Keeping Stock
Balances Accurate

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From Microsoft Business Solutions

Our goal is to help distributors reach their maximum business potential by delivering connected solutions designed to meet unique business processes through trusted partnerships and ongoing service.

This report is the second in a series of white papers designed to help forward-thinking distributors increase efficiency, customer service and profitability with smart inventory management strategies based on tried and proven methods and best practices.

The author, Jon Schreibfeder, draws from decades of experience helping more than 1,000 distributors achieve better inventory management. A popular speaker at distribution conferences, Mr. Schreibfeder has literally "written the book" on this topic, with Achieving Effective Inventory Management now in its second edition.

As a leading provider of specialized distribution and business management systems, Microsoft Business Solutions is pleased to sponsor this series. We are committed to serving the success of companies in the distribution industry through education and world-class technology.

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>> The First Steps to Keeping Stock Balances Accurate

Where to begin? Understanding the problem.

Many distributors spend thousands (and hundreds of thousands) of dollars implementing new computer software systems. Often these systems are purchased to help these companies gain control of what is probably their largest investment: their inventory. But sometimes these distributors find that they are no better off after the new software is implemented than they were with their old system. Management is frustrated and feels that they've wasted a lot of time and money. We've discovered in 23 years of working with computerized inventory systems that often the problem causing this dissatisfaction has nothing to do with the software. The new system doesn't perform up to its potential because the on-hand or available quantities of products in the new software do not agree with what is physically in the warehouse. This situation causes many problems:

> Customers are disappointed because they are promised material that the computer says is on-hand, but is not physically available in the warehouse

> Inside salespeople cannot rely on the computer's stock balances and must go out in the warehouse to physically check stock

> Material is not reordered when the actual stock balance falls below the minimum quantity in the computer system. Products are either replenished too early (if there was actually more than the computer's stock balance in inventory) or too late (if there was less than the computer's stock balance on the shelf). The result: overstocks of some items and stock outs of other products.

> Buyers are forced to overstock inventory. Why? Well compare your inventory to a checking account. If your spouse refuses to record checks as they are written and balance the checkbook every month, you are forced to keep a large balance in the checking account to avoid bouncing checks. If all disbursements and deposits are properly recorded, a lower balance can be maintained in the checkbook and the freed up money can be put to better use.

It's obvious that maintaining accurate stock balances is critical to achieving effective inventory management. In this document we'll look at some of the policies and procedures you can put in place to achieve this goal.

Record All Material Movement.

A salesperson walks into your warehouse and walks out with a "sample" for a customer. A warehouse worker is cutting two lengths of 10 foot pipe into 20 one foot pieces. He makes a mistake and cuts one 11" piece. It's thrown in the scrap pile when no one is looking and he takes another 10 foot piece out of stock to complete the job. A salesperson brings back a box of assorted left over material from one of his customer's completed projects. He dumps the box in the warehouse and takes a list of what he thinks is in the box into the office and has a clerical person issue a credit. All of the credited material is added back into inventory (at least in the computer). But when the warehouse manager finally unpacks the box she finds that more than half of the material is not suitable to be resold and throws it out.

These are three examples of how not recording material transactions properly can result in inventory inaccuracies. Successful distributors develop and maintain a policies and procedures manual. This is a step-by-step guide for processing any transaction that affects inventory. To create your company's manual, start by listing all of your inventory-related transactions: This list might include:

> **Normal stock receipts – From previously issued purchase orders and transfers**
> **Unexpected stock receipts – The stuff that just shows up on your receiving dock**
> **Requisitions – A request for material to be consumed within your company**
> **Emergency requisitions**
> **Sales:**
>   – **Orders to be delivered**
>   – **Orders to be picked up**
>   – **Cash sales**
>   – **Direct shipments**
>   – **Orders for non-stock products**

> **Transfers to other warehouses or facilities**
> **Assembly orders**
> **Bin-to-bin transfers within your warehouse**
> **Returns of stock material**
> **Returns of non-stock material**
> **Returns of damaged material**
> **Returns to your supplier**
> **Adjustments to on-hand quantities – Who is allowed to approve adjustments? Under what circumstances?**
> **Scrapping and writing-off stock**

You probably can add other transactions to this list. Circulate the list among your employees to be sure that you have included every function they perform that will affect inventory balances. Outline how each transaction should be processed. Then circulate and review the resulting policies and procedures guide with all employees who have access to inventory. Make sure that your procedures do not allow material to "fall through the cracks" and that you have specified how damaged inventory should be identified and handled. In the future there will be two ways of handling stock: your company's approved methods and the wrong way!

Unfortunately, no computer system can guarantee that all material related transactions will be properly recorded. People tend to find excuses for going around the system. Some of them may be good reasons. But any material movement that is not properly recorded results in inaccurate stock balances. We have found a simple solution to this problem. Post a clipboard near every exit of your building. A simple form on the clipboard contains five columns:

Date	Quantity	Item #	Reason	Taken By
1-10-03	1	A-1234	Sample for Acme Construction	Jeff Miller
1-10-03	12	M-2356	Emergency for Jensen Controls Will Bring Back P.O.	Karen Becker

Establish an unbreakable policy that any material removed from the warehouse must be recorded in your computer or on the clipboard form. A clerical person can enter the transactions listed on the clipboard into your computer system once or twice a day. But for this simple solution to be effective you must enforce an unbreakable policy: Any material removed from the warehouse that is not recorded in the computer or on the clipboard will be considered stolen! Your employees must realize that you are serious about achieving effective inventory management!

Put Your Best People in Receiving and Stocking.

Many distributors have a bad habit. They assign new warehouse employees to the receiving dock to "learn the business". Management thinks that because they do not have any direct customer contact, these new recruits cannot cause any problems or get into any trouble as they are trained. You must realize that receiving and stocking are the most critical functions in your warehouse. Only your most experienced and reliable employees should be assigned to these tasks. Why is receiving and stocking so important and challenging?

> **Receivers must be able to properly identify products as they are received –** Many items are similar in appearance but actually are very different products. A receiving person must be so familiar with your inventory that he or she can accurately verify that vendors have shipped the right quantities of the products that were ordered and that the material is in suitable condition to be sold or used.

> **Stocking People Must Know Where Material Should be Stored –** If material is put away in the wrong location how easy is it to find? If you have a 50,000 square foot warehouse, it may be like looking for a needle in a hay stack. Misplaced merchandise is not available to fill sales or production orders. Customers may be disappointed and you may have to reorder a product that is lost somewhere in your facility. The result: you lose both money and your reputation as a reliable supplier. Experienced people know where material goes and how it should be put away to minimize the cost of filling orders. Reserve these jobs for workers you can trust.

After initial training new employees should pick orders under careful supervision. It is easy for an experienced person to check their work. And if any mistakes are found, they can be corrected without much effort.

Consider Bar Coding.

Bar coding is a wonderful tool for improving both warehouse efficiency and the accuracy of on-hand quantities. Advantages of bar coding systems include:

> **Verifying that the correct item is being picked or put away –** Bar code labels can be printed on warehouse documents as well as bin locations or the actual product. When a warehouse worker fills an order, she can scan the bar code on the pick ticket and then the bar code on the bin or item. If the bar code reader beeps nicely, she knows that she has the right product. If it makes a harsh sound the picker knows that the item is not the product listed on the order. In the same way bar codes on receiving documents help ensure that material is put away in its proper location. The resulting reduction in errors not only saves money but helps to improve customer service and your reputation as a reliable supplier.

> **Instant Updates of Computer Records –** If you are using radio-frequency bar code units, your computer's on-hand quantity of an item in a bin location is reduced as soon as the picker scans the item as he removes it from the shelf. In a paper system, the on-hand quantity of the item usually is not reduced until every item on the pick ticket is pulled, the paperwork is returned to the office and a clerical worker enters a confirmation of the picked quantities in the computer system. The real-time information provided by bar-coding helps keep inventory accurate and allows inside salespeople to have confidence in your perpetual inventory system.

> **Elimination of Many "Keying" Errors –** Every time a human being keys information into a computer is another opportunity for a mistake to happen. Bar coding replaces many manual data entry tasks and has the ability to verify that accurate information is being entered.

Cycle Count Your Products on a Regular Basis.

Many distributors conduct an annual physical inventory. That is they count the products in their facilities once a year. Unfortunately we've found that most physical inventories are a total waste of time and money. Why?

> **Usually anyone with a pulse is drafted to count inventory during the physical –** Even people who are not familiar with your products will be sent out to the warehouse so that all of the products can be counted in the time allotted.

> **Workers do not enjoy the physical count process –** They probably have better things to do with their weekend than spend it in a hot or cold warehouse counting products. In all probability their actual objective is not to perform an accurate count, but to put down on the count sheet whatever management will accept so they can go home.

> **There is a tremendous time pressure to finish the count –** Shutting down operations for a physical count is a very expensive process. Usually at the end of the time allotted management will decide to accept the existing count as being as "accurate as possible" so that the company can return to the task of servicing customers. Many discrepancies between the computer's perpetual inventory and the quantity counted may remain unresolved.

Even if an annual physical count is 100% accurate, how long does it stay accurate? A week? A month? Many distributors respond that on-hand quantities only remain accurate until they start shipping material again.

For most distributors cycle counting provides a much better tool for maintaining accurate stock levels than an annual physical inventory. Cycle counting is the process of counting a few products every business day throughout the year. There are three common methods to determine what products to count on a specific day:

> **Random Selection –** Products to be counted are chosen at random. While this method keeps potentially dishonest employees on their toes, it does not ensure that all items in a warehouse will be counted on a regular basis.

> **Geographic Selection –** Products are counted in sequence. Starting at one end of the warehouse a certain number of products are counted each day until the counters reach the other end of the building. All products are counted the same number of times, even though some products are more susceptible to discrepancies than others.

> **Rank Based Selection –** Products that are sold most often (regardless of quantity) or have the highest cost of goods sold are counted most frequently. Slow moving products and dead stock items are only counted once a year.

Of the three methods we've found that rank based cycle counting to be the most effective at maintaining accurate stock levels. The more frequently an item is sold, the more chance for inventory inaccuracy. After all, every time someone fills an order or puts away a stock receipt is another opportunity for an error to occur. And the products that are requested most often are probably extremely important to your customers. In order to provide good service, it is critical that you have accurate counts for these items.

It is interesting that, for most distributors, relatively few products are responsible for the majority of product requests (also known as 'hits'). You may have heard of the 80-20 rule or "Pareto's Principle". This theory states that 80% of your sales are derived from 20% of your inventory items. We've found this not to be true. Usually only 10% - 13% of a distributor's inventory items are responsible for 80% of activity and 50% of items are responsible for 95% of sales.

We want to count the few items responsible for 80% of sales very frequently, perhaps six to eight times a year. Items with fewer hits can be counted less often. Let's look at a typical rank-based cycle counting program.

Items are sorted in descending sequence by either hits or cost of goods sold. The items that are responsible for 80% of total activity are assigned to the "A" rank, products responsible for the next 15% of activity are assigned to the "B" rank, "C" rank products include the products that are responsible for the next 4% of activity and "D" rank products are responsible for the last 1% of activity. Products with a rank of "X" have no cost of goods sold or hit activity (they're dead stock).

> **Count the "A" rank products six times a year**
> **Count the "B" rank products three times a year**
> **Count "C", "D" and "X" rank products once or twice a year**

Rank based cycle counting ensures that your counting activity is productive. Spending just an hour or so a day counting can make the difference in maintaining an accurate perpetual inventory system.

It takes a lot of discipline to implement and follow a program in which you count a certain number of products every business day. Many distributors have tried cycle counting and abandoned the program. They've been frustrated as other tasks have interfered with the process or they have not been able to complete counting all of the products scheduled on a certain day. The following ideas have helped many of our customers develop successful cycle counting programs. These companies are working "smarter" rather than "harder".

> **Set up a cycle count schedule for the entire year –** Know in advance what products you plan to count each day. If for some reason you are unable to count all of the products scheduled one day, make a commitment to "catch up" on the following day. Here is a sample count schedule for one of our customers. They are open for business 250 days per year:

> **Determine an acceptable level for count accuracy –** In a perfect world you would only be satisfied with a 100% accurate count. But how much effort do you want to extend looking for five missing pieces worth a total of 35 cents out of a total inventory of $1,000,000? Most successful distributors set limits on discrepancies that require a recount and a search for missing material. For example, one of our customers will order recounts if the counted quantity differs from the quantity in the computer by more than 5%, or the total value of the discrepancy is more than $10. Minor differences between the counted quantity and perpetual inventory are posted without the item being recounted.

Day 1 - 17	Count "A" items	Day 134 - 149	Count 2nd half of "C" items
Day 18 - 42	Count "B" items	Day 150 - 166	Count "A" items
Day 42 - 59	Count "A" items	Day 167 - 174	Count "D" and "X" items
Day 59 - 74	Count 1st half of "C" items	Day 175 - 199	Count "B" items
Day 75 - 91	Count "A" items	Day 200 - 216	Count "A" items
Day 92 - 116	Count "B" items	Day 217 - 250	Count "C" items
Day 117 - 133	Count "A" items		

> Be sure to check tag and hold and other staging areas for missing stock before posting discrepancies – Inventory may not be missing, just temporarily stored in another location.

> Have counting performed by conscientious experienced warehouse workers who know your products – These people know what they are counting and can count faster and with more accuracy than inexperienced workers.inventory are posted without the item being recounted.

> Show the counters the current on-hand quantity – There is an argument that you can get a more accurate count if you do not show counters what they are supposed to find in inventory. But we have found two advantages to showing counters what they are expected to find in stock:

- Counters can count up to twice as many products in the allotted time if they know what is supposed to be on the shelf. With this increased productivity you probably can afford the time to selectively audit counts to be sure your workers are not taking short cuts.

- If the counted quantity is less than what is expected, counters will tend to look in nearby locations for the missing material. If found, it can be put in its proper location and included in the count. This reduces the number of count discrepancies and the time spent looking for missing material.

Some people think that you must cycle count before or after normal business hours, when there is little or no material movement. Though ideal, this is impractical for many distributors. We've found a simple method that allows cycle counting to be performed during the business day:

1. The counter obtains a list of the products to be counted that day

2. He or she places a label reading "Cycle Count Today" on the bins that are being counted and a card in or on the bin. This card lists the item and bin number along with four columns with the following headings:

> **Time**
> **Transaction Type**
> **Order Number**
> **Quantity**

3. The counter prints a listing of items to be cycle counted including the current on-hand or shelf quantity. He notes the time the report is printed.

4. If a quantity of a product is removed from or added to a bin marked "Cycle Count Today", the warehouse person will note the time, transaction type (i.e., sales order or stock receipt), order number and quantity on the card that was previously distributed.

5. When the counter counts a specific bin he will examine the transactions listed on the card. If an order was filled after the count sheet was printed he will add the quantity on that order to the quantity found in the bin. The total amount should agree with the on-hand quantity on the count sheet (i.e., the computer's perpetual inventory quantity when the report was printed). He will make similar adjustments for the other transactions listed on the card.

Cycle counting is a very important element in a program to maintain accurate stock balances. Most highly profitable, successful distributors have established cycle counting programs. One of the advantages of implementing a radio frequency bar coding system is to simplify the cycle counting process. Because the computer's on-hand stock quantities are updated as soon as material is scanned, the quantity in the bin should always agree with stock level in the computer. These systems can be programmed to occasionally prompt a picker to verify the remaining balance in a bin after an order has been filled. As a result cycle counting becomes a byproduct of the order filling process!

If you don't know what is actually in your warehouse or storeroom, you cannot provide customers with reliable stock availability information and you won't reorder products at the proper time. Maintaining accurate stock balances is a vital component of an effective inventory management program. Without correct on-hand quantities it is difficult if not impossible to meet your customer service and profitability goals. You will also not be able to take advantage of the inventory management tools available in today's advanced computer software packages.

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