

**MPS 40**

# Operators Manual

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© OPEX Corporation 1997  
305 Commerce Drive • Moorestown, NJ 08057-4235 USA  
Phone 856.727.1100 • Fax 856.727.1955

**P/N 3012900**

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Information

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## From the President of OPEX Corporation

*We're excited about the possibilities to better serve our customers  
with the MPS-40!*



Welcome to the future of Mail-Sorting! For years now OPEX has streamlined the sorting of mail. Our expertise led to industry changing technologies and provided methods of sorting large amounts of incoming mail efficiently and accurately. Now the next generation of mail sorting is here.

The MPS-40 is our latest advance. This new machine will continue to enable mail rooms to sort based on thickness, length, the presence or absence of a check, metals such as staples and paper clips, PostNet Barcodes and Custom Barcodes. Depending on the needs of the process, selected envelopes can even be milled open on the fly. In addition we have increased the speed to 40,000 per hour and added many new features. These features include OCR and MLOCR, all of the usual Outgoing Mail types of pre-sorts, the full range of Postnet barcode spraying and verification functions, and sort groups and bins with up to 256 different combinations.

All of these capabilities are modular in nature. You need purchase only those modules that your application requires. Some MPS-40's may be specifically set up to sort incoming mail, others may be prepared for outgoing mail or a combination of both.

Whatever the application the key to this fully automated process is the MPS-40 OPERATOR. We've gone to great lengths to design our equipment to be user friendly, and I believe you'll be pleased with the results we've achieved.

Thank-you for taking the time to familiarize yourself with the contents of this manual. We recognize that you the operator are important to the overall performance of the machine.

Sincerely,  
OPEX Corporation

A handwritten signature in cursive script that reads "Albert Stevens". The signature is written in dark ink and is positioned below the typed name.

President

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# Overview of the MPS 40

## Introduction

The MPS40 (Multi-Purpose Sorter) is just that - the most versatile sorter on the market. The MPS-40 is a workflow tool that aids you and your shop in achieving the utmost in productivity and accuracy. The MPS-40 is modular and customizable. It can be used as both an incoming and outgoing sorter. The major modules include:

- ☒ **Justifier Module** – Corrects skew, justifying envelopes misaligned due to damage or anomalies in feeding. This module can be configured with or without an OPEX image camera.
- ☒ **Incoming Module** – Provides thickness, length, MICR, and metal detection, as well as check orientation.
- ☒ **Selective Cutting Module** – Mills open selected sort groups, adjustable from no cut to 1/8 of an inch.
- ☒ **OPEX Image Module** – Allows for PostNet Barcode reads, mark detect, and OCR reads.
- ☒ **Habitech Image Module** – Allows for PostNet Barcode and multi-line OCR reads.
- ☒ **Delay Module** – Lengthens the paper path to allow enough time for proper decision making.
- ☒ **Additional Output Bins** – Allows for up to 256 sorts.
- ☒ **Overhead Mail Rack** – Provides a place to rest standard mail trays for easy clearing of the stacker bins.

## Incoming Mail

When used to sort incoming mail, the MPS40 facilitates improved prioritization of incoming mail. Even before the envelope is opened, the MPS40 can make determinations about the contents.

The MPS40 can determine:

- ☒ How many pieces of paper are in the envelope
- ☒ Length of the envelope
- ☒ Presence of a check in the envelope
- ☒ Orientation of the check

- 
- ☒ Presence of a credit card in the envelope
  - ☒ Presence of extraneous metal such as coins, paper clips or staples
  - ☒ Intended recipient if equipped with barcode read capability

The MPS40 then sends the mail based on these criteria to the proper pre-programmed output pockets. The MPS40 can sort the mail in any combination of the above criteria. The machine can selectively mill open any designated sort group. Once the work is sorted into the correct groupings, each type of work can be routed to the appropriate department for expedited handling.

## Outgoing Mail

When used to sort outgoing mail, the MPS40 provides for improved accuracy and throughput. The paper path of the machine and the Jam control features assure ease in handling even the most difficult of Post Office acceptable first class mail.

The MPS40, equipped with the necessary modules and software, can:

- ☒ Read fixed and/or wide area barcode
- ☒ Single and/or multi-line OCR
- ☒ Spray PostNet barcode
- ☒ Support RVE
- ☒ Verify barcode accuracy (ABE)
- ☒ Utilize FASTforward change of address software

Reports are easily accessible and printed in formats required by the USPS.

Even with all of its advanced features, the MPS40 is operator friendly; the NT-based software makes programming and running jobs very easy. And the engineers' attention to detail makes the MPS40 easy to service. The MPS40 incorporates the best in market-proven technology with new developments to provide for state of the art performance.

We thank you for your trust in OPEX's people and products.

The MPS-40 has been designed with safety in mind. Our engineers have incorporated specific safety systems into the machine. **Do not at any time bypass, or disable any safety feature.**

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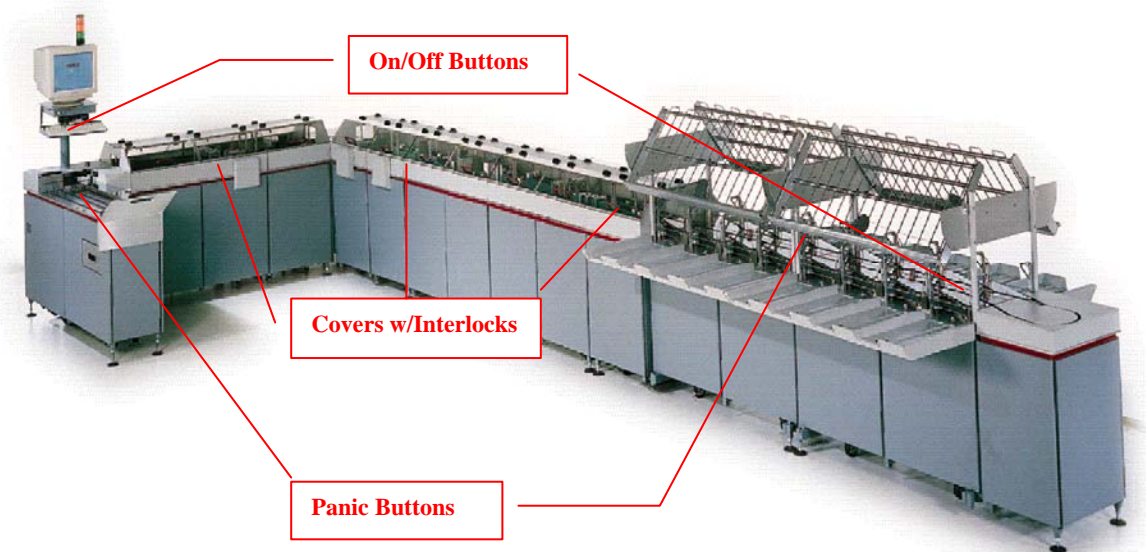
## Before You Begin - Safety!

**Module Covers** – Each module has been designed with a clear cover. These covers allow the operator to see the paper path and important hardware. If a cover is opened while the machine is running a safety interlock will stop the machine. The safety interlock will need to be re-set after the cover has been opened in order for the machine to re-start. Press the “ON” button to re-set the interlocks.

**Panic Buttons** – Red emergency buttons are designed into the machine and located in several locations to enable a quick stop of the machine.

**Do Not Attempt to Disable Safety Features!**

## Machine Overview



**Wear appropriate clothing.** Neckties, scarves, and loose-fitting clothing are potentially hazardous around any moving piece of equipment.

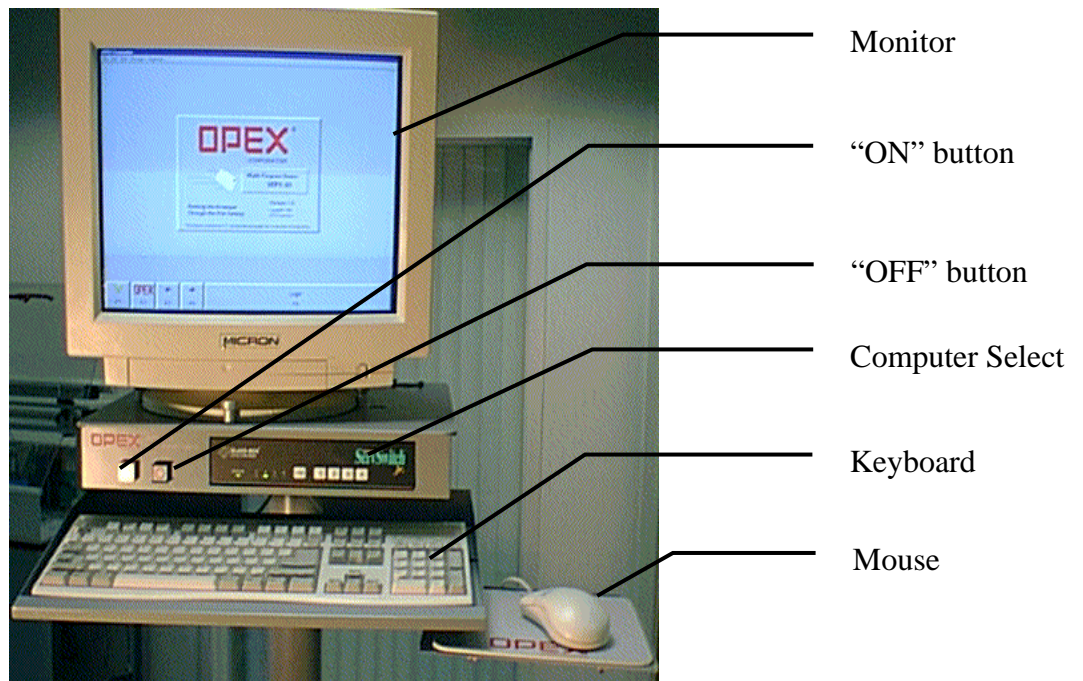
**Long Hair** – If you have long hair - tie back while you are working.

**Listen to your machine** – You will grow accustomed to the sound of the machine when it is working properly. Report any unusual sounds to you supervisor.

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## The MPS-40 Main Controls

1. “ON” button. The on button begins the process of turning on the machine. You must first press the “OFF” button to the recessed position.
2. “OFF” button. Pressing the “OFF” button at any time will turn off the machine. Before you press the “OFF” button, make sure you have returned to the Main “Sign-on” screen.
3. Monitor - The MPS-40 monitor displays important information to the operator.
4. Keyboard - The traditional keyboard enables the operator to enter his or her password, choose a job, or access any menu item by using the “Function” keys as needed.
5. Mouse - A common mouse allows the operator to click any on-screen command as needed.
6. Optional Computer Select Module. This allows the operator to select an optional computer to be displayed on the monitor.





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## Before You Start

The MPS-40 requires some simple cleaning in preparing to run your mail. Your OPEX Sales Engineer, OPEX Service Technician, or your Supervisor will instruct you in some basic cleaning. This is a simple, yet necessary part of the operator's job. It will directly affect the smooth operation of the machine.

### **These duties are:**

1. Vacuuming, all areas of the paper path. This includes the feed area, modules, and stackers.
2. Clean LVDT.(if present)
3. Clean all sensors by using by using compressed or forced air.
4. Blow any loose paper scraps away from sensors, belts, or other devices as needed.
5. Check the trash receptacle associated with the milling cutter. (if present)

In the event of a poor running machine stop the machine and perform routine cleaning. This minimal investment of time will pay off in the long run.

## Loading the Mail

Loading the machine is easy. Follow the simple steps outlined below and you will find that the MPS-40 has been designed to make your job easy.

1. Position trays of mail in USPS mail trays near the feed or use the optional mail tray holders.
2. Use two hands to grasp a section of mail from the mail tray. Remove any obviously damaged or "extra thick" mail.
3. Load the mail on the feed conveyor with the address side of the envelopes facing away from the feed. The first envelope and subsequent envelopes should stand vertically parallel to the input area.
4. Load the entire feed with mail before starting the machine. The mail at the end of the feed should lean towards the feed



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## Loading the mail During Operation

Once you have chosen the **Run Continuously** option the MPS-40 will run until all of the mail has been sorted, the machine jams, or until the Feed is out of mail. So that the machine does not stop because of an empty feed, the operator will need to pay attention to keeping the feed area loaded with mail. With practice, the operator will grow accustomed to transferring mail from mail trays to the feed area.

The MPS-40 has been designed to run with one operator in its base configuration.

## Emptying the Sort Bins

Plan ahead. Empty mail trays should be available to empty the sort bins. Make sure that you place the sorted mail in the correct trays. Optional mail racks above the sort bins may be used to place empty mail trays, or aisle racks may be used.

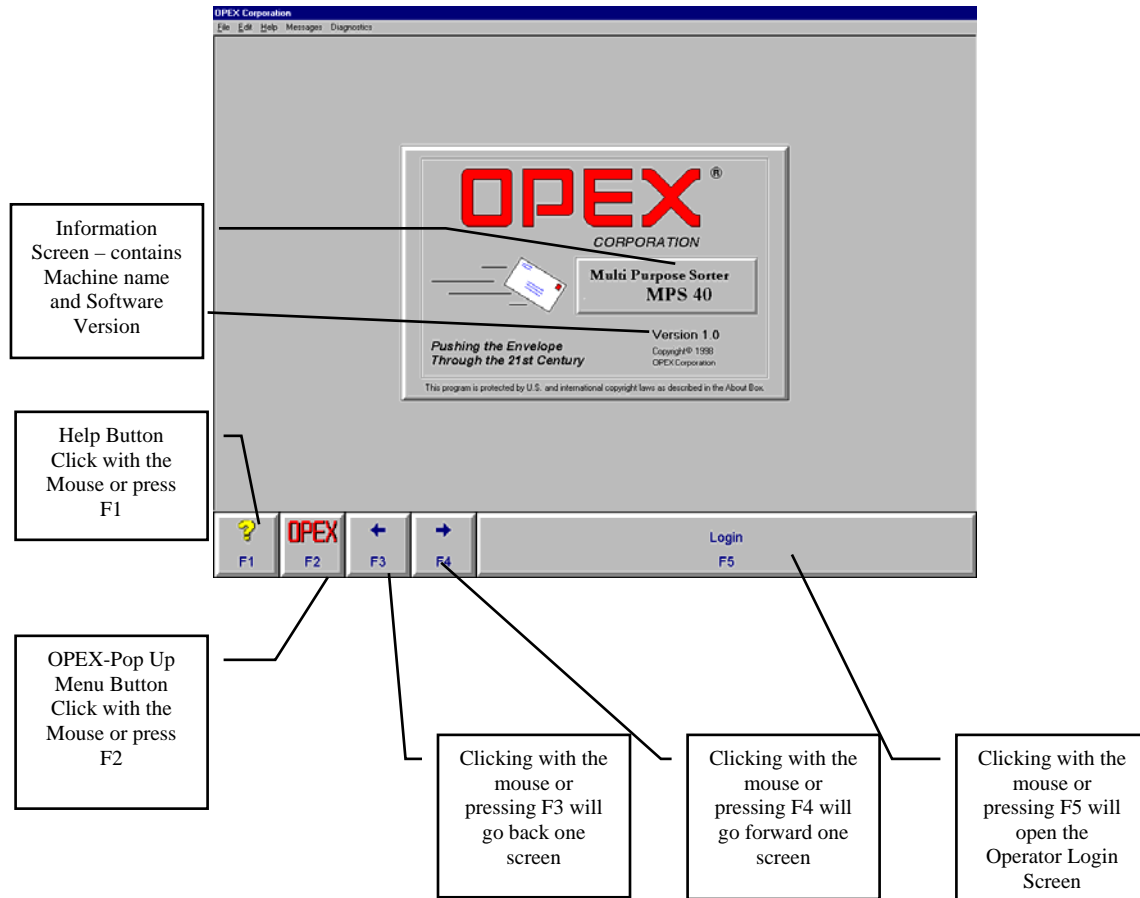
Whatever the method of emptying the bins, **always keep a balance between the feeding of unsorted mail and the emptying of sorted mail.**

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## Main Screen

Also known as the Home Screen, Sign-on or Sign-off Screen



From this Main Screen all other machine functions can be accessed. For security purposes before you can run the machine you must **LOGIN**.

The **LOGIN** feature assures that statistics and other vital job information is recorded accurately.

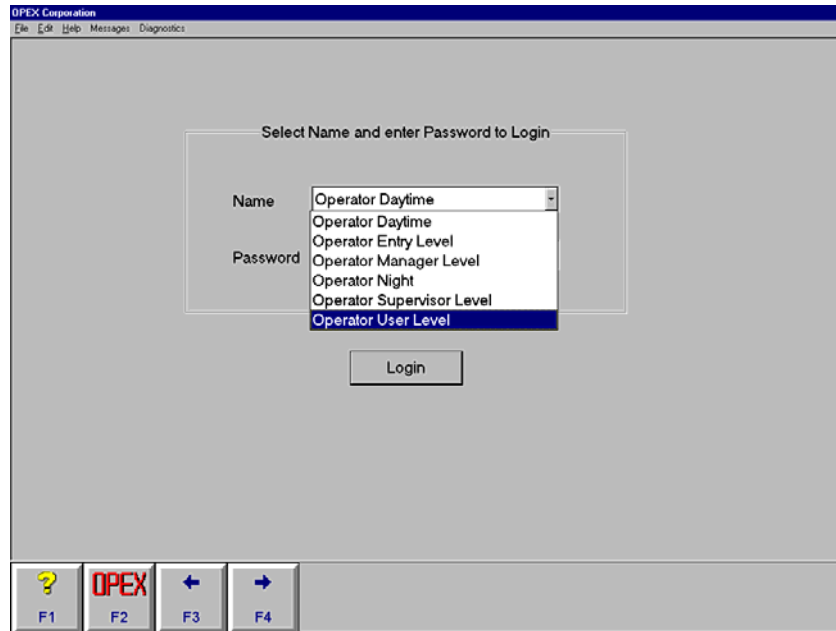
Simply click the **LOGIN** button or press F3.

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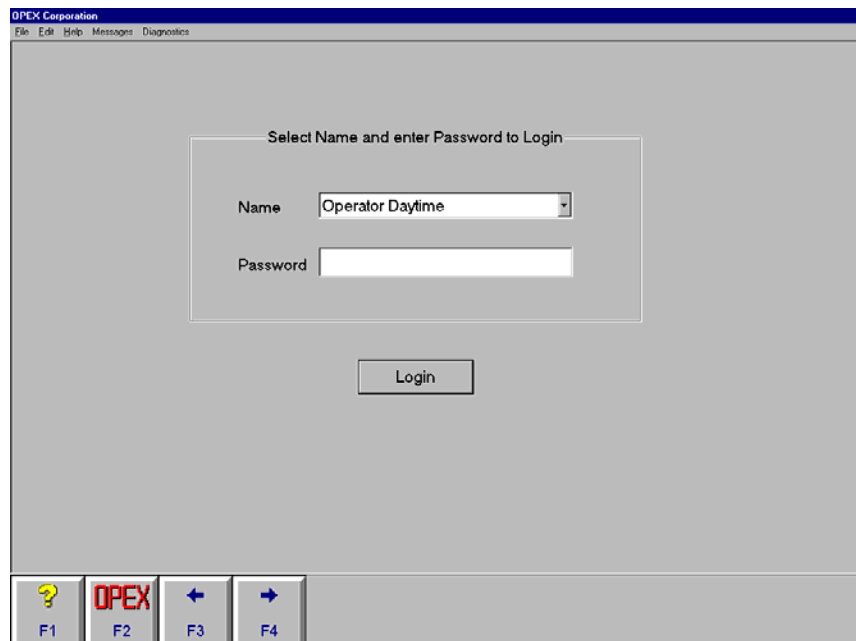
## Login Screen

When the operator chooses the LOGIN button (see previous page) the LOGIN screen appears as below.

Select the correct operator name using either the mouse (highlight and click), or the up or down arrow keys and the **Enter** on the keyboard.



## Password Screen



Using the keyboard – type in your password.

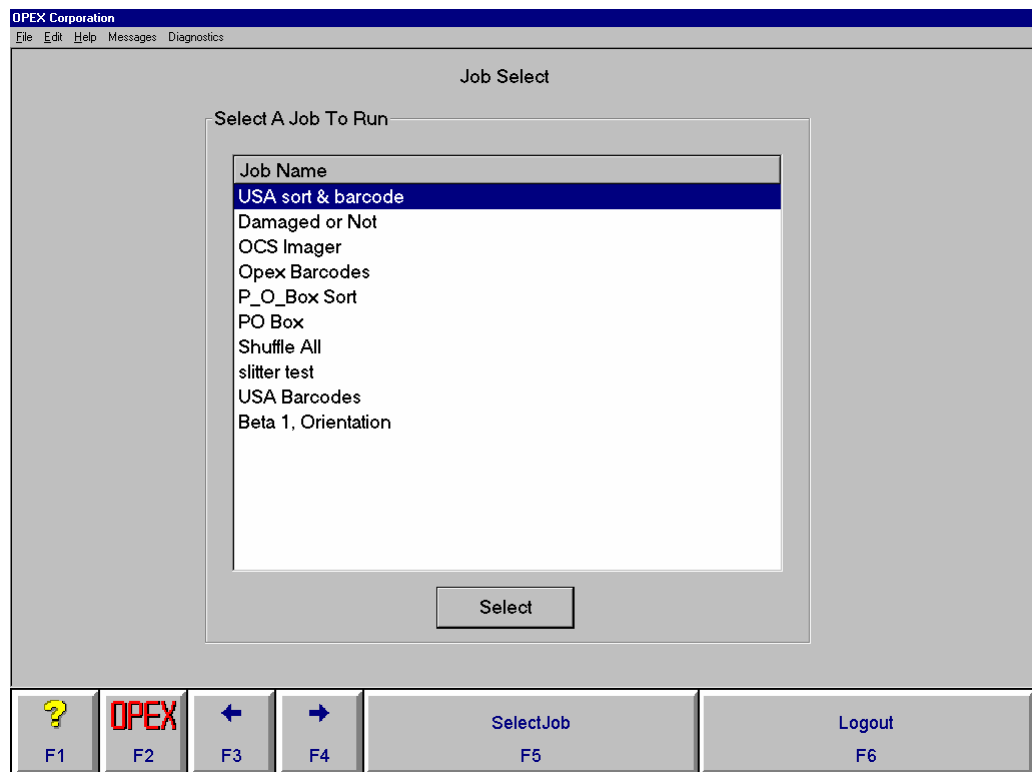
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After typing in your password click on the LOGIN bar just below the dialogue window or press enter on the keyboard

## Select Job Screen

The next window to appear will be the window that lists the jobs that have been pre programmed into the MPS-40 by your OPEX service technician. Determine which job needs to be run and select it by highlighting it with the mouse or arrow keys. Simply double-click on the highlighted job or a single click on the **Select** toolbar just below the job list or use the keyboard and press **Enter**.

## Job Select Screen



By now you have figured out that the MPS-40 operator interface is very user friendly. Most functions can be selected either by using the mouse or keyboard.

After choosing the job the **Run Screen** will appear.

## Run Screen- (Idle)

Please take a moment to familiarize yourself with the **Run Screen** Below

**Information TABS** –Groups, Re-runs, StatRpt, Feedinfo, Images. Each Tab will have detailed information related to job performance.

Confirm the correct job and operator name before beginning the job

Important directions for loading the mail

Statistics for job in progress

**Run Buttons** – Allows the operator or technicians to confirm job settings prior to continuous operation

The screenshot shows the OPEX Corporation Run Screen (Idle) interface. It features a menu bar (File, Edit, Help, Messages, Diagnostics) and a main display area. The main display is divided into several sections: a top section for job and operator information, a middle section for machine status and loading instructions, and a bottom section for statistics. A table on the right shows the assigned bins and their counts. At the bottom, there are eight function keys (F1-F8) for running the machine.

Group	Count	Assigned to Bins
Metal	0	8
Short	0	4
Long	0	5
Peak	0	11
Credit Card	0	10
Folded	0	6,7
One Piece	0	12
Multiple pieces	0	9
Clean	0	1,2,3
Other Barcodes	0	13
Other	0	14

OPERATOR: Operator Daytime  
JOB: USA sort\_barcode  
START DATE: Nov 24, 98  
START TIME:

Machine Status: Idle

New Run  
Load the mail with the stamp up facing the pusher  
<Enter> or Run buttons to start

Input 0  
Output 0  
Reruns 0  
Rerun Bin Count 0  
0 per/hour

Run 1 (F5), Run 5 (F6), Run 25 (F7), Continuous (F8)

The **Run Buttons** allow the operator to run a single envelope through the MPS-40.

**Run 1** - allows you to make sure that the envelopes are feeding properly, that the belts and sensors are clear, and that the entire paper path is clear.

**Run 5** - allows you or the technician to gradually increase the number of envelopes run to perform various diagnostic tests.

**Run 25** – allows a final test of the machine before running continuously.

**Run Continuously** – When all preparations are made and you are ready to begin.

## Run Screen – (Running)

While the machine is running information regarding the performance of the machine is displayed.

**Note:** Simply click on Cancel (F5) or press escape on the keyboard to stop the Feed.

The screenshot displays the OPEX Corporation Run Screen. The top menu bar includes 'File', 'Edit', 'Help', 'Messages', and 'Diagnostics'. Below the menu, there are several tabs: 'Groups', 'Reruns', 'StdRyt', 'FeedInfo', and 'Images'. The main display area is divided into several sections:

- Operator Information:** OPERATOR: Operator Daytime, JOB: USA sort\_barcode, START DATE: Nov 24, 98, START TIME: 03:09:56 PM.
- Machine Status:** Running.
- Performance Data:** Input 128, Output 60, Reruns 79, Rerun Bin Count 0, and a rate of 9804 per/hour.
- Group Count Table:**

Group	Count	Assigned to Bins
Metal	6	8
Short	8	4
Long	5	5
Peak	7	11
Credit Card	5	10
Folded	5	6,7
One Piece	4	12
Multiple pieces	4	9
Clean	6	1,2,3
Other Barcodes	4	13
Other	6	14

At the bottom of the screen, there are five function keys: F1 (Help), F2 (OPEX), F3 (Left Arrow), F4 (Right Arrow), and F5 (Cancel).

### Loading the mail During Operation

Once you have chosen the **Run Continuously** option the MPS-40 will run until all of the mail has been sorted, the machine jams, or until the Feed is out of mail. So that the machine does not stop because of an empty feed, the operator will need to pay attention to keeping the feed area loaded with mail. With practice, the operator will grow accustomed to transferring mail from mail trays to the feed area.

The MPS-40 has been designed to run with one operator in its base configuration.

### Emptying the Sort Bins

Plan ahead. Empty mail trays should be available to empty the sort bins. Make sure that you place the sorted mail in the correct trays. Optional mail racks above the sort bins may be used to place empty mail trays, or aisle racks may be used.

Whatever the method of emptying the bins, **always keep a balance between the feeding of unsorted mail and the emptying of sorted mail.**



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## Stacker Area

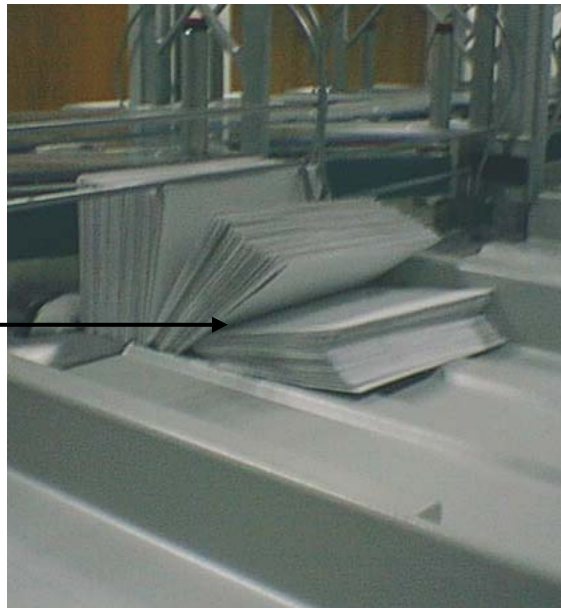
It is very convenient to use the optional over head mail rack for the placement of mail trays. Note how easy it is to locate the proper mail tray above the sort bin for easy unloading of the stacker bins.



Overhead Mail Racks

## Sort Bin Area

As the individual bins fill the mail will gently fall forward outside of the wire bale. Allow enough mail to fall and then grasp a comfortable handful to place in the correct mail tray.



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## Emptying Sort Bins (cont.)

Near each sort bin is a red indicator light. The red light serves several purposes in the regular operation of the machine.

1. **Bin Full** – The light comes on and stays on when a bin is full. If there are not other bins assigned to the same sort group the machine will stop.
2. **Bin Almost Full** – The light will flash when the bin is nearly full. The operator will still have a short time to empty the bin.
3. **Bin Override** – In the event of a problem in a particular sort bin, the red button can be pushed taking the bin out of service. This should almost never be used but has been included to give flexibility when more than one bin has been assigned to the same sort group.

## Machine Jams

Even though the machine has been correctly loaded with mail that is in good condition with no visible damage or visibly "thick" envelopes – there will be conditions that cause the machine to stop due to Jams.

Jams can be cleared in an efficient and logical way and the machine can be restarted easily without loss of productivity.

In the event of a machine stoppage due to a jam the operator is prompted as to where the jam has occurred so steps can be taken to clear the jam.

## Clearing a Jam

1. Look at the Main Screen for a dialogue box describing the Jam.

Once the Jam has been cleared simply click on continue with the mouse or press Enter on the keyboard

The machine will stop and immediately display a message noting where the jam has been called

OPEX Operator Interface Screenshot:

OPERATOR: Operator Daytime  
JOB: USA sort\_barcode  
START DATE: Nov 24, 98  
START TIME: 04:11:33

Group	Count	Assigned to Bins
Metal	3	8
Short	3	4

Machine Status: Machine is Jammed  
bin 6 entry missing jam

Buttons: Continue, Cancel

Bottom Panel: F1 (Help), F2 (OPEX), F3 (Left Arrow), F4 (Right Arrow), F5 (Run 1), F6 (Run 5), F7 (Run 25), F8 (Continuous)

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## Clearing Jams (cont.)

2. Allow all belts and motors to stop completely before opening a cover or attempting to clear the jam.
3. If the jam is behind one of the covers, open the cover on the section of the machine where the jam has occurred. Carefully remove the jammed or damaged envelopes from the paper path by gently pulling them out.
4. If the jam is in the sort bin area, carefully examine the paper path for any damaged or jammed envelopes. Carefully remove the Jam making sure that belts and pulleys are not dislodged.
5. Close all covers! The covers contain safety interlocks that will not allow the machine to be restarted if left open.
6. If you have opened covers make sure to press the “ON” button (the on button light should come on) in order to re-start the machine.
7. Appendix A contains a listing of jam messages and how to handle them.

## Tips

1. Take your time. Most jams can be cleared in about 20 seconds or less.
2. You will develop the ability to identify jams by ear.
3. Some jams may be difficult. It may be necessary to move belts by pulling or pushing on them. Always push the belts in their usual direction of travel.

## ReRuns and Rejects

The MPS-40 has the ability to distinguish between envelopes that are rejected for legitimate reasons (damage, unreadable barcodes, too thick etc.), and those which are only sent to the rerun bin because of Jam clearing procedures. Generally speaking, the operator can distinguish these items from one another. True ReRuns can be rerun on the machine while mail designated as rejects must be processed by hand.

The operator can get accurate information regarding the count of the mail in the ReRun/Reject bin by clicking on the Tab marked ReRun.

The screen on the next page illustrates how to view detailed information about the envelopes which have been sent to the ReRun bin and for which reasons.

## Sample Screen

This screen can be displayed either while the machine is running or as seen above in the Idle mode. Notice that several categories are described as possible reasons for envelopes to be sent to the ReRun bin

OPERATOR: Operator Manager  
 JOB: USA sort\_barcode  
 START DATE: Nov 25, 98  
 START TIME: 03:57:57 PM

Machine Status: Idle

New Run  
 Load the mail with the stamp up facing the pusher  
 <Enter> or Run buttons to start

ReRun type	Count
Too short	0
Too long	0
Gap	0
No right Opex imager report	0
No LVDT data	0
No bin available	0
Bin gate misfire	0
Jam bypass	0
Jam bypass recovery	0
Jamsorts	0

Input 0  
 Output 0  
 Reruns 0  
 Rerun Bin Count 0  
 0 per/hour

F1 F2 F3 F4 F5 F6 F7 F8

## Sample Statistic Screen

One of the valuable tools is the use of the Statistics Tab. This screen provides up to the minute detailed information about the Job currently being run.

OPERATOR: Operator Manager  
 JOB: USA sort\_barcode  
 START DATE: Nov 30, 98  
 START TIME: 09:52:21 AM

Machine Status: Idle

Run Completed  
 Load the mail with the stamp up facing the pusher  
 <Enter> or Run buttons to start

Input	Output	Reruns	Rerun Bin Count
105	49	64	0

11812 per/hour

OVERALL SYSTEM PERFORMANCE

Input	105	Throughput	11812 /hr	Idle Time	0:00:54
Output	49	Jam Clear Time	4 sec	Jam Time	0:00:18
Reruns	64	Ref Throughput	4021 /hr	Run Time	0:00:14
Jam Rate	26 env/jam	Ref Jam Clear Time	20 sec	Total Time	0:01:26

OUTPUT 49 46.7%

Metal	6	5.7%
Short	6	5.7%
Long	6	5.7%
Peak	5	4.8%
Credit Card	5	4.8%
Folded	3	2.9%
One Piece	4	3.8%
Multiple pieces	3	2.9%
Clean	4	3.8%
Other Barcodes	4	3.8%
Other	3	2.9%

RERUNS 64 61.0%

Too short	4	3.8%
Too long	3	2.9%
Gap	3	2.9%
No right Opex imager report	3	2.9%
No left Opex imager report	4	3.8%
Habitec report missing	3	2.9%
Lockheed report missing	4	3.8%
MICR report missing	4	3.8%
No LVDT data	3	2.9%
No bin available	3	2.9%

F1 F2 F3 F4 F5 F6 F7 F8

Any of the Tab buttons may be clicked with the mouse to obtain additional information.

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## Completing the Job

When the current job is completed it is important to “Close” out the job. Some statistical information, such as “idle time” will continue to be compiled even though the machine is not running.

The operator should use the mouse or the F2 button to access the OPEX pop up tool bar.

The screenshot displays the OPEX Corporation software interface. The top menu bar includes 'File', 'Edit', 'Help', 'Messages', and 'Diagnostics'. The main window is divided into several sections:

- Operator Information:** OPERATOR: Operator User Level, JOB: USA sort\_barcode, START DATE: Nov 30, 98, START TIME: (blank).
- Machine Status:** Idle.
- New Run Instructions:** Load the mail with the stamp up facing the pusher. <Enter> or Run buttons to start.
- Counts:** Input: 0, Output: 0, Reruns: 0, Run Bin Count: 0.
- Statistics:** 0 per/hour.
- Groups Table:**

Group	Count	Assigned to Bins
Metal	0	8
Short	0	4
Long	0	5
Peak	0	11
Credit Card	0	10
Folded	0	6,7
One Piece	0	12
Multiple pieces	0	9
Clean	0	1,2,3
Other Barcodes	0	13
Other	0	14

At the bottom, there is a toolbar with buttons for F1 (Help), F2 (OPEX), F3 (Backwards Arrow), F4 (Forwards Arrow), F5 (Run 1), F6 (Run 5), F7 (Run 25), and F8 (Continuous). A callout box on the left states: "Opex POP-UP Menu Tool Bar is accessed by clicking on OPEX or pressing F2".

To properly close the job the operator has several options. They are:

**Select Job** – Allows the operator to select another job and closes the last job run.

**Statistics** – This also closes the job and gives immediate access to statistics

**Logout** - This will return the screen to the Main MPS-40 screen.

**F3/Backwards Arrow Button** – Returns to the Select Job screen, which closes the job and allows the operator to choose another job to be run.

**Reminder** – The on-screen menu is easily accessed by using either the mouse or keyboard commands such as F2, F3, etc., or the arrow keys and the Enter command.

## Statistics

The MPS-40 is constantly compiling statistics. It accurately keeps track of information that can be retrieved in easy to read formats.

Before you begin decide what type of report you would like to retrieve. The MPS-40 has the ability to combine many different criteria in to one report. Knowing what you need before you begin will help to decide where to begin.

### Access to Statistics

There are two methods to access the statistics.

**Basic** - If you have already logged on to the MPS-40 and have been sorting mail access to your statistics is quite easy.

1. Click on the OPEX Pop-Up button to reveal three choices. For statistics simply move the mouse on Statistics with the mouse or use the arrow keys

This reveals two additional choices  
2. Again move the mouse to highlight and click or use the arrow keys and Enter to choose Individual or Summary

The screenshot shows the OPEX Corporation software interface. At the top, there is a menu bar with 'File', 'Edit', 'Help', 'Messages', and 'Diagnostics'. Below the menu bar, there are several status indicators: 'Groups', 'Reruns', 'StatRpt', 'FeedInfo', and 'Images'. The main display area is divided into several sections. On the left, there is a 'New Run' section with instructions: 'Load the mail with the stamp up facing the pusher' and '<Enter> or Run buttons to start'. Below this, there are several counters: 'Input', 'Output', 'Reruns', and 'Per Bin Count', all showing '0'. In the center, there is a 'Statistics' menu that is open, showing 'Individual' and 'Summary' options. On the right, there is a table with the following data:

Group	Count	Assigned to Bins
Metal	0	8
Short	0	4
Long	0	5
Peak	0	11
Credit Card	0	10
Folded	0	6,7
One Piece	0	12
Multiple pieces	0	9
Clean	0	1,2,3
Other Barcodes	0	13
Other	0	14

At the bottom of the interface, there is a row of function keys: F1 (with a question mark), F2 (labeled 'OPEX'), F3 (left arrow), F4 (right arrow), F5 (labeled 'Run 1'), F6 (labeled 'Run 5'), F7 (labeled 'Run 25'), and F8 (labeled 'Continuous').

### Individual

Selecting an individual report will automatically show a report of the last job completed and provide the opportunity to see each individual job run in consecutive order backwards to midnight. The MPS-40 will display information for these individual jobs one at a time. This provides the operator, supervisor, manager and service technicians detailed information about each job that is not available in a summary report.

### Summary

Selecting the summary report will automatically show a report of all jobs and all operators who have sorted mail since midnight. See samples of these reports on the next page.

# Summary Report (Sample)

OPEX Corporation  
File Edit Help Messages Diagnostics

Previous Next Print

Note: This report can be printed on the printer provided with the MPS-40

OPEX MPS-40 Summary Report for OPEX

Job Name: All Start Time: 11/30/98 09:52:21 AM  
Operator: All End Time: 11/30/98 01:58:38 PM  
Jobs Included: 11 Jobs Ended: 11

OVERALL SYSTEM PERFORMANCE MEASURES

Input:	319	Actual Throughput:	11600 /hr
Output:	150 (47.0%)	Actual Jam Clear Time:	5 sec
Reruns:	188 (58.9%)	Reference Throughput:	4160 /hr
Jam Rate:	2.6 env/jam	Reference Jam Clear Time:	20 sec

PERFORMANCE DETAILS

JOB TIME

Active Job Time:		0:58:14
Run Time:	0:00:36 (1.0%)	
Jam Time:	0:01:03 (1.8%)	
Idle Time:		0:56:35

OUTPUT

Sorted Pieces	150	100.0%
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RERUNS

Too short	16	8.5%
Too long	13	6.9%
Gap	14	7.4%
No right OpeX imager report	13	6.9%
No left OpeX imager report	13	6.9%
Habitec report missing	7	3.7%
Lockheed report missing	14	7.4%
MICR report missing	13	6.9%
No LVDT data	12	6.4%
No bin available	9	4.8%
Bin gate misfire	9	4.8%

F1 F2 F3 F4 Individual F5

# Individual Report (sample)

Note: Even though the operator has chosen Summary report, a simple click with the mouse will automatically display a n individual report.

OPEX Corporation  
File Edit Help Messages Diagnostics

Previous Next Print

Note: This report can be printed on the printer provided with the MPS-40

OPEX MPS-40 Individual Report for OPEX

Job Name: USA sort & barcode Start Time: 11/30/98 01:57:33 PM  
Operator: Operator Manager Lev End Time: 11/30/98 01:58:38 PM

OVERALL SYSTEM PERFORMANCE MEASURES

Input:	44	Actual Throughput:	14400 /hr
Output:	21 (47.7%)	Actual Jam Clear Time:	3 sec
Reruns:	23 (52.3%)	Reference Throughput:	3520 /hr
Jam Rate:	2.2 env/jam	Reference Jam Clear Time:	20 sec

PERFORMANCE DETAILS

JOB TIME

Active Job Time:		0:00:11
Run Time:	0:00:05 (45.5%)	
Jam Time:	0:00:06 (54.5%)	
Idle Time:		0:00:54

OUTPUT

Metal	3	14.3%
Short	2	9.5%
Long	2	9.5%
Peak	2	9.5%
Credit Card	2	9.5%
Folded	2	9.5%
One Piece	2	9.5%
Multiple pieces	1	4.8%
Clean	2	9.5%
Other Barcodes	1	4.8%
Other	2	9.5%

RERUNS

Too short	2	8.7%
Too long	2	8.7%
Gap	2	8.7%

F1 F2 F3 F4 Summary F5

When in the Individual Report Screen the operator can see the next or previous report.

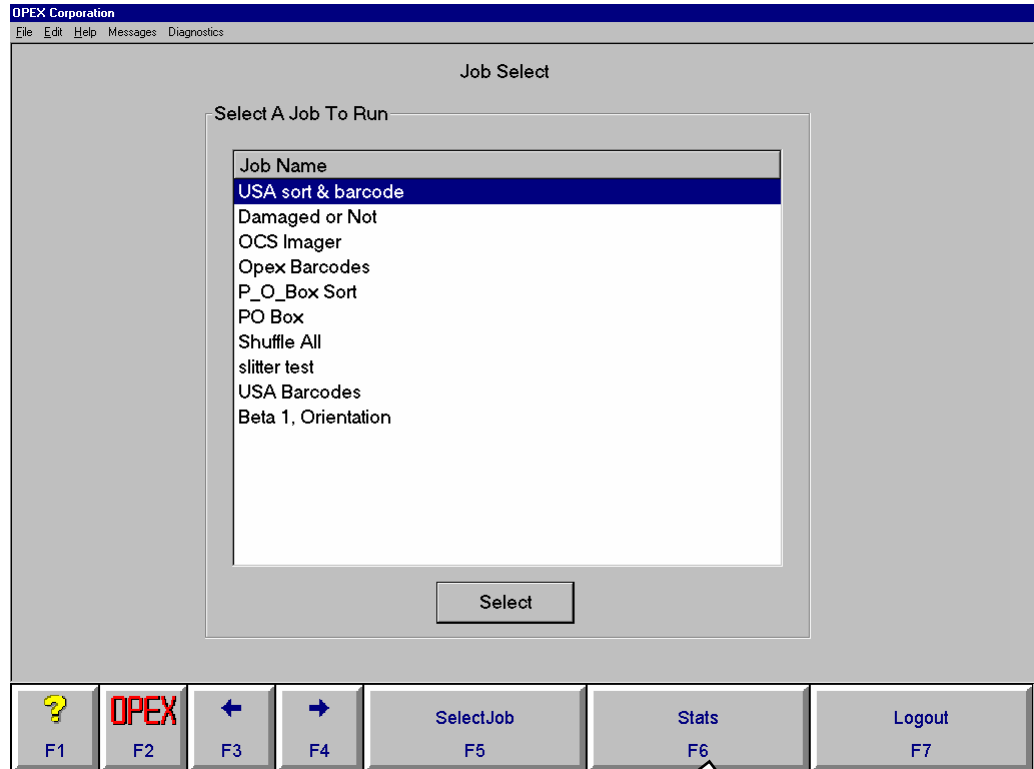
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## Accessing Stats (cont.)

**Custom** - The second way of accessing the statistics allows the operator to custom design reports based on their specific criteria. The operator, supervisor or manager who has been given Login permission can access the MPS-40 statistics file at any time. Statistical reports may be requested according to:

- **Date** – Daily, monthly, yearly etc.
- **Job Information** – Mail volume by specific job or combinations of jobs.
- **Operator Information** – Which operator ran what job when. How efficiently etc.

Login to the MPS-40 as you would if you were going to run a job. The following screen (Job Select Screen) will appear. Notice the Tab buttons at the bottom of the screen



Use the mouse or press F6 to access the Statistics Report Criteria menu screen.

As you will see on the next page, instead of providing a pre-set report the Report Criteria screen allows many options.

Take a minute to familiarize yourself with the Screen.



## Statistics Report Criteria Screen

OPEX Corporation  
File Edit Help Messages Diagnostics

[ Statistics Reports Criteria ]

**Jobs to Include**

- All Jobs
- Beta 1, Orientation
- Damaged or Not
- OCS Imager
- Opex Barcodes
- P\_O\_Box Sort
- PO Box
- Shuffle All
- slitter test
- USA Barcodes
- USA sort & barcode

**Ops to Include**

- All Operators
- 1st shift
- 2nd shift
- 3rd shift
- misc shift
- Operator Daytime
- Operator Entry Level
- Operator Manager Level
- Operator Night
- Operator Supervisor Level
- Operator User Level

**Date**

12/ 4 /98 to 12/ 4 /98

**Time**

12:00:00 AM to 9:15:16 AM

Denotes a shift

**Job/Op Lists**

Refill  With Current Jobs/Ops  
 Read thru Previous Runs

**Summary**

All  By jobs  By operators

Exclude jobs run by Opex Tech.

**Test**

# Matching Runs => N/A

? F1

OPEX F2

← F3

→ F4

Stats F5

Individual F6

Summary F7

Backup F8

The Job and Operator lists provide the choice of "All Jobs" or "All Operators". Optionally you may choose one individual job or one operator in any combination.

When defining specific information such as the beginning date, end date, year, week etc., - a drop down box will appear to aid in the setting of desired information.

**Date**

12/ 1 /98 to 12/ 1 /98

<<< Dec 1998 >>>

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9

Refill  With Current Jobs/C

Reports can be viewed on screen and printed by clicking on the button labeled Print after the report has been displayed.

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## Appendix A – Error Messages

### Jam information Basics

**Missing Jam:** A sensor transitions from blocked to unblocked as a piece travels by it. When this transition occurs a specific time is expected. If the next sensor does not transition within the time frame expected a “jam” is called.

A piece has a set amount of time to move from one section to the next. When a piece does not arrive at a section's sensor on time, then the machine stops and displays a jam message on the screen. The operator should look at the belt path between the sensor called in the jam and the section just prior to it.

**Blocked Jam:** During machine startup, the controller checks the status of all sensors in a machine section while that section ramps up to production speed (there is a specific time for this ramp-up to occur). If a sensor is blocked after the appropriate time elapses for getting the motors up to speed, then the controller stops the machine and sends the jam message to the screen. This kind of jam often occurs when restarting the machine after a "Missing Jam" call. The operator only needs to make sure there is no physical jam and re-start the machine.

If at any time the protective covers are opened it will be necessary to press the “ON” button to re-set the safety interlock system.

**Miscellaneous** –Many of the jam messages are self-explanatory. They often name the module in which the error has occurred. Familiarity with the machine modules and paper path will help in getting started after clearing the jam.

Training by your OPEX Sales Engineer will answer many of the specific questions you may have.