console Switch <ul style="list-style-type: none">0 = turns off diagnostics only used in debug mode.
12	1	Language Select <ul style="list-style-type: none">1 = English.
13	8	Xcvy Package InOut Counter <ul style="list-style-type: none">Max Number of packages expected in Xcvy. 0 disables this check.

14	150	Acc Dump Clutch On Time	<ul style="list-style-type: none"> • Constant value Accumulator clutch is on adjusted for speed. Adjust up so pack fully exits. Adjust down if next pack is partially pulled under rollers.
15	5	TouchScreen X Correction	<ul style="list-style-type: none"> • Constant value for touch sensing. Adjust up to move sense right. Adjust down to move sense left.
16	-10	TouchScreen Y Correction	<ul style="list-style-type: none"> • Constant value for touch sensing. Adjust down to move sense up. Adjust up to move sense down.
17	20000	Paper Demand Time	<ul style="list-style-type: none"> • Time(msec) waiting for paper stack switch in feeder to be satisfied by infeed.
18	3	Max Xcvy Stations	<ul style="list-style-type: none"> • Max Number of package positions in Xcvy "2-6".
19	0	Test ExitComm Test List Switch	<ul style="list-style-type: none"> • 0 = No extra ExitComm (Comm3) list messages. • 1 = Extra ExitComm list messages, times in msec, Demand time, receive character (for Sure-Feed).
20	1	Exit Demand Switch	<ul style="list-style-type: none"> • Applies to HopperFill and Conveyor. • 0 = No Exit Demand required. • 1 = Exit Demand required(for Conveyor for Sure-Feed).
21	215	Exit Demand Time Out	<ul style="list-style-type: none"> • Default 60 = 60 seconds to shut down on no demand. Range 0 to 999 seconds.
22	3000	Xcvy Jam At Out Time	<ul style="list-style-type: none"> • Default 3000 = 3000 msec to pass pack through exit sensor. Range 0 to 9000 msec.
23	350	Xcvy Jam At In Time	<ul style="list-style-type: none"> • Default 500 = 500 msec to pass from folder to in sensor. Range 0 to 9000 msec.
24	200→300	Feed to Accum Time	<ul style="list-style-type: none"> • Default 170 = 170 msec for the lead edge of paper fed at the feed sensor to the lead edge entering the accumulator. Range 0 to 5000 msec.
25	0-1	Advance Feed Switch	<ul style="list-style-type: none"> •1=ON, allows the next pack to be started when the Accumulator is supposed to dump plus the Accumulator Dump Time. •0=OFF, starts the next pack after Accumulator Presence Sensor is cleared plus the Accumulator Dump Time. •When EV #25 is set to "1", EV's #1,2,23,24 should be adjusted as close to numbers on the right of "→" to obtain optimal performance. These values may vary depending on type and weight of paper being processed, environmental conditions, and system tolerances.
26	1	Comm Hardware Type	<ul style="list-style-type: none"> •0 = Ziatech, 1 = WinSystems.
27	4444	Eng Values Password	<ul style="list-style-type: none"> • 4444 = Default(9561 is backup).
28	1	Eng Values Enable Password	<ul style="list-style-type: none"> • 1 = Enable(Default), 0 = Disable. This enables or disables password to access Engineering Values.

29	3	<p>Max. Exit Demand Power On Cycles</p> <ul style="list-style-type: none"> • 3 = Default. Number of inserter demand cycles before 438 outputs a package.
30	2	<p>Bar Read Commport (Cycle Machine Power).</p> <ul style="list-style-type: none"> • 1 = Default. Commport on CPU-PCB. • 2 = Commport on Serial Expansion PCB.
31	700	<p>System ON/OFF Time (Min=500ms, Max=700ms).</p> <ul style="list-style-type: none"> • 700 = Default. Debounce time to acknowledge cycling of POWER ON button presses from OFF to ON, ON to OFF.
32	100	<p>Conveyor Table On Time</p> <ul style="list-style-type: none"> • 100 = Default. Time in milliseconds for conveyor table on time for each pack out of folder.
33	2	<p>Number of Double Detect Sample Counts.</p> <ul style="list-style-type: none"> • 2 = Default. Number of Double Detect Sample Counts per sheet fed. 20msec sample rate.
34	0	<p>Not Used</p>
35	130	<p>Feed Control Brake Delay Time.</p> <ul style="list-style-type: none"> • 130 = Default(msec). Allows the page trail to leave the singulator before the feed brake is applied. Delay calculation based on sheet length, speed, and this constant.
36	130	<p>Exit Comm Received Ack Time (Used with Exit Comm Setup "Type 6 Tampa 1" only.</p> <ul style="list-style-type: none"> • 250 = Default(msec). If set to = 0 there is no Exit Comm Rcvd Ack Timer check and no machine error.
37	0	<p>Exit Comm Xmit Retrys</p> <ul style="list-style-type: none"> • This setting applies to "ExitComm" Type #6 "Tampa 1" only. Allows 0 → 2 retrys of the same serial data if an acknowledge character "0" is not received within the time period specified in Engineering Value #36. After these retrys and time periods expire, the system will stop and display the error message: "Exit Comm: No Message Response (E20801)". Setting EV#36 to "0" disables this retry and timeout function.
38	2	<p>Bar Code Reader</p> <ul style="list-style-type: none"> • 1 = Accusort 30+, 2 = Microscan 911 • Engineering Value #38 will select the Start and Stop protocol for either an Accusort Model 30+ or a Microscan MS911. EV#38 default is "1", the range is 1 → 2, and increments by 1.
39	0	<p>Bad Pack, Retain Selects?</p> <ul style="list-style-type: none"> • 1 = Yes, 0 = No • This allows inspection of the package in the accumulator only. Should the read error be valid, the package should be removed from the accumulator. Should the read error be false, the package can be processed through the system normally.
40	1	<p>Electronics?</p> <ul style="list-style-type: none"> • 1 = New, 0 = Old • Select between the 438 (Old) and FPF35 (New) Electronics depending on you model (refer to the model number listed on the serial number plate on the feeder cabinet.

Section 9 LINE CODE READ SYSTEMS OPTION

Section 9a FPF35 Line Read Setup Screens

Line Read Setup 1

("Setup" > "Line Read" > "Setup 1")

DEMAND FEED

NORMAL - The machine will demand feed on the absence of an End Of Group mark. This means the only page in a set that has the mark is the last one.

REVERSE - The machine will demand feed on the presence of the End Of Group mark. This means the all pages in the set will have the mark except the last one.

YES/NO - Used where all pages have a mark. Each page will have an End of Group or a NOT End Of Group mark. The machine will demand feed on EOG, but all other documents in the set should have the NOT EOG mark.

FIRST PAGE - When this option is selected, the system looks for the end of group mark (demand feed) on the first page of a set to be fed into the accumulator. This option is intended for use with page sequencing configured as "down".

Press "Cancel" to void any changes made to this screen or "Ok" to set the changes and return to the "Line Read Setup 0" screen.

GROUP SEQUENCE

UP - Choose if the group is counted UPward. (1, 2, 3, 4). Sets must be in order.

DOWN - Choose if the group is counted DOWNward. (4, 3, 2, 1). Sets must be in order.

MATCHING - will match marks within a set. All marks in the set must be the same. Sets may be in random order.

SAME ID - select if all group numbers are the same.

NONE - No group sequence.

The purpose of the Group Set mark is to ensure pages from two different packages do not get processed in a single package. Group Set marks must be present when using GROUP SEQUENCING.

PAGE SEQUENCE

PAGE UP - Choose if the page is counted UP (1, 2, 3, 4).

PAGE DOWN - Choose if the page is counted DOWN (4, 3, 2, 1).

ROLL UP - Cycle counts up sequentially to a selectable value set in "Line Read Setup 3 (Group Seq and Page Seq - Min and Max)

ROLL DOWN - Cycle counts down sequentially from a selectable value set in "Line Read Setup 3 (Group Seq and Page Seq - Min and Max)

ITEM COUNT - Choose when the first sheet in a package indicates the total number of sheets in that package.

NONE- No page sequence.

There is a limit of three Page-Sequence marks. Their purpose is to give an individual identity to each page within the package. The maximum number of pages in a package is seven. Page-Sequence marks must be present when using PAGE SEQUENCING.

PARITY MARK

ODD PARITY – Counts the total number of marks read. If the total is an odd number, then the parity test is passed. If the total is an even number, then an "PARITY ERROR (E18019)" is generated and the machine stops. The Parity Mark is present to always make the total odd.

EVEN PARITY – Counts the total number of marks read. If the total is an even number, then the parity test is passed. If the total is an odd number, then an "PARITY ERROR (E18019)" is generated and the machine stops. The Parity Mark is present to always make the total even.

NONE – Default.

Ink Mark - Select when using Ink Mark feature.

Meter Divert - Select when using Meter Divert feature.

Subset Mark

The limit of sheets into the accumulator is seven. Subset is a special line in the code that is used to indicate whether a set is more than seven pages. When the package is more than seven pages the machine will use the subset line to break the total page count into the amount of packages necessary to complete the total count. This prevents possible damage to the

folder from packages greater than seven pages. The set and subset will go out in different envelopes.

Random Mark

(not functional at this time)

NO STOP MAX ERRORS

Ignores read errors -

Setting "No Stop Max Errors" to "0" allows the machine to function normally and stop on a read error. Setting to "1" enables the "No Stop" function which, when a read error is encountered on a pack being accumulated, that pack, the previous pack that had been accumulated and the folded pack sitting in the first station of the transfer conveyor, will all be set as bad packs. These packs are diverted at the end of the inserter.

This use of Divert has priority over "Divert by Mark" and "Divert by Weight".

To use this function, "Bad Pack Stop Enable" in "Inserter Setup 1" must be deselected.

Priority Levels for Pm Divert are:

1. "No Stop" if selected in Line Read and Line Read is selected in System or, if "No Stop" is selected in Bar Read and Bar Read is selected in System. If "None" is selected for read type then "No Stop" is disabled.
2. "Meter Divert" in Line Read no matter what read type is selected.
3. By "Weight" is default.

Press "OK"

Line Read Setup 2

("Setup" > "Line Read" > "Setup 2")

Lines / Inch

The code marks can be at 1/6, 1/8, or 1/10 inch spacing. This is 6, 8, or 10 lines per inch. There can be as many as 25 mark locations in a bank.

EXAMPLE

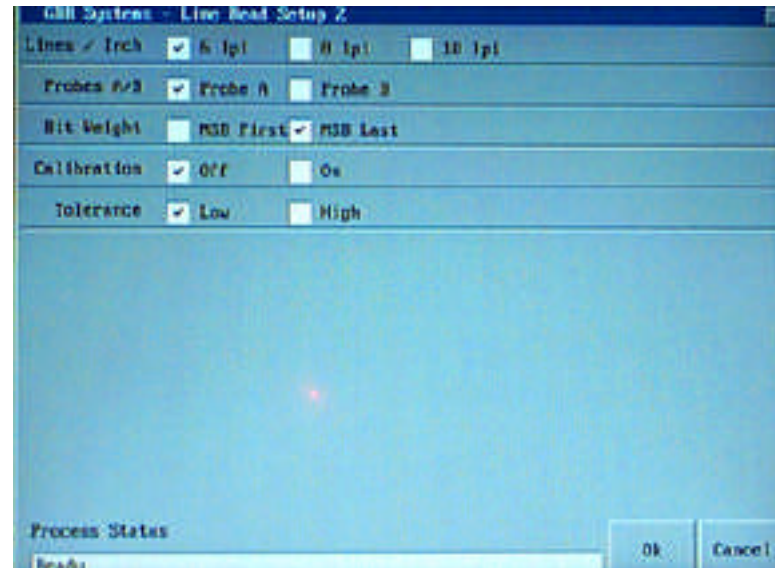
GRV
EOG
GS1
GS2
GS4
GS8
PS1
PS2
PS4
PAR

NOTE: Presence of a bar is binary 1, and the absence of a bar is binary 0.

The GRV mark must be located in the first position. The EOG, PAR, GS_n, and PS_n marks may be shifted in the bank of marks. The GS grouping and the PS grouping must be located as sets, however.

Probes A/B

Select the reading probe to be used.



Bit Weight

Page and Group marks can be arranged as Most Significant Bit First (MSB) or Most Significant Bit Last.

MSB First is the first bit encountered when reading.
MSB Last is the last bit encountered when reading

<u>Example MSB Last</u>	<u>Example MSB First</u>
GRV	GRV
EOG	EOG
GS1	GS8
GS2	GS4
GS4	GS2
GS8	GS1
PS1	PS4
PS2	PS2
PS4	PS1
PAR	PAR

Line Code Calibration

NOTE: Calibration is normally to be used by the service technician only. See Line Read Setup 0, "Line Calib" for B+H Line Read calibration.

The Line Code Recognition system can be calibrated to the particular machine in which it is installed. Calibrating the Line Code Recognition system to the particular machine eliminates parts tolerance problems and provides a method of recalibration once parts have become worn.

Calibration of the machine is provided for 1/10", 1/8" and 1/6" code spacing. There is a different calibration number stored in battery backed memory for each type of code spacing. This means a machine must be calibrated when the proper line code spacing is selected. Once a machine has been calibrated for 1/6", 1/8", or 1/10" spaced codes it will operate properly until the parts on the machine become severely worn.

The machine is calibrated by running a special Calibration sheet through the machine. The Calibration document has two precisely placed marks on the document. These marks provide the needed reference points to calibrate the machine. The same sheet is used for all three settings.

Description of A Calibration Document

A Calibration document has two precisely placed Line Code marks on a document. The first Line Code mark is placed one inch from the leading edge of the document. The second Line Code mark needs to be precisely placed 6 inches away from the first Line Code mark. No other marks can be in the area between the two marks. This will give the Line Code Recognition system the expected reference distance to calibrate to the machine. The Line Code Recognition card uses the two marks on the Calibration document to count the number of encoder signals that occur between the marks. If the number of encoder signals counted are within 15 % of the expected number of encoder signals, it is considered a valid calibration value.

Calibration Procedure

FOR 1.10", 1/8" AND 1/6" SPACED LINE CODES

- 1) Check all mechanical setups in the machine. Examples:
 - Friction feeder is free of mechanical binding
 - Singulator is adjusted properly
 - Documents are processed through machine without distorting the paper
 - All paper hold downs are set up properly
 - Paper rails are set to the proper width
- 2) Line Read Setup 4 and all preceding Setup 2 must be performed first.
- 3) Select "Calibration On".
- 4) Press "OK".
- 5) Now feed a single Calibration document on the machine.
- 6) If none of the following errors are declared when a calibration document is fed the Line Code Recognition system is calibrated for the current selected Line Code spacing.

Errors Indicating A Bad Calibration

- NO FEED
 - NO GATE MARK DETECTED
 - NO GATE MARK DETECTED IN 2ND BANK
 - CALIBRATION OUT OF RANGE
- 7) If a bad calibration is indicated RECALIBRATE must be selected before another Calibration document is fed. (Go back to step 4.)

Tolerance

Use LOW setting unless there is not a good contrast between the document background and the function marks. The LOW setting will tolerate some drift in the printer registration. Use of the HIGH setting does not allow drift in the printer registration. The mark location is very critical if the HIGH setting is used. Use it if the contrast between the document and the function marks is poor.

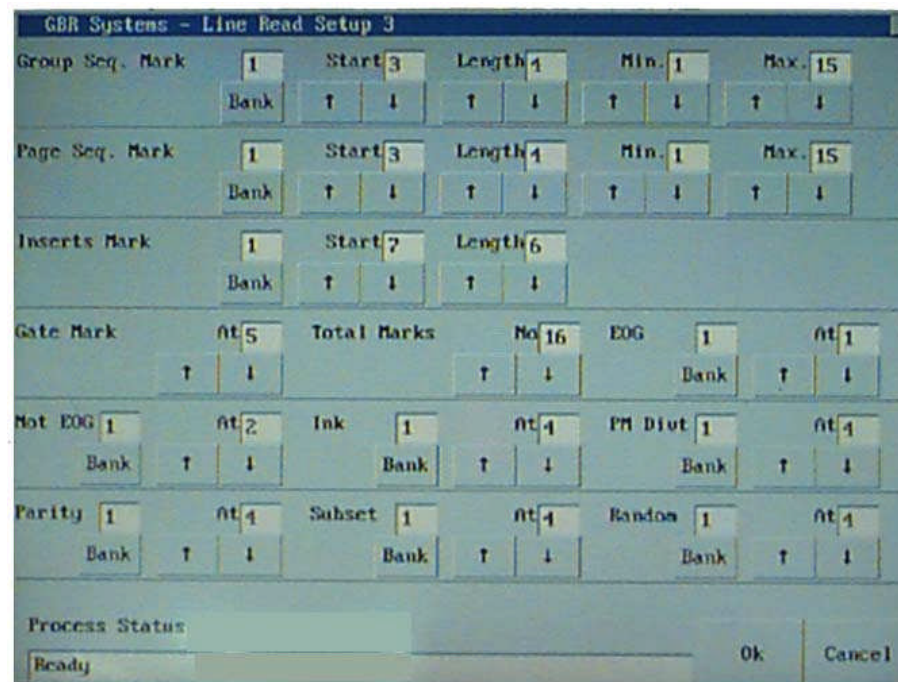
The Line Code Recognition system supports two print line windowing schemes when interpreting a Line Code. The two windowing schemes are High tolerance and Low tolerance reading. Having two windowing schemes permits service personnel to select the windowing scheme which is best suited for the customer's application.

When Low Tolerance read is selected the print line windowing scheme used does not detect paper slippage. This means the integrity of the Line Code information must be ensured by the data fields represented within the code.

A Low Tolerance interpretation of a line code synchronizes the print line windows on the Gate Mark. The Print lines following the Gate Mark are divided into absolute locations. When a mark is detected it is automatically associated with a Print line number. This means the Line Code Recognition system will not look for the standard tolerances applied between Line Code marks.

When High Tolerance read is selected the print line windowing scheme applies the standard tolerance specification between Line Code marks. This makes it likely for paper slippage in the machine to be detected during the interpretation of the Line Code. Detecting paper slippage improves the integrity of the Line Code Recognition process. It also introduces the possibility of more reading errors being created.

A High Tolerance interpretation of a line code synchronizes the print line windows on the Gate Mark. The Print lines following the Gate Mark are divided into zones of 1/2 print lines. Centered around the expected location of every Line Code Mark is a 1/2 print line zone where the Line Code mark is expected to be detected. Between two Line Code marks there is a 1/2 print line zone where a mark can not be detected without creating an error. This ensures that all Line Code marks are exactly where they are expected.
Press "OK"



Line Read Setup 3

("Setup" > "Line Read" > "Setup 3")

The reader must be told at what point in a code field it will see page, group, parity, and inserts. Depending on the code format this indicates when the field begins, how many lines it consists of, and the maximum value of the field.

This is crucial to proper reading, and the operator should have a master code template that shows the location and value of each line in a code field. If certain fields are omitted, enter an arbitrary number not related to the specific code in that field.

Example: Where the code is page field first, and there are three lines for the page field the correct set-up would be Begin: 01 Length: 03 Max value: 7

Bank

The 438C/438D must be told which Bank it will find this information. A Bank is associated with a Probe in the "Line Read Setup" screen (see section A.7g). Normally Bank 1 is associated with Probe A, Bank 2 with Probe B, and so on. This might not always be the case, check the settings.

Group Seq. Mark

Purpose - Identify each page as being a part of an individual package. The sequential incrementing of the number ensures the document's printed sequence is maintained.

Usage - It is interpreted as a binary number. This number must be constant for all the pages within a package. This number should sequentially increment from package to package (when sequentially counting sheets upward). This number sequentially counts from 0 to 15.

Page Seq. Mark

Purpose - Identify each individual page within a package. The sequential incrementing of the number ensures the documents are assembled in the proper order.

Usage - It is interpreted as a binary number. This number sequentially counts from one to as high as seven.

Inserts Mark

Location of marks for insert stations

Gate Mark

Location - First OMR mark within a bank (always present)

Purpose - Indicates the start of an OMR code

Usage - synchronizes the OMR system to interpret the remaining OMR marks in the code.

Total Marks

Total number of marks in the code.

EOG Mark

Purpose - Controls the size of dynamic packages by indicating the end of a group.

Usage - A solid bar is placed in this location on the page with the largest page ID number. All other pages within a group should have no mark in this area.

Not EOG

Ink Mark

Mark to drive an ink/zip mark mechanism downstream.

PM Divt

Mark to drive a divert mark mechanism downstream.

Parity Mark (not available at this time)

Purpose - Adds parity error checking to the code

Usage - This location is used to maintain an even number of solid marks within a code.

Note: The fields that are marked Optional can be eliminated by operator configuration of the machine. However, when a data field is eliminated package security and integrity suffers.

Subset

Random

Press "OK"

Line Read Setup 4

("Setup" > "Line Read" > "Setup 4")

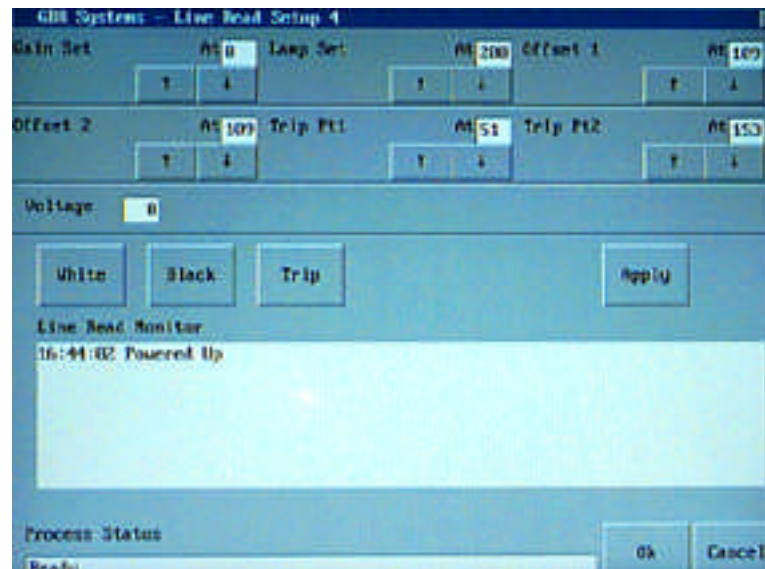
Note: This screen is used only for B+H Line Read, not used for GBR Line Read.

- 1) Turn on the FPF35, press the SETUP button then press the LINE READ button.
- 2) Select "GBR".
- 3) Press "OK".
- 4) Press "LINE READ" again.
- 5) Press "SETUP 4".
 - a) Take a piece of the stock that is going to be run through the machine and hand feed it until the light beam is on a white portion of the paper.
 - b) Press "WHITE". The system will indicate that when it is done.
- 6) Press "BLACK" and slowly move the paper until a black bar is under the light.
- 7) Press "BLACK" a second time when the voltage reaches "0" (the black bar is directly under the light)
- 8) Remove the paper from under the light and press "TRIP".
 - a) Event list will say finished when done.
 - TRIP POINT #1 value should be between 40 and 150
 - OFFSET #1 should be between 100 and 250.

If these values are not obtained, go to section A.8b and reset the probe.

- 9) Find the average of the recorded OFFSET #1 and #2 values.
- 10) Change OFFSET #1 and #2 value to this average value by pressing the + or - keys. (example: OFFSET 1 = 129, OFFSET 2 = 111, average = 120, set both OFFSET 1 and 2 = 120)
- 11) Change GAIN to 0.
- 12) Record these settings in the area to the right. In the future this procedure can be eliminated by entering these values directly.
- 13) Press "APPLY" to download these parameters to the read system and then press "OK".
- 14) The reader setup is complete. Line Read screens "SETUP 1, 2, and 3" must be completed before running paper.

NOTE: When switching between probes or after the FPF35 has been switched off, it may be necessary to repeat this setup procedure.



NOTE VALUES FOR FUTURE REFERENCE

(To find the values, go to "Setup" > "Line Read" > "Setup 4" and write down the values listed there)

GAIN: _____

OFFSET #1: _____

OFFSET #2: _____

TRIP POINT #1: _____

TRIP POINT #2: _____

Section 10 LASER BAR CODE READ OPTION

Section 10a Laser Safety



The radiation level from the laser does not constitute a health hazard. Exercise care to avoid any unnecessary, direct exposure to the eyes. Avoid staring at the light source, since prolonged exposure could result in eye damage. Avoid deliberate eye exposure to the beam. Inadvertent contact, however, is not a cause for alarm.

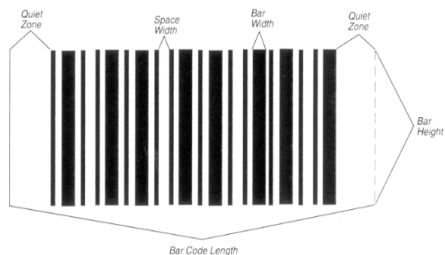
Any service should be performed so as not to violate compliance with the Code of Federal Regulations, Title 21, Part 1040, Section 10 (21 CFR 1040.10), as administered by the Center for Devices and Radiological Health, a service of the Food and Drug Administration under the Department of Health and Human Services. Do not attempt to defeat any safety provisions.

Section 10b Bar Code Basics

A bar code is a group of rectangular bars and spaces arranged in a preset pattern. The pattern is organized to represent elements of data referred to as characters. The standard industry codes can represent several alphanumeric characters.

There are many different types of bar codes. Each type uses its own symbology, which defines how the bars and spaces represent the letters and numbers.

The figure below shows each part of a bar code. The labels for each part remain the same even if the position, orientation, or type of bar code changes.



The GBR FPF35 with the Microscan MS-911 uses the 3 of 9 code or Code 39 - fixed or variable length. This was the first code developed that used both numbers and upper-case letters. It is the most recognized and widely used for non-retail applications. Each character is represented by a stand-alone group of 5 bars and 4 spaces. The basic code set includes 0-9, A-Z, * which is used for the start and stop characters, and six other symbols - . \$ / + and % for a total of 43 characters. Because each of the characters are discrete and self-checking, Code 39 provides a high level of data security. The Microscan MS-911 automatically checks all data for this symbology.

The bar code width must not be printed smaller than 0.010" (.025 mm). Recommended width is 0.015", code height is 3/8 inch. Minimum quiet zone start and end of .25 inches.

Bar coding, sizing, tolerance ratio tolerance per ANSI MH10.8-1983. Print quality must meet or exceed ANSI Grade B per ANSI X3.182, BAR CODE PRINT QUALITY GUIDELINE.

Section 10c Adjusting Your Microscan MS-911

Your scanner can be mounted in any direction depending on the scheme of your bar codes. **Ladder** orientation refers to a bar code whose bars look like a ladder when facing the bar code's direction of travel. **Picket Fence** appear as a picket fence when facing the direction of travel. Regardless of the direction of travel, the scan line must be perpendicular to the bars.

In some applications, codes are printed on glossy paper or covered with a shiny material such as cellophane. When this happens, it is possible that the code surface reflects so much laser light that it is very difficult for the scan head to decode the bar code.

To avoid reflections from the surface of glossy bar codes do not mount the scan head parallel with the object to be scanned. Mount the scan head at a five to ten degree angle so the laser beam reaches the bar code at a slight angle.

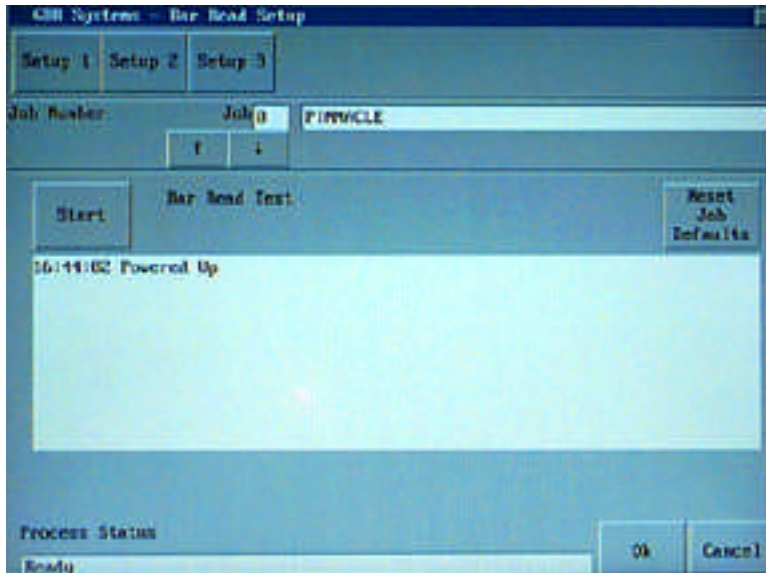
Section 10d Adjusting the Paper Guides

In order for your laser scanner to read the bar code there can be nothing blocking its path. The Paper Guides are custom adjustable for your specific code location. Place these guides to provide as much support evenly across the paper path as possible without interfering with the lasers path.

Section 10e Setting the 438FPF35 to Read Laser Bar Code

“Setup” > “Bar Read”

Modifications to the bar setups are retained as long as the bar job defaults are not restored or the internal non-volatile storage is not overwritten by a new ‘ini’ file or is lost.



Job

Select the job to run by pressing “↑” or “↓”.

Note: If your job is not listed, go the next section “Setup 1” to program it in. Refer to the Appendix in this manual for setup parameters for various jobs. If your job is not listed call the factory.

Start

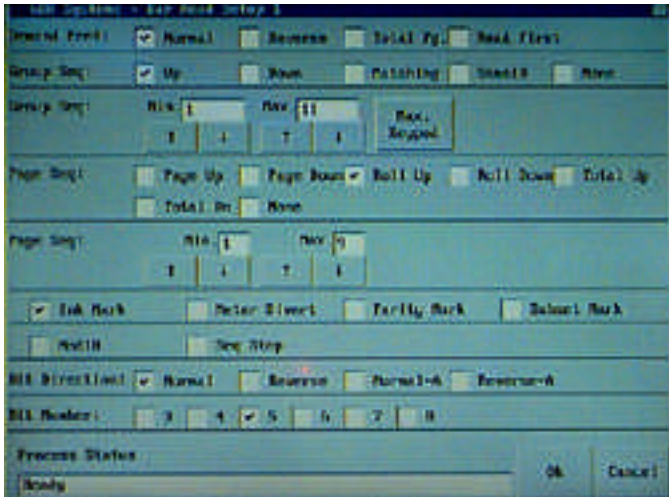
This will turn the laser on continuously to hand test the lasers positioning. The screen will read **BAR READ:** and an audible beep will sound when the laser reads the code. The results of the read will be shown on the screen.

Reset Job Defaults

Sets the bar job selected to its defaults, erasing any modifications that may have been done in the setups.

Press **OK** to set the job.

Bar Read Setup 1



Demand Feed

- **Normal**

Mark is on the last page fed. Last page is "1" all others in the pack are "0".

- **Reverse**

If checked, will handle an inverted Demand Feed sequence. Last page is "0", all others in the pack are "1".

- **Total Page**

Each sheet has a page number and the total number of pages for it's group. Select "Total Up" or "Total Down" in Page Sequence.

- **Read First**

The first sheet (Banner Page) of the document is read. The page count information is used to determine how many more sheets to feed and not read. After the last non-read sheet is fed, the next fed sheet will be scanned by the barcode reader to process the next document group.

Group Seq.

Purpose - Identify each page as being a part of an individual package. The sequential incrementing of the number ensures the document's printed sequence is maintained.

- Up – Match in set. Min to Max to Min
- Down – Match in set. Max to Min to Max
- Matching – Match in set. Must change each set.
- Same ID – Match in set. No change needed
- None
- Min (0 to 1)
- Max (0 to 99999)

"Max Keypad" may be used to set a "Max" value through a keypad instead of using the arrow scroll button.

Page Seq. Mark

Purpose - Identify each individual page within a package. The sequential incrementing of the number ensures the documents are assembled in the proper order.

- Page Up - Min to Max within sets.
- Page Down - Max to Min within sets.
- Roll Up – Min to Max to Min across sets
- Roll Down – Max to Min to Max across sets
- Total Up - (A-Z) Supports "Total Page" demand feed option.
- Total Down - (Z-A)
- None
- Min (0 to 1)
- Max (0 to 999)

Ink Mark

- Mark to drive an ink/zip mark mechanism downstream.

Meter Divert

- Mark to drive a divert mark mechanism downstream.

Parity Mark

(Not functional at this time.)

Purpose - Adds parity error checking to the code

Usage - This location is used to maintain an even number of solid marks within a code.

Note: The fields that are marked Optional can be eliminated by operator configuration of the machine. However, when a data field is eliminated package security and integrity suffers.

Subset Mark (NA)

Mod 10

An algorithm is used to check a sequence of characters that are used for secure documents, such as checks.

Seq Stop

When a package with this bit set is accumulated, the machine stops feeding, purges the accumulator and transfer conveyor to the inserter, then powers down.

Bit Direction

- Normal
Count bits 5 to 1, left to right, bit position 4 to 0, follow standard bit position of character.
- Reverse
Count bits 1 to 5, left to right, bit position 4 to 0.(B&H)
- Normal – A
For multiple character numeric values. For 5 numeric characters converted to a number, bit positions 16 to 1:
1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16384, 32768.
- Reverse – A
For multiple character numeric values. For 5 numeric characters converted to a number, bit positions 1 to 16:
1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16384, 32768.

Bit Number

Establishes the maximum number of bits in one character. This is determined by the type of code being used.

Select from 5 through 8:

5 3 of 9 Bar Code

6-8 not used at this time

Bar Read Setup 2

The software permits a total of 30 characters in Bar Read, however, physically that isn't always practical due to the length of the code. For instance, 3 of 9 code is physically larger than 128 code (not available on the FPF35 at this time). A code in excess of 15 characters becomes problematic with a 3 of 9 code but a 128 code can easily exceed 20 characters.

Define the position in the barcode string to extract the information for the following:

Group Seq Code

- Start (0 to 30). Start character.
- Length (0 to 5). Number of characters.
- Start_Bit (0 to 30). Starting bit position within character.
- Length_Bit (0 to 30). Number of bits.

Page Seq Code

- Start (0 to 30). Start character.
- Length (0 to 3). Number of characters.
- Start_Bit (0 to 30). Starting bit position within character.
- Length_Bit (0 to 30). Number of bits.

Inserts Code

- Start (0 to 30). Start character.
- Length (0 to 20). Number of characters.
- Start_Bit (0 to 30). Starting bit position within character.
- Length_Bit (0 to 30). Number of bits.

Demand Feed Code

- Start (0 to 30). Start character.
- Length (0 to 20). Number of characters. Used with Normal-A or Reverse-A, multiple character numeric values,
- Start_Bit (0 to 20). Starting bit position within character.

Ink Mark Code

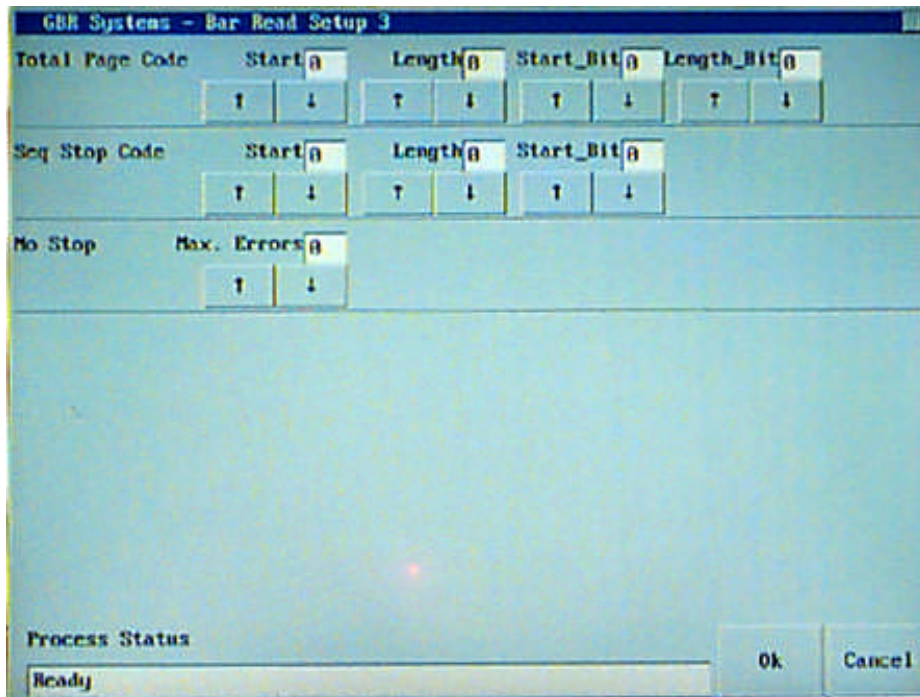
- Start (0 to 30). Start character.
- Length (0 to 20). Number of characters. Used with Normal-A or Reverse-A, multiple character numeric values,
- Start_Bit (0 to 20). Starting bit position within character.

PmDiver Code

- Start (0 to 30). Start character.
- Length (0 to 20). Number of characters. Used with Normal-A or Reverse-A, multiple character numeric values,
- Start_Bit (0 to 20). Starting bit position within character.



Bar Read Setup 3



Total Page Code

- Start (0 to 30). Start character.
- Length (0 to 5). Number of characters.
- Start_Bit (0 to 30). Starting bit position within character.
- Length_Bit (0 to 30). Number of bits.

Sequence Stop Code

- Start (0 to 30). Start character.
- Length (0 to 20). Number of characters.
- Start_Bit (0 to 20). Starting bit position within character.

NO STOP MAX ERRORS

Setting "No Stop Max Errors" to "0" allows the machine to function normally and stop on a read error. Setting to "1" enables the "No Stop" function which, when a read error is detected, continues to process the job but the pack with the error is diverted at the end of the inserter. This use of Divert has priority over "Divert by Mark" and "Divert by Weight".

To use this function, "Bad Pack Stop Enable" in "Inserter Setup 1" must be deselected.

Priority Levels for Pm Divert are:

4. "No Stop" if selected in Line Read and Line Read is selected in System or, if "No Stop" is selected in Bar Read and Bar Read is selected in System. If "None" is selected for read type then "No Stop" is disabled.
5. "Meter Divert" in Line Read no matter what read type is selected.
6. By "Weight" is default.

Section 11 SOFTWARE UPDATES VIA EMAIL

The disk for this product is specifically bootable on the FPF35. This boot software is not normally visible and cannot be copied from one disk to another. The entire disk must be 'disk copied' or 'copy disked'.

The application software ('GBR420.exe') is visible and can be copied to and from an e-mail, another disk or from the hard disk of a computer.

PROCESS:

1. Attached to the New438/426/420 is a new revision 'GBR420.exe'. Save this and any other files to your hard disk in a unique folder (such as: \gbr\29101005\ where 29101 is the part number and 005 is the current engineering revision number).
 2. Make a disk copy of your current master. In Windows Explorer or My Computer, right click on the 3 ½" Floppy A: and Copy disk...your current master to a new 3 ½" disk.
 3. Copy the new e-mailed software revision executable, GBR420.exe to the new disk from step 2. Overwrite the previous revision. Copy any other files sent, such as the dictionary (msgs420.dat) to the appropriate place on the new disk (such as: \gbr\msgs420.dat). This is the new master for the new revision.
 4. Make a disk copy of this new master to another 3 ½" disk. Use this copy as the machine boot-disk.
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