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Introduction

- An E... Man... incre...
- Automatically generates Vendor Purchase Orders based on
- Vendor parameters:
  - Frequency
  - ROP/ROQ
  - MIN/MAX

We also offer a sophisticated option based on Gordon Graham's recommendations. We came up with an easier to use system which still provides purchasing efficiency.

Introduction

This is a simple, effective method, which can increase your purchasing efficiency . The system basically reviews usage, compares it to on hand/ on order quantities, and recommends a purchase quantity. This menu is used with two warehouse replenishment methods, either an ROP/ROQ method , or a Min/Max replenishment system. Later, I'll explain the differences between the two methods.

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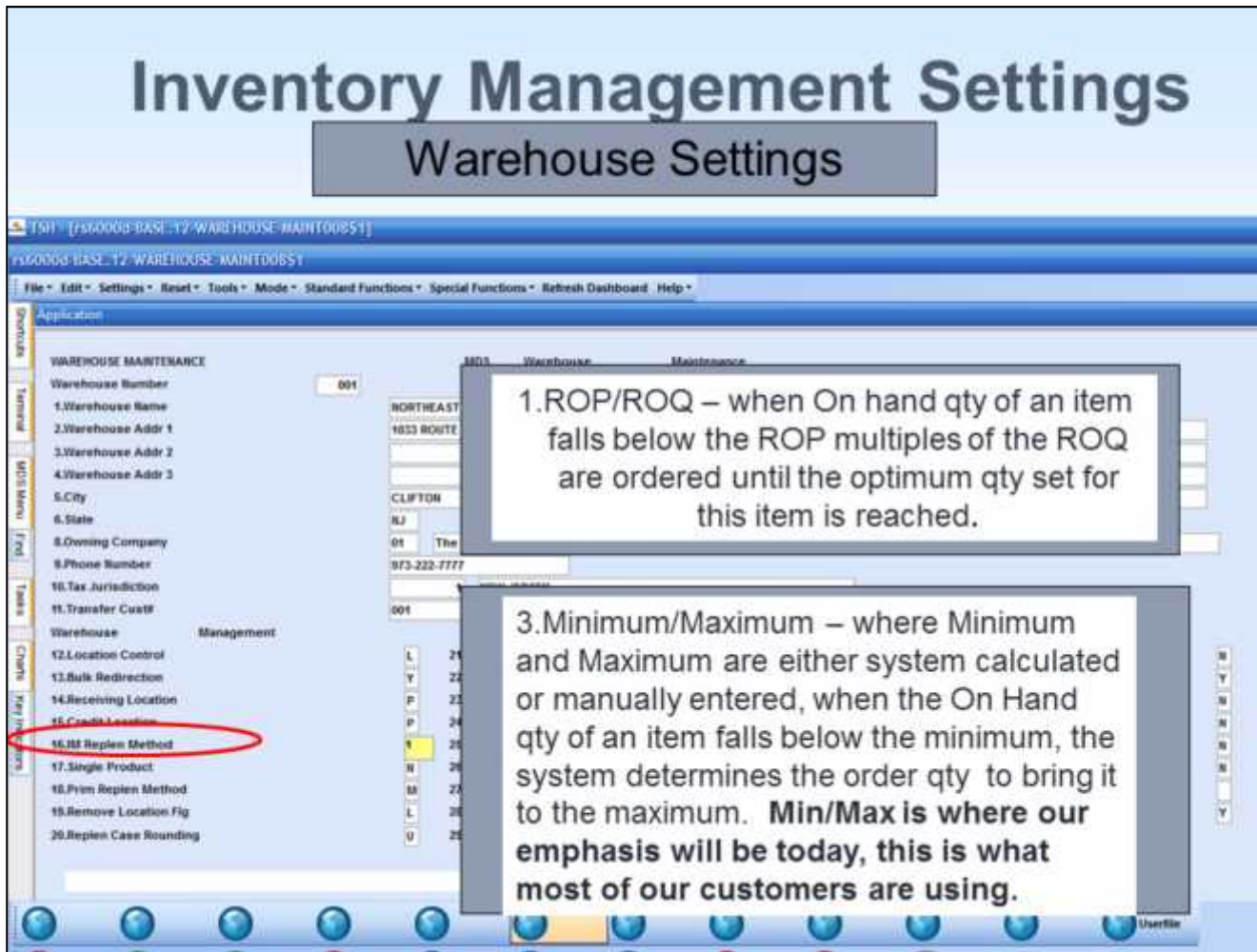
In the Warehouse Maintenance Screen, there are three different replenishment methods:

1. ROP/ROQ, which sets a Reorder qty, and X number of multiples of this qty can be ordered until the optimum qty set for this item is reached.

2. Inventory Class- not used

3. Minimum/Maximum – where minimum and Maximum are either system calculated or manually entered, and when the On Hand qty of an item falls below the minimum, the system determines the order qty to bring it to the maximum.

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Suggestions for Min/Max

- There are different factors in setting up your Min/Max for a vendor.
  - How far is vendor from you?
  - Does your vendor charge for shipping?
  - Does your vendor have minimums?
- Vendor is in the next town, no delivery charges, no minimums, no need to stock - order daily.
- Vendor is across country, charges for delivery, takes a week to receive inventory, you need to have a safety stock and order before needed.

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If using Min/Max replenishment method, you have the option to override the default Min/Max parameter settings by vendor.

ROP/MIN = .5 of month's worth of demand
ROQ/MAX = 1 month's worth of demand
If monthly demand is 100 units when avail is under 50 units order up to 100 units

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Parameters Affecting Demand

(Demand is a forecast of what you will sell next month)

- Seasonal vs. Non-Seasonal Items
- Number of Months to use
- Demand Scaling Factor for Non-Seasonal Items

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To calculate the demand estimate, we average a specified number of previous months sales. This number is specified in the field labeled "ROP Months Non Seasonal".

For example, if the number of months is set to 5, then the calculation will add the previous 5 months sales, (excluding current month, because it is not a complete month), and then divide by 5, to arrive at a one month average.

You can also enter the default ROP/Min months and ROQ/Max months, which are used with Min/Max method 3.

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Calculation of Weighted Average to Find Your Non-Seasonal Demand

In this example sales for the past 5 months weighted average is 20 units per month, the straight average would be 22 units.

Month	1	2	3	4	5	
Sales	20	18	8	40	24	= 110
Factor	5	4	3	2	1	= 15
Result	100	72	24	80	24	= 300

Average = 110 / 5 = 22
Weighted Average = 300 / 15 = 20 units

The best estimate of what you will sell this month is what you sold last month.

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Inventory Management Settings

Seasonal Parameter Settings

You shouldn't use more than 3 months in a seasonal calculation because you want a small window.
The system will look back at the last 3 months of sales this year and the same 3 months of last year. It will apply the percent of change to the next 3 months of last year to calculate this years expected demand.

To calculate the demand estimate, we average a specified number of previous months sales. This number is specified in the field labeled "ROP Months Non Seasonal".

For example, if the number of months is set to 5, then the calculation will add the previous 5 months sales, (excluding current month, because it is not a complete month), and then divide by 5, to arrive at a one month average.

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Seasonal Demand

- Number of months to use (3 months is industry standard)
- Trend percent based on year to date sales

- To calculate June: (use 3 months)

Month	March	April	May	June	July	August
Last Yr	5	12	13	35	15	10
This Yr	23	20	2	?		

- This Yr / Last Yr 45 / 30 = 150% trend increase (50% increase)
- Upcoming 3 months last year = 35+15+10 = 60/3 = 20
- 20 * 150% = 30

- Forecasted demand = 30 units

- You need to have history on an item to calculate demand. On new items you need to estimate and manually enter a min/max.

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ABC Ranking

- ABC Ranking allows you to create and maintain the proper safety stock
- Higher safety stock results in higher service levels – but results in higher inventory costs
- Lower safety stock results in lower inventory costs – but results in lower service levels and unhappy customers
- The question we need to ask is how to balance service level vs inventory costs

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Service Levels/Safety Stock
The Normal Distribution
Carrying Costs vs Service Levels

Velocity Code	Service Level Objective	Safety Stock Required
A	93%	148%
B	85%	104%
C	75%	68%
D	50%	0%

Applied to the Min/Max

Inventory experts suggest you don't aim for a higher service level than **93%**. To achieve a 93% requires and inventory investment of an additional 148%. No safety stock gives you a 50/50 chance of being out of stock.
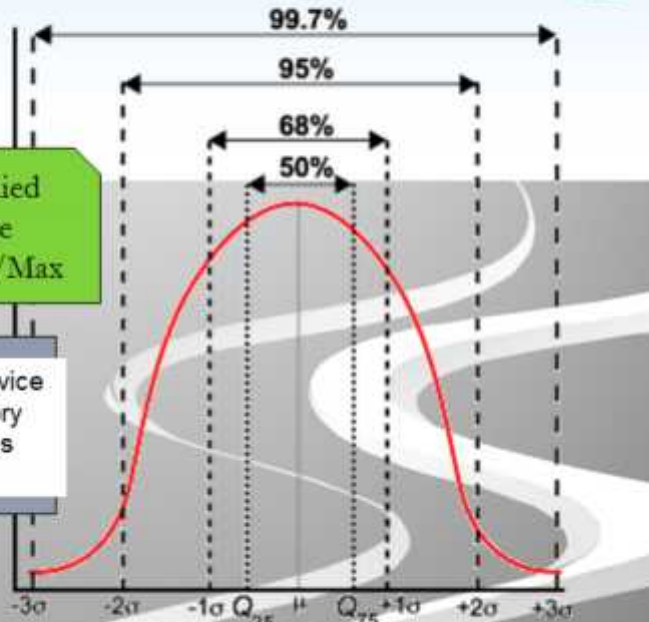
Service Level Goals

Standard Deviations

50	60	70	75	80	85	90	91	92	93	94	95	96	97	98	99
0	0.25	0.52	0.68	0.84	1.04	1.28	1.34	1.41	1.48	1.56	1.65	1.76	1.88	2.06	2.33

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Determine ABC Levels

These screen is used to rank your products by a Velocity code of A, B, C and D. The items may be organized based upon unit sales volume, dollar sales volume, gross profit volume, cost dollar volume or number of times ordered.

ABC Product Ranking Update

CaptureOn

1. Warehouse

2. Enter Ranking Criteria

3. Enter Level Type

4. A Item Cutoff

5. B Item Cutoff

6. C Item Cutoff

Inquiry List

ACCEPTABLE VALUES :

Q Quantity Levels
P Percent Levels

The cutoff fields are used to indicate how many products should be included up to that level. For example, you might have 100 items to classify as A, 200 to classify as B and 300 to classify as C. The cutoff levels would be 100, 300, 600. All other items would fall into the D category.

Qty = # of items 10,20, etc
Pct = Pct of total items

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The ABC Ranking Report will show your products organized by ABCD as determined in the previous update.

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Sample Reorder Calculation

- Example: Product GLVE650132
- Sales Demand = 20 Units
- Velocity Level = A Highest possible
  - Safety factor is 148%
  - Vendor/Item minimum months is 2.0
  - Vendor/Item maximum months is 3.0

- Minimum = 20 * 2 = 40
  - Plus safety stock = 40 * 148% = 60
  - Minimum = 40 + 60 = 100
- Maximum = 20 * 3 = 60
  - Plus safety stock = 60 * 148% = 89
  - Maximum = 60 + 89 = 149

After the demand is calculated, the ROP/ROQ calculation may be run. This will determine the minimums and maximums (or ROPs and ROQs) using the average monthly demand arrived at earlier.

When using the MIN/MAX method, the Minimum (Reorder Point) is determined by taking the number of months entered for the vendor, or the default number of months in the parameter file.

Once the system has calculated the MIN and MAX for each product, you can run a proof listing to evaluate the system calculated figures.

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You can manually override any min or max figure through Product Detail maintenance; manual ROP or ROQ entry.

If any Min or Max has been manually entered, you must then COPY Manual ROP and ROQs to actual fields.

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This is an example of a Purchasing Report by vendor. This report can be reviewed before generating a Purchase order, to provide the Purchasing Agent with additional information before placing PO.

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Inventory Analysis Report

This report can be reviewed to determine items that you are carrying in inventory that aren't producing sales.

This report is an excellent tool to analyze the percentage performance of inventory value versus sales generation. As you can see on this report about **20%** of the inventory is producing **80%** of sales. This means that there is a lot of money and warehouse space tied up in inventory that is not very productive. Using this report to analyze the sales potential and effectiveness of your inventory can help you to greatly reduce this waste of valuable space and money.

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Automatic PO Generation

- Now that the Min/Max has been calculated and loaded based on your parameters it is time to create purchase orders.

- You can create purchase orders where the purchasing agent decides the vendors / items to review.

- The other option is to setup vendors with a frequency of when to order. The agent would just then run the process and the system would select the vendors that are on that frequency. Create purchase orders that are on hold automatically.

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PO Generation By Vendor and Reorder Point
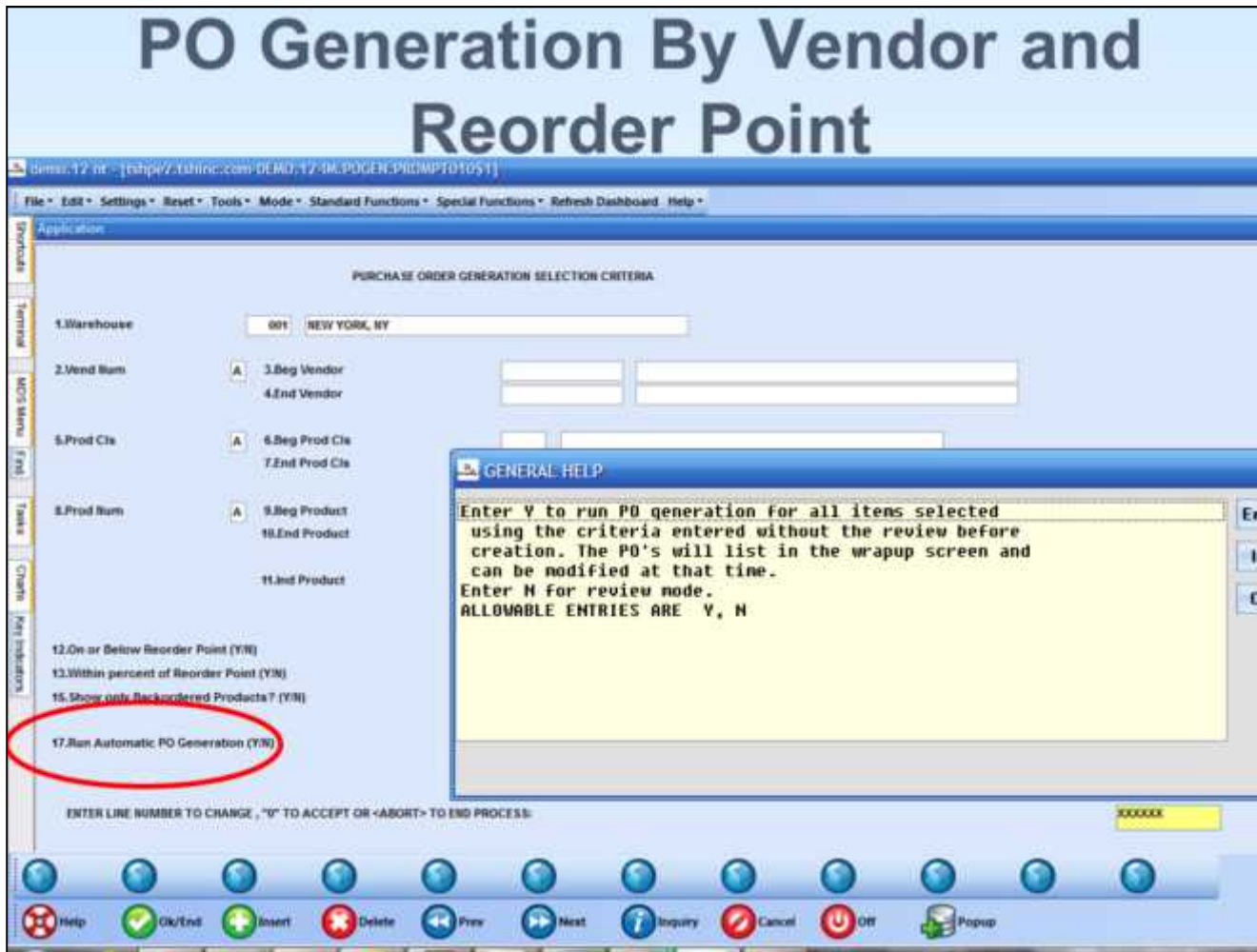
Operator will be prompted for various selection criteria, including warehouse, vendor etc.

A "Y' response to any of these fields will display only items that meet the criteria; a "N" response will display all items for that vendor.

A new feature has been added to allow the po generation to run without a review process.

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PO Generation Summary

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PO By Vendor Screen Display

This is the detail screen of the PO generation by vendor program.

The Header section displays some general vendor information, including Vendor AP Balance, Credit Limit and Min Qty for a PO. The Header section also has a running total of the weight, quantities and dollars accumulated for this PO.

.

This is the detail screen of the PO generation by vendor program.
The Header section displays some general vendor information, including Vendor AP Balance, Credit Limit and Min Qty for a PO.
The Header section also has a running total of the weight, quantities and dollars accumulated.

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PO By Vendor Screen Display

The detail section displays Avail, ROP and ROQ, and Sales info for each item.

An "*" indicates the item inventory is below reorder point.

The Order Qty is displayed in both Purchasing and Stocking Unit of measures.

The recommended Order qty is 8 each (2 cases), to bring the inventory from available: 1

to

Rop (Max) :

Order qty : 8

The program allows the operator to override the order qty.

On our base system, the operator can also change (override) the ROP and/or the ROQ right from this screen

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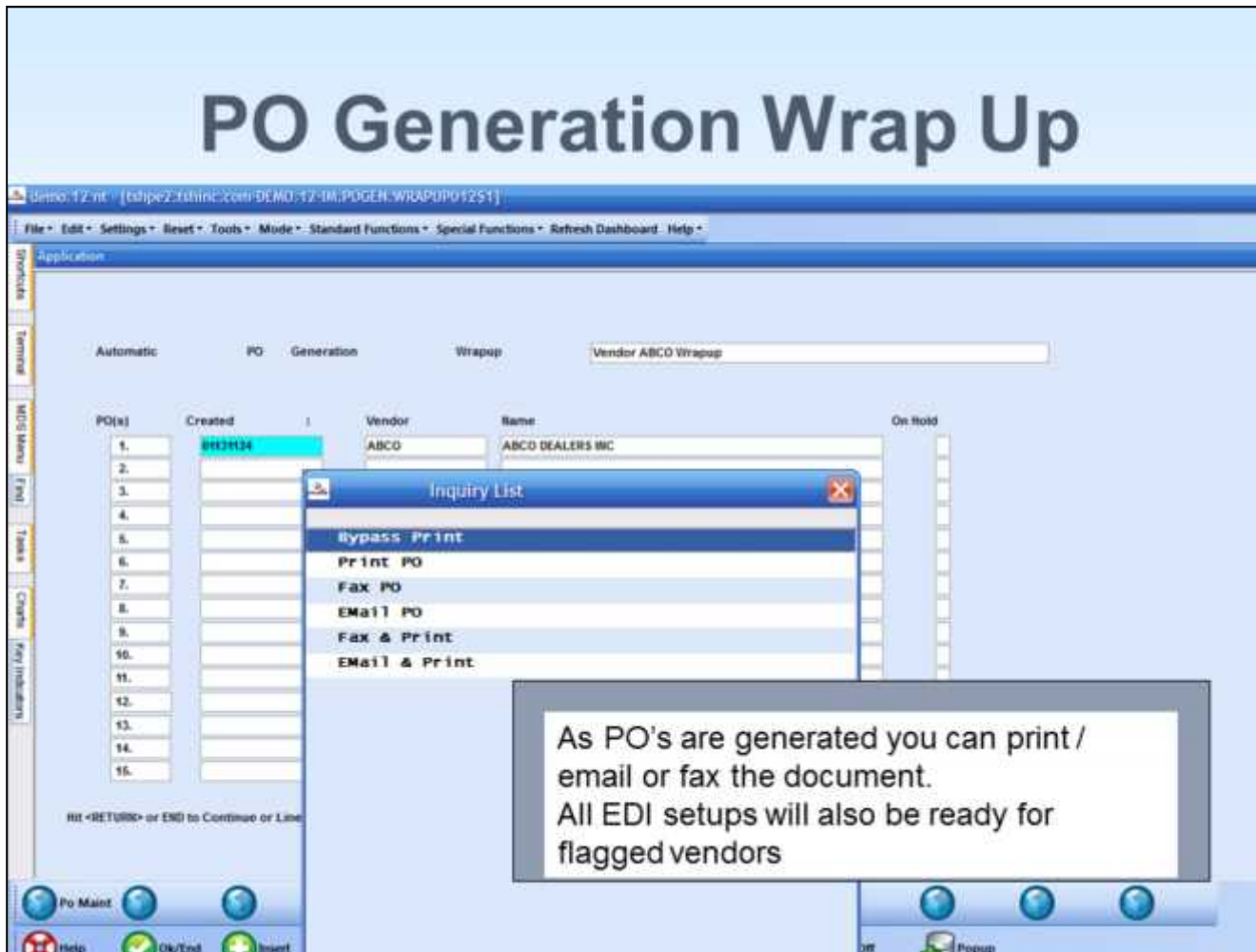

By Clicking on one of the buttons on bottom of this screen, you can access the Stock Status, Inventory, Cost Quote or Vendor Notes Inquiries. You can navigate back and forth between the inquiries and the PO generation screen.

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PO Generation Wrap Up

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Automatic PO Generation for Vendors on a Scheduled Basis

- Select Warehouse
- Create PO's by Frequency
- Put on hold for review

PO's will be created for all vendors flagged for auto Po generation. The order quantities will be calculated the same as in PO generation by vendor. When the PO's have been created a screen listing and a printed report of the PO numbers will be generated. All of the PO's will be put on Hold, and will not print, fax, email etc until an operator has gone to PO Maintenance and released them. They can then be directed to print, E-mail, Fax, or EDI.

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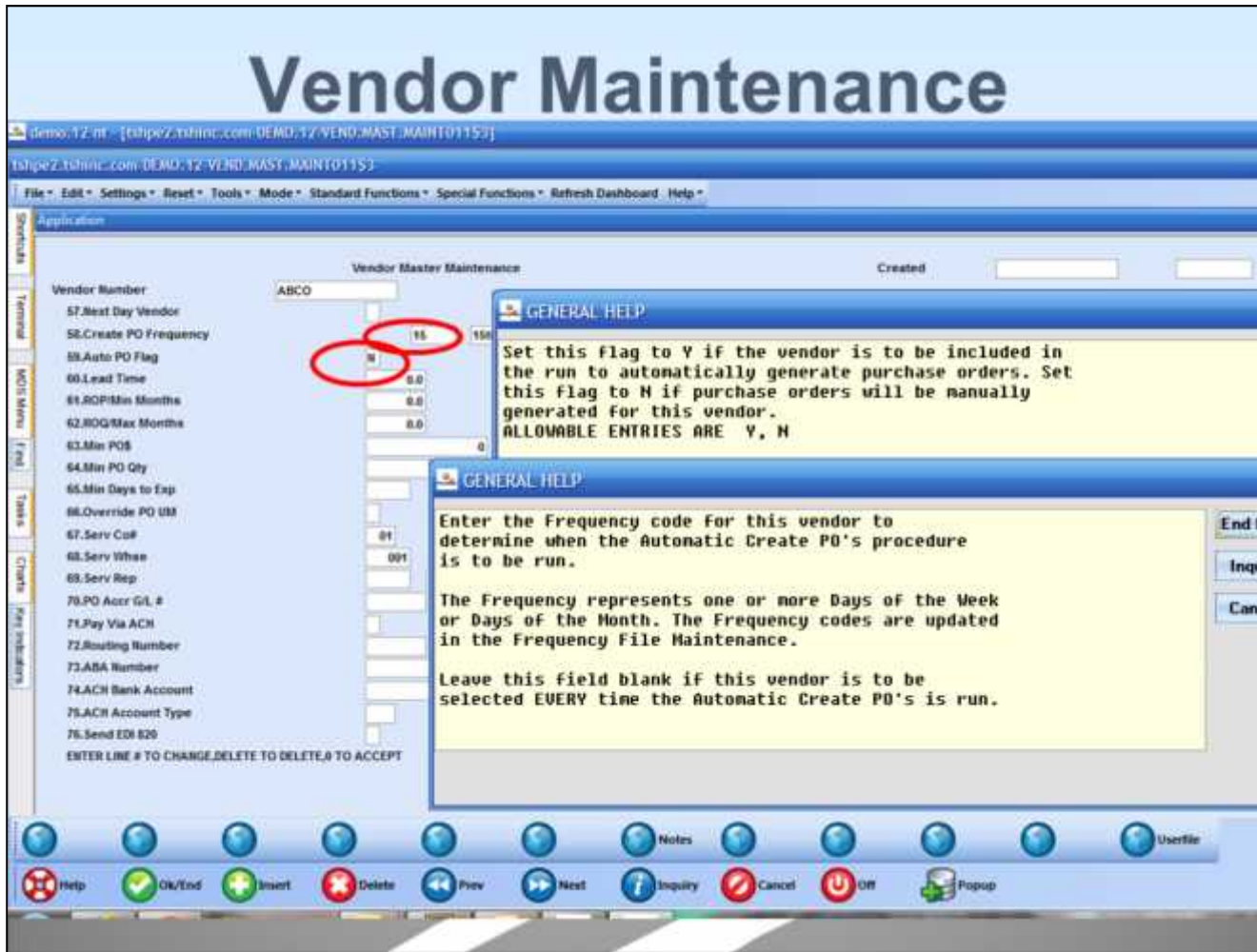
You can setup a vendor for a specific frequency. Only on Monday, bi weekly, monthly, etc. You assign the frequency code setup in frequency maintenance to the vendor. You also need to set the vendor up as Auto Po Flag of "Y". If the vendor is setup up with no frequency code it will be selected and checked each time the automatic po generation program is run.

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PO Generation Frequency Maintenance

SH - [rs60000 BASE.12-FREQUENCY.MAINT0125]

000d-BASE.12-FREQUENCY.MAINT0125]

e • Edit • Settings • Reset • Tools • Mode • Standard Functions • Special Functions • Refresh Dashboard Help •

Application

Frequency File Maintenance

Frequency Code

1.Description

2.Days of the Week

FREQUENCY
1 10TH /
2 MONDAY
3 12 / 3
4 TUESDA
5 MONDAY
6 MONTHL

GENERAL HELP

Enter the days of the month for this Frequency
that a procedure is to be run.

GENERAL HELP

Enter the days of the week for this Frequency that
a procedure is to be run.

For example: MON,WED,FRI

If you enter values for Days of the Week, you cannot
enter values for Days of the Month. You must
choose to use one or the other.

If you enter values for Days of the Week and wish to
change to use Days of the Month, then you must
first delete each value for Days of the Week before

End Help

Inquiry

Cancel

Help   Ok/End   Insert   Delete   Prev   Next   Inquiry   Cancel   Off   Popup

The automatic po generation can be setup to do all vendors each time it is run or at specific days of the week or dates. The frequency maintenance allows you to select days of the week, one or multiples or a specific date or multiples. In the examples one is for bi weekly purchasing of Monday and Thursday, the other is for the 15th and 30th of the month. These frequencies can be assigned to vendors.

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As you can see from this brief overview of the Inventory Management Lite System, you can see the cost effective and time saving benefits to using this system as opposed to entering your PO's manually.

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