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- Mike Milliken, BN.com Review.

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- Jason Myers, TX
Amazon.com review

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“One thousand one . . . one thousand two . . .”
MANAGING INVENTORY

CONSIDER your inventory carefully. Buying too much or too little, the wrong type or size, can quickly lead to financial problems. In fact, it doesn't take long for excess inventory to quickly become dated and hard to clear, nor does it take long for customers to become dissatisfied with your selection (or rather lack of selection), and take their business elsewhere.

To help prevent these problems and maximize your profits, set up an inventory control and management system that:

- outlines your ideal inventory level,
- establishes inventory purchasing policies and strategies, and
- informs you at a moment's notice what your inventory status is.
DETERMINING YOUR IDEAL INVENTORY LEVEL

THE FIRST PART of setting up an inventory control and management system involves determining your ideal inventory level. Inventory must be maintained at a proper level and provided in a timely fashion, otherwise production efficiencies will erode, as in the case of a service or manufacturing business, or sales will plummet, as in the case of a wholesaling or retailing business.

However, finding that proper level is easier said than done. To do this, you must consider factors like:

- How much capital is available to purchase inventory?
- How much and what kind of consumer demand exists in the marketplace and how will this effect sales projections?
- How much inventory have you sold in the past?
- What are the industry averages for your type of business?
- What and how much are your inventory carrying costs and how do they increase as your inventory levels increase?
- Can quantity discounts actually save you money in the long run?
- How much storage space do you have or have access to?
- How much inventory do your suppliers require?
actually have available to sell?

To help you determine the best inventory level for your business, an explanation of each of the above factors is provided below, as well as an explanation of the various mathematical formulas, rules and ratios used by management to calculate desired inventory levels, turnover rates and order quantities.

**NOTE** The term *inventory* includes retail/wholesale merchandise or stock, raw materials, work in process, finished products, and supplies that physically become a part of the item intended for sale.

**Factors that Influence How Much Inventory You Need**

The following factors influence how much inventory you *should* carry, or *will be able to* carry, at any one time:

**Amount of Capital or Financing Available** – In determining how much inventory to hold, you need to consider how much money you have or have access to, as well as the effects of any financing charges on your cash flow. Obviously, the less capital you have or financing available, the smaller amounts of inventory you will be able to purchase.

*Large inventories consume cash, increase the investment in the business and can bankrupt a business if not properly controlled. It is thus an important objective of every inventory control and management system to keep the financial investment in inventories just sufficient to supply the business – no more, no less.*

**POWERPOINT**
However, even if you have access to numerous capital resources, if your cash flow needs are unpredictable (as is the case with most new businesses), it is perhaps wiser to set up a special reserve fund to meet sudden high demand for a particular product, rather than to fully invest in all your inventories and bear the full brunt of high monthly interest payments.

**Consumer Demand & Projected Sales** – In determining how much inventory to hold, consumer demand for the type of products your company makes or stocks and the resulting sales generated, must be predicted so that sufficient raw materials or goods can be purchased to satisfy that demand. These predictions must be as accurate as possible, as holding inventory levels at less than what is needed to support sales will cost your firm business, while holding more inventory than present demand will generate excessive inventory holding costs.

In determining how much inventory to hold, it is also useful to predict and closely monitor the demand for key inventory items. For example, if you are presently experiencing a sudden unexpected increase in demand for oatmeal bran due to the fact that a new and widely promoted study by the FDA has concluded that oatmeal bran reduces the risk of all forms of cancer by 300%, than obviously it is to your advantage to stock up on this particular item or items similar to it.

**NOTE** To prepare for potential sales in-

*Displaying older inventory prominently and monitoring its turnover daily, can help prevent loses due to obsolete inventory.*

**SUPERTIP**
creases, it may be prudent to hold some level of “safety stock.” The amount of safety stock is determined by comparing the cost of maintaining this additional inventory against potential sales losses.

**Historical Sales Patterns** – In determining how much inventory to hold, take into account historical sales patterns and past experiences with certain products. This information may tell you to order key items more frequently than others, or to stock up on all items during certain times of the year (e.g., stock up on school supplies for August and September).

**Industry Averages** – In determining how much inventory to hold, find out what the average inventory level and corresponding stock turnover rate is for your industry or line of merchandise. Consult various trade journals in your industry.

**NOTE** There is a trend towards having smaller and smaller inventories due to faster and more efficient shipping and ordering processes. More and more companies are aiming to achieve a rapid turnover on all their inventories, believing that the fewer dollars they tie up the better. This strategy allows them to respond faster and reinvest their capital to meet additional consumer needs.

**Inventory Carrying Costs** – In determining how much inventory to hold, you need to factor in the numerous costs asso-

More and more companies are aiming to achieve a rapid turnover on all their inventories, believing that the fewer dollars they tie up the better.
associated with keeping inventory on your premises, in addition to the outright purchase costs. These costs often referred to as inventory carrying or holding costs, include the costs of:

- ordering
- financing
- receiving
- storing
- handling
- insurance

Furthermore, you must consider:

- costs of keeping stock control records
- deterioration
- obsolescence costs

- physical damage
- tax expenses
- theft

The above inventory carrying costs always increase as inventory levels rises. It is thus critical not to stock more inventory than you need to keep your operating costs reasonable, and at the same time making sure you have enough to satisfy demand.

NOTE Ordering costs, include the administrative costs of placing, tracking, shipping, receiving and paying for an order. These costs are fixed for every order and remain the same regardless of an order’s size.

**Quantity Discounts** – In determining how much inventory to hold, you should
consider whether any discounts received for making large single orders of goods or raw materials rather than numerous smaller ones, more than compensate you for the resulting increased carrying costs and increased probability of spoilage and damage. You will also need to bear in mind that even if a large order significantly reduces your per unit costs and thus increases your per unit profits, unnecessarily tying up excessive amounts of cash can have a seriously negative impact on your cash flow position.

Storage Space – In determining how much inventory to hold, whether you are a retail, wholesale or manufacturing business, you must factor in how much space you actually have available to store or display goods. Obviously, if you operate

Strategies for Finding the Right Inventory Level

TO FIND THE right inventory level, an owner-manager must also find a balance between:

- **Maintaining a wide assortment of stock** but not spreading rapidly moving goods too thin.
- **Increasing inventory turnover** but not sacrificing service level.
- **Keeping stocks low** but not sacrificing service or production efficiency.
- **Obtaining lower prices by making volume purchases** but not ending up with slow-moving inventory.
- **Having an adequate inventory on hand** but not getting caught with obsolete items.
an auto dealership, for example, and have only enough room for 100 cars in your parking lot, unless you start stacking cars on top of each other, or lease storage space from another nearby business, you can only stock 100 cars at any one time.

Supply Levels – In determining how much inventory to hold, you need to consider how much stock your suppliers have or have access to. More simply put, if you figure you can sell six wonder gadgets a month but your suppliers can only provide you with three, then you can only order three.

NOTE It is very important whenever launching a large promotion to make sure your suppliers have enough merchandise to meet your deadlines.

Calculating a Profitable Inventory Turnover Rate

Since the goal of inventory management is to provide a sufficient amount of inventory to meet the sales demand and to maximize profitability, you need to develop an effective method for determining:

- the minimum annual cost of ordering and stocking each item in your inventory
- the average minimum cost of ordering and stocking all the items in your inventory
- the average number of times your inventory is sold within a specific period of time i.e., your inventory turnover rate

If you figure you can sell six wonder gadgets a month but your suppliers can only provide you with three, then you can only order three.
how much money you should have invested in inventory at any one time. The following formulas, rules and ratios can be used to help determine these quantities:

**Using the EOQ Formula** — If you are in the business of buying and reselling goods, a handy tool you can use to help reduce inventory costs is the “Economic Order Quantity” (EOQ) formula. This formula helps you calculate the minimum annual cost for ordering and stocking each item (or group of items) in your inventory by considering the total units sold per year, the cost of placing and receiving orders, and all inventory carrying costs for each item. By knowing your optimal order size for ALL inventory items, you can then average these to calculate your average turnover rate.

**Calculating your EOQ** — The EOQ model states that given certain reasonable assumptions, the order quantity that minimizes total inventory cost can be found using the following formula:

\[
EOQ = \left( \frac{2 \times F \times S}{C \times P} \right)^{1/2}
\]

Where,

- **F** is the cost of placing and receiving an order.
- **S** is the annual sales in units (or sales in units for a specified period).

A high turnover ratio normally indicates an efficient use of inventory. However, a high turnover ratio can also mean you are missing sales opportunities because items that customers are requesting are not in stock. **SUPERTIP**
**C** is carrying costs expressed as a percentage of inventory value (usually this cost is the interest rate charged for any borrowed funds used to buy the inventory).

**P** is the purchase price the firm must pay per unit of inventory.

For example, if you own a shoe wholesaling company and sell 10,000 pairs of slippers per year, where your purchase price is $5 per pair, your fixed cost per order is $500, and your carrying costs have been calculated to be 20 percent of the inventory value for that particular item, then according to the EOQ model, the quantity of slippers you should order each time is:

\[
[(2 \times 500 \times 10,000) \div (20\% \times 5)]^{1/2} = \]

\[
3,162 \text{ pairs}
\]

Using a variation of the inventory turnover ratio formula shown on the following page (where units are substituted for dollar value), this gives you an inventory turnover rate of:

\[
\frac{10,000 \text{ units per year}}{3,162 \text{ units}} = 3.162 \text{ times per year}
\]

With an average turnover rate of 3.162 times a year, you should reorder new stock every 115 days (365 days per year/3.162).
### Calculating Key Inventory Figures Using Inventory Ratios

FOR EXAMPLE, if during the previous year your business sold goods that cost you a total of $200,000, and if your average inventory at any point during that year was about $20,000, then your inventory turnover rate would be $200,000 divided by $20,000 or 10 times. To calculate the number of days your inventory turns over, you would then divide the number of days in the year by your turnover rate (365 days / 10 = 37 days). These two numbers indicate that during the past year, your inventory turned over 10 times and, on average, it took about 37 days to sell the entire inventory. However, if the average turnover rate for your industry is 12 times, then your ideal inventory level should have been $16,666. Operating at this inventory level would likely have reduced your carrying costs, hence increasing your profits, without affecting sales to any large extent.

**NOTE** The term average inventory refers to the average stock available for sale during the period in question (usually a year). It’s calculated by totaling the number of inventory counts made during the period and averaging them (ITR = Inventory Turnover Rate).

<table>
<thead>
<tr>
<th>Formula</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ITR Based on Cost</strong></td>
<td>( \frac{\text{Annual Cost of Goods Sold}}{\text{Average Inventory at Cost}} )</td>
</tr>
<tr>
<td><strong>ITR Based on Retail Cost</strong></td>
<td>( \frac{\text{Retail Sales}}{\text{Average Inventory at Retail}} )</td>
</tr>
<tr>
<td><strong>ITR Based on Units of Merchandise</strong></td>
<td>( \frac{\text{Sales in Units}}{\text{Average Inventory in Units}} )</td>
</tr>
<tr>
<td><strong>Inventory Turnover Days</strong></td>
<td>( \frac{\text{Number of Days in a Period}}{\text{Inventory Turnover Rate}} )</td>
</tr>
<tr>
<td><strong>Ideal Inventory</strong></td>
<td>( \frac{\text{Annual Cost of Goods Sold}}{\text{Industry Average Turnover Rate}} )</td>
</tr>
</tbody>
</table>

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Using a Spreadsheet to Calculate your EOQ – Suppose, for example, you wish to sell a total of 1,000 exotic African vases by mail. You buy the vases for $25 each; it costs you $60 in overnight-international-courier charges to place each order; and to pay for the vases, you borrow money on a revolving bank-credit line that costs 12% annually. Using a spreadsheet program such as Excel, enter total quantity (1000) in cell A1; enter shipping costs ($60) in cell A2; enter purchasing costs ($25) in cell A3; enter interest rate for credit (.12) in cell A4; and enter the formula,

\[+((2*A1*A2) / (A3*A4))^{(1/2)}\]

into an empty cell.

The spreadsheet returns the value 200 as the EOQ – the order quantity that will minimize your overall costs for buying and holding inventory.

Using the “Total Sales Divided by Six” Rule: For most businesses, total inventory should turnover at least six times per year. Using this rule of thumb, to figure out how much capital you should have invested in inventory at anyone time, you need to divide your yearly cost of goods sold by six. For example, if you project annual sales to be $400,000 at a cost of $240,000, then you should carry on average $40,000 worth of inventory.

<table>
<thead>
<tr>
<th>A1</th>
<th>Total Desired to Sell</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2</td>
<td>Shipping Costs</td>
<td>$60</td>
</tr>
<tr>
<td>A3</td>
<td>Purchasing Costs</td>
<td>$25</td>
</tr>
<tr>
<td>A4</td>
<td>Interest Rate</td>
<td>.12</td>
</tr>
<tr>
<td>A5</td>
<td>EOQ Formula</td>
<td>200</td>
</tr>
</tbody>
</table>
NOTE If your plan to retail high ticket items (which tend to have a slower turnover), a more realistic rule would be total sales divided by four or four and a half.

Calculating a Profitable Turnover Rate for a Manufacturing Business –
To help manage inventory for a retailing business, inventory turnover rates are used. However, for a manufacturing business, it is easier to figure the amount of inventory it should carry in terms of days of sales.

For example, if it is planned to stock a minimum inventory of running shoes being manufactured equivalent to 3 weeks (15 working days) of the projected sales rate to ensure having enough shoes to satisfy demand (the maximum inventory might be 6 weeks of the projected sales rate to limit the investment in raw materials), and if the sales rate of running shoes was 150 pairs per day, then the inventory days for the minimum inventory planned would be 2,250 pairs of shoes.

If the running shoes cost $10 a pair to manufacture then the minimum inventory planned would be $22,500 (2,250 units x $10 per unit) and the daily cost would be $1,500/day.

Putting Stock Turnover Averages into Perspective
In calculating your stock turnover, beware of taking averages to the extreme. For example, in a men’s store, the overall turnover average may show 4 times a year, but shirts may turnover 5.2 times and shoes
only 2.2. Also within departments, stock turnovers may vary considerably. For example, men’s dress shirts and casual shirts may have completely different turnover rates. This should be reflected in your purchasing policies.

One way to tackle this problem is to subdivide your merchandise into reasonable classifications, and attempt to establish a realistic averages for turnover rates on each classification. As you pinpoint the stock turnover rate of each line or style, you will be able to determine the actual rate of sales and which are the fast sellers and slow sellers. This is important in determining reorders and in deciding whether to continue with lines that are not earning their keep.

*SUPERTIP*

*If inventory can be reduced and sales maintained, the result will have a positive impact on profitability.*
DEVELOPING A PURCHASING PLAN

THE SECOND PART of setting up an inventory control and management system involves developing an inventory purchasing plan. A purchasing plan should provide detailed answers to the following types of questions:

- What kinds of inventory items should we purchase and keep in stock and how should we do this?
- Who will supply us?
- How can we get the most out of our suppliers?
- How should shipments of goods or raw materials be received, inspected and order quantities verified?
- When should reorders be placed?
- When should inventory on a certain item be peaked and reorders no longer placed?
- How much should we spend?

Establishing Buying & Selling Guidelines

After you have figured out what kinds of products or materials to purchase and stock (this has been dealt with in greater detail in earlier Guidebooks), a good purchasing plan should outline what kinds of methods are available to you to acquire and sell that inventory. The most common approach is to buy direct from suppliers. However, if you cannot get enough capital to finance or
purchase your inventory directly from suppliers you may decide to join a buying group, order inventory only after a sale has been made, sell on consignment, or use what is known as a drop shipping company.

1. **Buying Direct from Suppliers** – Direct purchasing, whether it be from wholesalers or manufacturers, offers the greatest chance for profit and loss (see strategies for getting the most out of your suppliers outlined later on in this section). However, while buying direct from wholesalers is more straight forward, as they are purposely set up to function as suppliers and thus have better sales service infrastructures, buying direct from manufacturers can help cut out all the middle men and any resulting wholesale markups, giving you and the manufacturer a bigger share of the profits.

2. **Joining a Buying Group** – For small businesses who do not have the volume buying power of larger companies, one method of reducing purchasing costs is to join or create a buying group of similar businesses that purchase the same products but are not in direct competition with each other. This type of relationship can result in quantity discounts and a better selection of merchandise.

*Statistics Canada tabulates department store monthly stock sales ratios be departments for Canada (catalogue No. 63-002). This is a good source for determining if your stock turnover is below or above the average.*

**FUNFACT**
3. Selling on Consignment – Selling on consignment means you don’t buy any inventory. You just store it, advertise it and essentially sell it on a commission basis. It works this way: manufacturer’s, wholesalers or even private individuals give you their products to sell. When you sell their product you keep a percentage as a commission (usually anywhere from 15% to 50% of the retail price) and pay the consigner the rest. Unsold products are returned to or picked up by the consigner.

The disadvantage of consignment selling is that although you don’t need any cash to purchase merchandise, your profit off each item is usually less than what it would be had you bought the item direct.

4. Ordering Inventory after a Sale Has Been Made – In the case of a highly specialized retailer, it is possible to order and pay for inventory only after a request has been made. Usually, a cash down payment or in some cases full payment is collected before the order is placed and processed. However, for the typical retailer, this way of doing business is impractical as competitive forces dictate that if you don’t stock items customers want, they will quickly move on to other places that do.

**NOTE** It is possible for mail order sellers, offering unique items not regularly found in retail stores, to buy inventory only after advertising has created sufficient demand.
retail stores, to buy inventory only after advertising has created sufficient demand. This is because mail order buyers will normally tolerate a short delay in receiving their merchandise.

5. **Using a Drop Shipping Company** – Using a drop shipping company to meet your inventory needs works this way. You advertise a product presently being stocked by a drop shipping company. When an order is received along with full payment, you forward the order to the drop-shipping company. The drop-shipping company then mails the product to the customer and

---

**“Just-in-Time Inventory Management”**

INVENTORY CARRYING costs can be reduced by applying “just-in-time” inventory and manufacturing management techniques. Just-in-time inventory management works to virtually eliminate inventories, so that the inventory of raw materials and work-in-process falls to that which is needed in a single day. This is accomplished by reducing set-up times and lead times so that small lots can be ordered as required. To effectively administer this plan, you will have to make several orders a day and possible move closer to suppliers (or have them move closer to you).

**NOTE** For a manufacturer, just-in-time techniques involve structuring the flow of materials through the plant to reduce inventory in all categories. The benefit of this technique is reduced holding costs.
PROS – The advantages of this form of inventory purchasing, besides the fact that your customers pay for the merchandise before you do, as a dropshipper:

- You don’t have to tie up any investment in products.
- You don’t have to pack and ship stock.
- You need no storage facilities for inventory purchasing.
- You can usually obtain all or most of your follow-up sales materials from your drop-shippers at much lower costs than a local printer would charge.
- You need very little space or equipment to operate a drop ship business – a desk, chair, file cards, typewriter, and shipping labels are all you need to start.
- Your sales materials are usually professionally prepared and often include color photographs.
- Sales materials provided by your drop-shippers are usually professionally prepared and often include color photographs.
- You don’t have to tie up any investment in products.
- You don’t have to pack and ship stock.
- You need no storage facilities for inventory purchasing.
- You can usually obtain all or most of your follow-up sales materials from your drop-shippers at much lower costs than a local printer would charge.
- You need very little space or equipment to operate a drop ship business – a desk, chair, file cards, typewriter, and shipping labels are all you need to start.
- Your sales materials are usually professionally prepared and often include color photographs.

CONS – However, although the advantages to this form of selling are numerous the disadvantages are real killers.

First, your profit margins will tend to be low.

Second, you become dependent on your drop-shippers for supplying you with products limiting any innovation on your part (to make matters worse the products carried by drop-shippers are usually available from your competitors).
usually low quality products with enormous suggested mark-ups).

- **Third**, you are the one responsible for keeping your customers satisfied not the drop shipper.

- **Fourth**, there’s nothing much to keep the drop-shipping company from stealing your customers and adding them to their own mailing list, after all, you send them your customer’s address.

  For information on drop shipping companies that carry mail order type products, write to:

  The Mellinger Company, 6100 Variel Ave., Woodland Hills, CA 91367

  Specialty Merchandise Corporation, 9401 DeSota Ave., Chatsworth, CA

  **91311-4991**

  **Choosing Suppliers**

  Finding a good supplier is critical to your business survival and prosperity. However, don’t make the mistake of relying on one supplier and one supplier only. Try and find at least two or three suppliers for each product you sell. Let them compete against each other for your business. Use the form on page 58 to evaluate and compare suppliers. The evaluation areas in the chart are explained in more detail below:

  **Cost of Goods & Discounts** – How competitive are the prices of the supplier? What quantity discounts are offered?

  **Try and find at least two or three suppliers for each product you sell.**
Delivery Time – How many days or weeks does it take the supplier to deliver the merchandise to your store? How long does it take to reorder?

Shipping & Delivery Costs – Who pays for freight, you or the supplier (these costs are a big expense item)? Where is the F.O.B. point?

Reorder Policies – What is the supplier’s policy on reorders? Do you have to buy hundreds, a dozen or can you buy only two or three items?

Getting the Most Out of Your Suppliers

After determining who your suppliers will be, to help you get the most out of them, use the following strategies:

Ask suppliers to help contribute to your advertising costs. For special promotions, ask manufacturers and suppliers if they have a program to contribute to advertising costs.

Buy from your suppliers during their slow selling periods. Suppliers often have slow periods or surplus stocks in which discounts are offered to encourage sales. If discounts are not possible, negotiate for more favorable terms with your suppliers in return for buying during their “slow selling” periods.

Buy for cash to get additional discounts. If you have available cash, offer partial and/or advance payment in return for additional discounts.

For special promotions, ask manufacturers and suppliers if they have a program to contribute to advertising.
Buy in large quantities for discounts. Buying in bulk gives you lower per/unit costs but also means you could end up with excess stock. Therefore, be warned that to take advantage of this strategy you must have a rapid turnover rate for the product in question and enough surplus cash to prevent unforeseen cash flow problems.

Buy only the amount you need or expect to sell. If you don’t need it or can’t sell it, don’t buy it, regardless of how favorable the sale or credit terms of the supplier offers.

Develop multiple sources of supply and alternate sources of raw materials. An organization or a firm may have a fantastic relationship with a very competent supplier, but it is essential that alternative sources of supply be identified. It is recommended that the majority of a firm’s raw material requirements be equally divided between two major suppliers, with a third source receiving lesser, but consistent, amounts.

The proper management of inventory helps the business achieve its objectives in sales, costs and profits.

NOTE Do not buy from too many sources. Some of the results of purchasing from too many different suppliers are a mixed up inventory, additional and costly bookkeeping, too much time spent with sales representatives, and overlapping or duplication of lines. Perhaps worst of all is that your buying budget is spread thin among many suppliers. You are thought of as a fringe account by most, and hence will often receive fringe treatment rather than priority treatment given to more solid accounts.
Get to know the credit manager of your suppliers. If you need extra time to pay, extra credit or special terms, this is the person you will have to contact. It is thus best to get to know them before a crisis rather than during.

Maintain good business relations with all suppliers. It is essential that you have a good relationship with all your suppliers. Suppliers, manufacturers, distributors and their respective salespeople can alert you to trends, hot items, competitive activity, close-outs, special volume prices, and delayed payment terms. You won’t have to continually ask them for these things.

Negotiate for the best price. Don’t always pay what your suppliers ask. Work in a deal, especially if you’re making a large order or if you are a regular customer.

Pay accounts on time. Establish a good credit by paying on time. Building up a reliable relationship with your dealer may open up special deals to you in the future.

Prepare a written policy for dealing with suppliers. It is essential that you have a written and well-documented plan on how to deal with suppliers. This document should incorporate delivery schedules, quality of material and services expected, payment terms and any other particulars regarding your purchasing policies that is of concern to your suppliers. It should also contain contingency plans in case you and your supplier encounter unforeseen problems.
NOTE This document should be provided to all major suppliers.

Send payment just before it is due. To keep your cash a bit longer, set up a system to send your payment checks just before they are due. Consider delaying payment further, if necessary, and only if it doesn’t harm the relationship with your suppliers.

Sign a favorable supply contract. If suppliers really want to keep your business, it may be possible for you to lock-into a favorable price by entering a supply contract. However, keep in mind that supply contracts can quickly backfire if future prices suddenly drop.

Take advantage of discounts for early payment. Most suppliers will offer a discount of a few percentage points if accounts are paid ten days after invoicing rather than at the end of the month. Although, paying accounts too early can negatively affect your cash flow, and be down right foolish especially if you have to borrow funds to finance another purchase, a discount of two or three percent on a million dollar order is enough to buy outright a new delivery van or set-up a computer network.

Never forget – the longer the merchandise stays on shelves the more it will cost and the less it is worth.

SUPERTIP

Establishing an Order Inspection Policy

The criteria and procedures used to inspect incoming raw materials and inventory should be documented and well publicized
to all parties involved. Below is an example of how a large retail company might handle all incoming shipments of new inventory (to record this information a *Receiving Report* similar to the one shown on page 59 should be used):

**At time of delivery**
- each carton is carefully examined for damage
- all cartons are opened immediately and merchandise inspected for damage
- all merchandise is counted
- total count is verified with supplier’s invoice and company purchase order

**When damage is discovered**
- damaged materials are held at the point they were received
- damage is reported to the carrier and immediate inspection requested
- this request is confirmed in writing (this is not mandatory, but it is one way to protect yourself)

**Carrier inspection of damaged items**
- all damaged items are kept in the receiving area
- steps are taken to make sure all damaged items are not moved before they are inspected by the carrier.
- after the carrier/inspector has prepared a damage report, this report is read carefully

**After inspection**
- damaged materials are kept until written
authorization from the shipper/supplier is received to return the damage items (damaged materials should not be used or disposed of without permission from the carrier)

**NOTE** To help control quality, a firm may pay a premium to a supplier for a specified quality level of incoming materials or may choose to employ a statistical sampling technique. This is particularly important for manufacturing firms where poor quality raw materials will not only lead to the production of inferior products, loss of customers and damage to the firm’s reputation, but can also cause damage to production equipment.

**Calculating a Profitable Reorder Point**

In addition to calculating your order quantity, that is, the size and frequency of orders, it is also important in inventory control and management to determine your reorder point, that is the minimum stock level at which additional quantities need to be ordered (so you don’t run out of stock). This point can be calculated knowing your inventory turnover rate or EOQ and the time it takes to receive a new order.

**Reorder Point for a Furniture Store Retailer** – Sandra Smith owns a furniture store and sells 2,400 standard model kitchen chairs each year. She has calculated her EOQ to be 300...
units per order and thus her inventory of kitchen chairs turns over an average of eight times a year or every 46 days. Since it takes 14 days for an order to be received, she needs to reorder 300 new chairs 32 days after receiving her last order.

However, Sandra Smith has found that her sales levels of kitchen chairs drops considerably during the summer months. Therefore, to keep from being overstocked she reorders when her inventory records show that she has 91 chairs left. She calculated this value by finding the percentage of stock needed to last until a new order is received. One way to calculate this value is to use the following formula:

\[
\text{EOQ} \times \left(\frac{\text{# of days to receive order}}{\text{inventory turnover days}}\right)
\]

\[
300 \text{ units x } \frac{14}{46} = 91 \text{ units}
\]

Establishing an Inventory Discontinuation Policy

The last part of a purchasing plan involves establishing a set of guidelines to help determine when you should discontinue stocking an item. These guidelines will likely be based on criteria such as the following:

- a newer model of the product has come out making the old one obsolete
- the product failed to meet a pre-calculated sales quota
- the product’s turnover rate is well below
your average inventory turnover rate

- the product’s profit margin has shrunk well below your average profit margin per inventory item due to reasons such as increased product costs, price wars, surpluses within the industry, or the need for drastic discounting due to what can only be described as lack of consumer interest
- the dust on the product’s packaging is thick enough to write your name on it

**The “Life Cycle” of a Product**

To determine when to discontinue a product it is useful to understand its life cycle. Generally speaking, the life cycle of a product can be broken down into the following 4 stages:

**Development Stage** – During this stage, new products are being developed and market tested. Manufacturers are only concerned about making enough products available for these purposes. To find out about these new products, owner-managers visit trade shows within their industry. At these trade shows, they try and anticipate which new products will be hot and which ones will. However, in general, there is little concern about inventory investment at this point.

To determine when to discontinue a product it is useful to understand its life cycle.

**Growth Stage** – During this stage, the product demonstrates significant market potential. Owner-managers then invest heavily in inventory to ensure product availability and to gain a significant market share.
Maturity Stage – During this stage, growth levels off. Inventories are very closely controlled to keep investment in them just sufficient to maintain market share.

Aging Stage – During this stage, competitive products or changing market values take away or eliminate markets for mature products. Inventories decline as unprofitable and marginally profitable products are weeded out.

Developing a Purchasing Budget

It is advisable to plan a budget for inventory purchases based on monthly sales projections (see sample on page 36), as well as, changing inventory prices and the resulting need to remain in an “open to buy” position. These two important budgeting considerations are explained in more detail below:

Keeping Your Stock Purchases “In-tune” with Monthly Sales – A good merchandise plan maintains inventory levels that relate closely to monthly sales. In this way, a retailer avoids over-or under-buying. It is obvious that your stocks will not and should not remain at the same quantity level each month of the year. Sales records will show peaks and valleys, and purchases must be precisely timed to move with customer buying. This means that stocks must peak just before major customer buying periods, and diminish as demand tapers off. In short, the availability of merchandise must be attuned to periods of high and low

*When a man is trying to sell you something, don’t imagine that polite he is all the time.*

*EDGAR WATSON HOWE*
demand. Failure to peak or diminish stocks at the right time can seriously affect sales and profits.

Remaining “Open to Buy” – One of the problems with planning a merchandise purchasing budget is that there must be room to maneuver in order to take advantage of current deals. “Open to buy” is a condition whereby the merchant leaves a portion of the purchase budget to buy additional items as the season progresses. To stay flexible, establish within your purchasing budget a special reserve fund.

More Buying Strategies
Use the following strategies to fine-tune your purchasing plan:

**Be careful about overlapping of lines.** This is a common pitfall even among experienced retailers. This is caused when inventory dollars are invested in similar styles or duplicating lines, which cannot be justified by sales. The store ends up with excessive or unnecessary inventory that ties up capital, leads to markdowns and a lower stock turn. Further, it costs money to carry this excess baggage.

**Carefully monitor which stock is slow to turnover.** Slow turnover of stock is a drag on inventory and as a result ties up cash. Often a low stock turnover indicates that a poor buy has been made and markdowns should be considered.
Don’t overstock fringe items. There is a common tendency among smaller and beginning retailers to overstock their inventories on those items of fringe size or with otherwise small appeal. The retailer does this in the belief that his or her stock will then be equipped to fit all customers, and that lost sales will be avoided. However, this is a costly fallacy.

Fringe sizes or items slow down the stock turnover rate and frequently end up as markdowns. You must serve your customers within realistic limitations. Inventory should concentrate heavily within the sizes, lines or styles that are most frequently in demand. This is where your turnover and profit are, and where your markdowns are minimized. Accept the fact that you will lose an occasional fringe-size customer.

Don’t understock fast moving items. It is easy to create a high stock turnover. You simply carry minimal stocks (an inadequate breadth and depth of styles and sizes). The fewer items will turn much faster. However overtime, sales will be lost as you establishment will gain the reputation of offering little choice or being frequently out of stock on wanted merchandise.

NOTE It is especially important not to be understocked on fast-moving merchandise. Unfortunately, it is with the fast selling items that most stores reach an out-of-stock condition. Fast moving goods may amount to only about 10 percent of current inventory, but they may account for 25 to 30 percent or more of current sales. Being out of stock on a slow mover may mean the loss of only one sale.

It is especially important not to be understocked on fast-moving merchandise.
until the reorder comes in, but during the same time period, the loss of sales on the best seller may amount to from three to five sales.

**Stocks cannot be allowed to age too much.** Many smaller and beginning retailers are reluctant to clear out stocks fast enough after seasonal peaks or buying periods have passed. They hold on to the merchandise in the hope that it will sell at regular prices. Soon the stock is outdated and the markdowns are much more severe than if the stock had been cleared out earlier. This out-of-date stock ties up cash needed to buy fresh merchandise. It is vital that a fresh flow of new merchandise be maintained to sustain the buying interest of customers.

*It is vital that a fresh flow of new merchandise be maintained to sustain the buying interest of customers.*
# Purchasing Budget

<table>
<thead>
<tr>
<th></th>
<th>Actual Sales Last Year</th>
<th></th>
<th>Planned Sales This Year</th>
<th></th>
<th>Actual Sales This Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SALES</td>
<td>COST</td>
<td>% of Year’s Total</td>
<td>SALES</td>
<td>COST</td>
<td>% of Year’s Total</td>
</tr>
<tr>
<td>January</td>
<td>6,785</td>
<td>2,714</td>
<td>5.4</td>
<td>7,500</td>
<td>3,000</td>
<td>5.2</td>
</tr>
<tr>
<td>February</td>
<td>7,916</td>
<td>3,166</td>
<td>6.3</td>
<td>9,000</td>
<td>3,400</td>
<td>6.3</td>
</tr>
<tr>
<td>March</td>
<td>10,932</td>
<td>4,373</td>
<td>8.7</td>
<td>12,500</td>
<td>5,000</td>
<td>8.7</td>
</tr>
<tr>
<td>Total for 1/4</td>
<td>25,633</td>
<td>15,279</td>
<td>20.4</td>
<td>29,000</td>
<td>11,600</td>
<td>20.3</td>
</tr>
<tr>
<td>April</td>
<td>12,565</td>
<td>5,026</td>
<td>10.0</td>
<td>14,000</td>
<td>5,600</td>
<td>9.8</td>
</tr>
<tr>
<td>May</td>
<td>11,811</td>
<td>4,724</td>
<td>9.4</td>
<td>13,000</td>
<td>5,200</td>
<td>9.1</td>
</tr>
<tr>
<td>June</td>
<td>9,926</td>
<td>3,970</td>
<td>7.9</td>
<td>11,000</td>
<td>4,400</td>
<td>7.7</td>
</tr>
<tr>
<td>Total for 1/4</td>
<td>34,302</td>
<td>13,721</td>
<td>27.3</td>
<td>38,000</td>
<td>15,200</td>
<td>26.6</td>
</tr>
<tr>
<td>July</td>
<td>8,796</td>
<td>3,518</td>
<td>7.0</td>
<td>10,000</td>
<td>4,000</td>
<td>7.0</td>
</tr>
<tr>
<td>August</td>
<td>9,047</td>
<td>3,619</td>
<td>7.2</td>
<td>10,000</td>
<td>4,000</td>
<td>7.0</td>
</tr>
<tr>
<td>September</td>
<td>10,680</td>
<td>4,272</td>
<td>8.5</td>
<td>12,000</td>
<td>4,800</td>
<td>8.4</td>
</tr>
<tr>
<td>Total for 1/4</td>
<td>28,523</td>
<td>11,409</td>
<td>22.7</td>
<td>32,000</td>
<td>12,800</td>
<td>22.4</td>
</tr>
<tr>
<td>October</td>
<td>11,937</td>
<td>4,775</td>
<td>9.5</td>
<td>14,000</td>
<td>5,600</td>
<td>9.8</td>
</tr>
<tr>
<td>November</td>
<td>10,178</td>
<td>4,071</td>
<td>8.1</td>
<td>12,500</td>
<td>5,000</td>
<td>8.9</td>
</tr>
<tr>
<td>December</td>
<td>15,078</td>
<td>6,031</td>
<td>12.0</td>
<td>17,500</td>
<td>7,000</td>
<td>12.2</td>
</tr>
<tr>
<td>Total for 1/4</td>
<td>37,192</td>
<td>14,877</td>
<td>29.6</td>
<td>44,000</td>
<td>17,600</td>
<td>30.8</td>
</tr>
<tr>
<td>Year Totals</td>
<td><strong>125,650</strong></td>
<td><strong>50,260</strong></td>
<td><strong>100%</strong></td>
<td><strong>143,000</strong></td>
<td><strong>57,200</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
DEVELOPING AN INVENTORY RECORDS SYSTEM

THE THIRD PART of setting up an inventory control and management system involves developing an inventory record keeping system. An inventory record keeping system is primarily used to determine your company’s cost of goods sold as well and provide information for financial statements. It also functions to help provide maximum service to your customers, keep wanted items in stock, dispose of unwanted items, and see that parts and materials are not lost through theft, shrinkage, error or waste.

An inventory record keeping system is primarily used to determine your company’s cost of goods sold as well and provide information for financial statements.

To meet these basic objectives your system will need to tell you the following three things:

1. **Approximately or exactly how much of an item you have in stock at any particular moment in time.** You need to know this information so that you are able to reorder and maintain sufficient quantities in stock to meet customer demand.

2. **Exactly how much inventory you have in stock and have sold at the end of the month, quarter or year.** You need to keep track of this information for accounting and sales information purposes.
3. **How much stock is on order.** You need to keep track of this information so you don’t accidentally order the same item twice.

To get these three basic pieces of information out of your inventory record keeping system, you will need to:

- pick an inventory control system
- pick an inventory record keeping method
- develop both an “Period Ending Inventory Record” form as well as an “Inventory In-stock Record” form

As your company develops and matures, you should also take steps to:

- integrate your inventory record keeping system with other systems within your company that track sales, production and purchasing activities
- regularly compare projections with the actual results from your inventory record keeping system and analyze the differences
- develop procedures to correct problems once spotted and improve business performance

**Keeping shelves stocked with a balanced inventory ensures that customers can find what they want when they want it.**

**SUPERTIP**

**Picking an Inventory Control System**

To help you establish adequate controls over inventory on order and inventory in stock, several proven methods for inventory control are listed below, from the simplest to the more complex:
Visual Inventory Control – In this system, the manager examines the inventory visually to determine if additional inventory is required. In very small businesses where this method is used, records may not be needed at all, or only for slow-moving or expensive items. Using this system, the following records are usually kept (see page 45 & 46 for samples):

- Inventory In-stock Record
- Period Ending Inventory Record

Tickler Control – In this system, the manager physically counts a small portion of the inventory each day, so that each segment of the inventory is counted every so often.

Click Sheet Control – In this system, the manager records the item as it is sold. The information is then used for reordering purposes.

Stub Control – In this system, the manager retains a portion of the price ticket when the item is sold. The manager can then use the stub to record the sale. This method of inventory control is often used by retailers.

Computerized Control – In this system, the manager uses a computer to assist in managing inventory. A computerized inventory system is especially helpful when dealing with large inventories of many individual items, as in a bookstore, a liquor store or a grocery store.
A computer based system usually centers around a sophisticated point-of-sale terminal that relays information on each item used or sold to a computer. This system is usually expensive, difficult to set-up but once functioning is highly superior to all other systems.

To its advantage, a computerized system allows you to:

- Avoid overstocking items that do not sell in large quantities by providing detailed reports on sales and stock turnover.

- Handle accounting and billing procedures with a single entry.

- Use on-line point-of-sale terminals, to relay information directly to the computers of your suppliers, who then use the information to ship additional items automatically to you.

**NOTE** The best computerized inventory system is a system specifically designed for your line of business. Speak to your accountant or software sales rep about the feasibility and cost of using such a system.

**Hiring Outside Agencies** – One final option available to the owner-manager, to make sure inventory needs are being met, is to hire an outside agency to do the actual counting and reordering. In this system, a manufacturer’s representative makes scheduled visits to your business, takes the stock count and writes the reorder. Unwanted merchandise is removed from stock and returned to the manufac-
turer according to a predetermined, authorized procedure.

Picking an Inventory Record Keeping Method

There are two basic inventory record keeping methods fundamental to almost all inventory record keeping systems. These methods are called:

- Perpetual Inventory Method
- Periodic Inventory Method

Both methods are shown in the chart on the following page and explained in more detail below.

Perpetual Inventory Method – The perpetually inventory method starts with a physical inventory (actual count of merchandise or raw materials) and then adjusts this inventory for additions and withdrawals. The inventory at the end of the period is calculated by subtracting the number of units sold from the total of the beginning inventory plus all the additional units produced.

Although physical inventories can be costly and time consuming, they should be taken at least once a year and preferably twice. SUPERTIP

The perpetual inventory method is used when reliable sales and production information is readily available and the frequent taking of physical inventories would be burdensome. However, physical inventories must be periodically taken either quarterly or annually. The inventory records are then adjusted to agree with physical inventories.

Periodic Inventory Method – The periodic inventory method starts with the
physical inventory taken at the end of each period. Sales or production amounts are then calculated based on the beginning and ending physical inventories. This method is used when reliable sales or production data are not readily available.

Taking a Physical Inventory – At some point or another, all inventory systems require a physical inventory. A physical inventory is often the only way to accurately determine merchandise on hand.

To perform a physical inventory, simply list the quantity and value – at cost and retail price – of every item on the shelves and in storage. Care must be taken that goods received after the close – off date be marked so as not to be included in the inventory count (see “Period Ending Inventory Record” on page 46).

Using Basic Inventory Record Keeping Forms

There are two basic record keeping forms fundamental to almost all inventory record systems.

<table>
<thead>
<tr>
<th>Perpetual Inventory Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activity</strong></td>
</tr>
<tr>
<td>Beginning inventory</td>
</tr>
<tr>
<td>Sales</td>
</tr>
<tr>
<td>Production (purchases)</td>
</tr>
<tr>
<td>Ending inventory (calculated)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Periodic Inventory Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activity</strong></td>
</tr>
<tr>
<td>Beginning inventory</td>
</tr>
<tr>
<td>Sales</td>
</tr>
<tr>
<td>Production (calculated)</td>
</tr>
<tr>
<td>Ending inventory</td>
</tr>
</tbody>
</table>
keeping systems. These forms are called:

- “Perpetual Inventory Record” also known as the “Inventory In-stock Record”
- “Period Ending Inventory Record”

These forms are shown on the right and in more detail on pages 45 & 46.

**Using an “Inventory In-Stock Record” – “Inventory In-stock Records,” also known as Perpetual Inventory Records, are used to keep track of inventory as it is ordered and used up or sold. These records are thus regularly reduced by the cost of your goods sold, or number of units sold (this information is usually obtained from your sales invoices), and increased when new orders are placed and received. At the end of the year, “Inventory In-stock Records”**

### Inventory “In-Stock” Record

<table>
<thead>
<tr>
<th>INVENTORY CARD for</th>
<th>Harry’s Pet Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item: Dog Collar</td>
<td>Model: deluxe leather</td>
</tr>
<tr>
<td><strong>Date</strong></td>
<td><strong>Received</strong></td>
</tr>
<tr>
<td>12/31/95</td>
<td></td>
</tr>
<tr>
<td>1/1/96</td>
<td>80</td>
</tr>
<tr>
<td>1/1/96</td>
<td>10</td>
</tr>
</tbody>
</table>

### Period Ending Inventory Record

<table>
<thead>
<tr>
<th>Periodic Inventory Record for</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harry’s Pet Supplies</td>
<td>1/1/96</td>
</tr>
<tr>
<td><strong>Item</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Stock #101</td>
<td>Deluxe Leather Dog Collars</td>
</tr>
<tr>
<td>Serial # 871</td>
<td>Enamel Bird Cage</td>
</tr>
<tr>
<td>Stock #511</td>
<td>HPS Brand Canned Dog Food</td>
</tr>
<tr>
<td>Other misc. items detailed on other sheets</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total Physical Inventory</strong></td>
<td><strong>464</strong></td>
</tr>
</tbody>
</table>
are then added up and compared with “Period Ending Inventory Records.” Any major differences are then investigated, and the “Inventory In-stock Records” corrected, if necessary.

**Using a “Period Ending Inventory Record”** – “Period Ending Inventory Records” are used to record a physical inventory taken of all the items you have in stock at the end of the year, or at the end of any period of time you find useful to gather such information. These kinds of forms are straightforward and easy to understand, so easy in fact, that many small businesses decide it’s all they need to use to keep track of their inventories, and hence, completely disregard using an “Inventory In-stock Record.” However, if you also decide to do this you must take steps to become aware of inventory shortages by other means such as: spot checks of specific inventories during the year; sales records compared with purchase records; and by taking measures to control who has access to inventory and when.

**NOTE** For accounting purposes (e.g., determining your cost of goods sold), your ending inventory figure can be taken from either your “Inventory In-stock Records” or from your “Period Ending Inventory Record.” However, for reasons of greater accuracy and control, it is better to use both records in conjunction with each other.

---

An entrepreneur tends to bite off a little more than he can chew hoping he’ll quickly learn how to chew it. **ROY ASH**

CEO Am International
## INVENTORY “IN-STOCK” RECORD

**Inventory Status Record FOR:** Sandra's Shoe Shop  |  **DATE:** Oct. 8, 1995

<table>
<thead>
<tr>
<th>Item Name:</th>
<th>Men's Tennis Shoes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Number:</td>
<td>Serial 125</td>
</tr>
<tr>
<td>Typical Unit Cost:</td>
<td>$14.00</td>
</tr>
<tr>
<td>Suggested Retail:</td>
<td>$24.95</td>
</tr>
<tr>
<td>Our Price:</td>
<td>$19.95</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item Size:</th>
<th>Comes in sizes 7 to 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Weight:</td>
<td>From 0.43 to 0.57 Kg</td>
</tr>
<tr>
<td>Rate of Usage:</td>
<td>30 / month</td>
</tr>
<tr>
<td>Reorder Point:</td>
<td>20</td>
</tr>
<tr>
<td>Reorder Quantity:</td>
<td>48</td>
</tr>
<tr>
<td>Item Location:</td>
<td>Aisle 3, middle shelf</td>
</tr>
<tr>
<td># of Items/Shipping Carton:</td>
<td>24</td>
</tr>
<tr>
<td>Weight of Shipping Carton:</td>
<td>12 Kg</td>
</tr>
<tr>
<td>Shipping Lead Time:</td>
<td>10-14 days</td>
</tr>
<tr>
<td>Shipping Costs:</td>
<td>paid by distributor</td>
</tr>
<tr>
<td>Terms of Sale:</td>
<td>15-day money back guarantee</td>
</tr>
<tr>
<td>F.O.B. Point:</td>
<td></td>
</tr>
<tr>
<td>Discount Schedule:</td>
<td>10% off for 10 or more</td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>

### Main Vendor for this Item

<table>
<thead>
<tr>
<th>Name of Firm</th>
<th>Address</th>
<th>Contact</th>
<th>Phone/Fax</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oscar’s Wholesale</td>
<td>61 West 62nd St. NY 10023</td>
<td>Barbara Harris</td>
<td>(F) 397-1966</td>
<td>Pleasant staff; reliable</td>
</tr>
</tbody>
</table>

### Inventory Control

<table>
<thead>
<tr>
<th>Date</th>
<th>P.O. #</th>
<th>On Order</th>
<th>Received</th>
<th>Usage</th>
<th>In Stock</th>
<th>Total</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/8</td>
<td>63214</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>11/6</td>
<td>63214</td>
<td></td>
<td>48</td>
<td></td>
<td></td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>11/20</td>
<td></td>
<td></td>
<td></td>
<td>25</td>
<td>23</td>
<td>23</td>
<td>Inventory Count</td>
</tr>
<tr>
<td>12/1</td>
<td>63235</td>
<td>48</td>
<td></td>
<td>8</td>
<td>15</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>12/5</td>
<td>63235</td>
<td></td>
<td>48</td>
<td>1</td>
<td>14</td>
<td>62</td>
<td></td>
</tr>
</tbody>
</table>
**PERIOD ENDING INVENTORY RECORD**

**Inventory Record FOR:** Sandra's Shoe Shop.  **DATE:** Nov. 20, 1995

**DEPT:** Running Shoes  **LOCATION:** Aisle 3

<table>
<thead>
<tr>
<th>Called by</th>
<th>Entered by</th>
<th>Priced by</th>
<th>Checked by</th>
<th>Approved by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack Donne</td>
<td>Fred Silvers</td>
<td>Fred Silvers</td>
<td>Ron Jackson</td>
<td>Susan Jackson</td>
</tr>
<tr>
<td>11/20/95</td>
<td>11/20/95</td>
<td>11/20/95</td>
<td>11/22/95</td>
<td>11/23/95</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Item #</th>
<th>Quantity</th>
<th>Unit</th>
<th>Description</th>
<th>✔️</th>
<th>Unit Price</th>
<th>Comments</th>
<th>$Total</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>124</td>
<td>7</td>
<td>Soccer</td>
<td>✔️</td>
<td>35.95</td>
<td>shoe laces missing</td>
<td>251.65</td>
</tr>
<tr>
<td>2</td>
<td>125</td>
<td>9</td>
<td>Baseball Cleats</td>
<td>✔️</td>
<td>25.95</td>
<td></td>
<td>233.55</td>
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<tr>
<td>3</td>
<td>215</td>
<td>23</td>
<td>Tennis Shoes</td>
<td>✔️</td>
<td>19.95</td>
<td></td>
<td>458.85</td>
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<tr>
<td>4</td>
<td>124</td>
<td>7</td>
<td>Soccer</td>
<td>✔️</td>
<td>35.95</td>
<td>box damaged</td>
<td>251.65</td>
</tr>
</tbody>
</table>
OTHER INVENTORY RELATED FACTORS TO CONSIDER

THE FOLLOWING section outlines other aspects of a good inventory control & management system not covered in the previous three sections, such as establishing a markdown policy, establishing an inventory valuation policy, calculating cost of goods sold and using bar codes.

Establishing a Markdown Policy

To help move inventory that is not selling quickly enough at normal price levels, it is necessary for proper inventory control and management to establish a markdown policy. This policy must provide guidelines that help you recognize:

- what part of your inventory needs to be marked down (e.g., inventory that is well beyond its EOQ rating)
- how the markdowns are to be implemented once the need is recognized (see Guidebook #52 for more information on markdown pricing policies).

Markdowns have a constructive value. They reduce inventory, free cash, save carrying charges and allow you to buy fresh inventory that is more profitable.

Markdowns are the biggest single drain on profits. Generally, the last 25 percent of each style or line decides whether money will be made or lost on that style. However, it is important that you regard a certain percentage of markdowns as normal and necessary. This percentage should be figured into sales, costs...
and inventory, right from the beginning when stock is fresh.

Many retailers, especially smaller or beginning ones, are reluctant to markdown their slow sellers, or they do not mark them down enough to stimulate clearance of these stocks. There is a saying, “The first markdown is the best markdown.” This means that the first markdown should not only be big enough to make the merchandise move but also soon enough. The longer the delay, the greater the markdown will have to be.

When establishing a markdown policy, keep in mind that markdowns have a constructive value. They reduce inventory, free cash, save carrying charges and allow you to buy fresh inventory that is more profitable.

Listed below are additional markdown tips, techniques and planning strategies:

Advertise a “markdown sale.” Markdowns are usually cleared by strongly advertised post season markdown or clearance sales. Some stores set aside a special corner or section of a display unit as a continuing markdown plan. These areas should be well lighted and attractive to draw customers to them.

Avoid markdowns by making better buying decisions – Most retailers agree
that markdowns are caused by mistakes in buying rather than selling. These mistakes are listed below:

- Lack of planning before buying.
- Late buying and late deliveries and, therefore, a late start in selling, especially in the case of fashion merchandise.
- Shallow buying which quickly leads to thinned out stocks that must inevitably become markdown stock.
- Too many fringe sizes instead of concentrating on the common sizes. Not enough depth in the best selling sizes soon leaves holes in the stock and leads to markdowns.
- Too many fringe styles. This is usually in an effort to have a little of everything in the hope of being able to please everyone. All this accomplishes is to thin out inventory.
- Too many similar styles in stock leading to duplication or overlapping of lines.

Be careful of excessive markdowns. When markdowns are

A clean, orderly workplace promotes quality. I can almost sense the extent of a plant’s quality level just by walking through and observing their housekeeping. Ever see a plant after it's been straightened up for annual inventory? I used to take pictures, which were then used as the “acceptable standard” for the rest of the year.

HAMMOND BERRY
Furniture Manufacturer
greater than normal, a blow is dealt to profits and to the perceived quality of the inventory itself. Establish the amount of markdowns you can handle with the knowledge that anything beyond that means trouble.

**Other Markdown Considerations** – Other mistakes which can contribute to reduced profits and the necessity of deeper markdowns include:

- a delay in taking markdowns (this simply deepens and makes the markdown condition of the stock worse)
- failure of salespeople to give enough attention to slow moving items (or too much concentration on the fresh merchandise).

When markdowns are greater than normal, a blow is dealt to profits.

- failure to keep pace with style changes; caused by being too slow or having a wait-and-see attitude
- inadequate record keeping which leads to a loss of control over stock

**Establishing an Inventory Valuation Policy**

At the end of each fiscal year you must determine your yearly income to calculate taxes owed. An essential step in achieving this objective is to prepare an annual inventory to determine your costs of goods sold.

An annual inventory is usually a list of goods held for sale including, in the case of a manufacturers, raw materials and work-in-progress on hand.
Problems You are Likely to Encounte
When Valuing Your Inventory – Although counting up your in-stock quantities is rather straightforward, some difficulties can present themselves when determining its exact value.

One problem you might face is the evaluation of work-in-progress. This is due to the fact that you have substantial leeway in valuation, derived from the variety of choices available to you as to the manner in which how goods flow through your establishment. The best advice here is to come up with as simple a method as possible and then stick to it.

Another problem created is when you have similar items of different costs as a result of being purchased at different times of the year or from different suppliers.

Both of these above difficulties are further aggravated, since the values at which your inventories are recorded have a dual significance: 

- First, the amount shown in your balance sheet as a current asset is likely to be a significant working-capital component – shareholders and investors like to see a company with lots of working-capital. And second and perhaps even more important, is the fact that the accounting valuation which you place on your inventories directly affects the amount of net income for the period.

Two Most Common Methods of Inventory Valuation – For income tax pur-

Under the “Cost Method” of inventory valuation you determine the value of your entire inventory at its cost.
poses, two acceptable methods of valuing your inventory are the:

- **Cost Method** – Using this method you determine the value of your entire inventory at its cost (this valuation method is also known as the “identified cost method” of inventory valuation).

  For merchandise on hand at the beginning of the year, cost means the inventory price of the goods.

  For merchandise purchased during the year, cost means the invoice price less appropriate discounts plus transportation or other charges you incur in acquiring the goods.

  For merchandise produced during the year, cost means all direct and indirect costs (in the U.S. these costs must be capitalized under the uniform capitalization rules that must be capitalized).

- **Lower of Cost or Market Method** – Using this method you compare the market value of each item on hand at the inventory date with its cost and use the lower value as its inventory value. If at the end of the year you had the following items (as shown in the example on the next page), the value of your closing inventory would be $800.

  Beware however, that if you use this method
method you must value each item in the inventory. You may not value the entire inventory at cost ($1,200) and at market ($850) and use the lower figure.

NOTE Under ordinary circumstances and for normal goods, *market value* means the usual bid price at the date of your inventory. This price is based on the volume of merchandise you usually buy.

**Which Method to Use?** When choosing which method to use, consider the following information: It is almost universally acknowledged that inventories should be reported at their cost, that is by method #1. Using this method, for example, if you have on hand five units of Material “X” and know that you paid $2 each for two of them $3 each for two of them and $4 for the fifth, your identified cost of Material “X” is,

\[(2 \times \$2) + (2 \times \$3) + (1 \times \$4) = \$14\]

However, some people like to argue that it is perfectly ridiculous to list a series of identical items at different values. Using method #2, if the market value of Material “X” at the time of inventory was $2 a unit, they would list their inventory value at:

\[(5 \times \$2) + \$10\]

Whichever method you choose, you must continue to use the same method in subsequent years.

<table>
<thead>
<tr>
<th>Items</th>
<th>Cost</th>
<th>Market</th>
<th>Whichever is Lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$300</td>
<td>$350</td>
<td>$300</td>
</tr>
<tr>
<td>B</td>
<td>$400</td>
<td>$250</td>
<td>$250</td>
</tr>
<tr>
<td>C</td>
<td>$500</td>
<td>$250</td>
<td>$250</td>
</tr>
<tr>
<td>Totals</td>
<td>$1,200</td>
<td>$850</td>
<td>$800</td>
</tr>
</tbody>
</table>
**NOTE** If you use the cash method to calculate your income, you do not include the inventory calculation in your cost of sales. You simply claim the expenses that you actually paid in the year.

**Calculating Your Cost of Goods Sold**

Calculating your “Cost of Goods Sold” is straightforward for a wholesaling or retailing company, as long as inventory records are kept accurate and up-to-date and inventory valuation methods firmly established. You simply subtract your present inventory from all purchases made over the course of the year in addition to any inventory held at the beginning of the year. The only other calculations you might need to make involve shipping costs and perhaps sales taxes.

However, due to the numerous overhead costs in addition to the raw materials inventory costs associated with manufacturing a product, this calculation is quite a bit more complex for a manufacturing business.

To help you through this, use the “Manufacturer’s Cost of Goods Sold” form at the end of this guidebook (see page 60).

**Using the Gross Margin Method to Estimate Inventories and Calculate the Cost of Goods Sold** – In between physical counts, inventory can be estimated by the gross margin method. By this method, the store’s usual gross margin percentage is used to figure a cost of goods amount. This figure is subtracted from the goods inventory to arrive at the estimated cost of goods sold.

**SUPERTIP**

- Inventory should always be valued at the lower cost or market value to ensure that its value is not overstated on the balance sheet.
available for sale to arrive at an estimate of current inventory at the end of the period.

For example (refer to chart on right), let’s say that a store’s sales for one month totaled $15,000, inventory at the beginning of the month was $9,000 (cost), and purchases during the month amounted to $11,000 (cost). Assume the store’s usually gross margin is 35 percent of sales. To estimate the month’s ending inventory, use the example on the right as a guide:

**NOTE** When margin percentages vary between departments within a store, each department’s inventory should be calculated separately. This method could be used to help provide monthly income statements.

### Estimate Inventories

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Beginning Inventory</td>
<td>$9,000</td>
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<tr>
<td>Merchandise Purchased</td>
<td>$11,000</td>
</tr>
<tr>
<td>Merchandise Available for sale</td>
<td>$20,000</td>
</tr>
<tr>
<td>Estimated Gross Margin</td>
<td>35%</td>
</tr>
<tr>
<td>Cost of Sales (100-35)</td>
<td>65%</td>
</tr>
<tr>
<td>Sales for the month</td>
<td>$15,000</td>
</tr>
<tr>
<td>Cost of Goods Sold (65% of $15,000)</td>
<td>-$9,750</td>
</tr>
<tr>
<td>Ending Inventory</td>
<td>$10,250</td>
</tr>
</tbody>
</table>
Using Bar Codes
The bar code system for inventory and pricing can reduce the costs of selling and controlling inventory. A bar code consists of 30 lines of varying thickness that when read by an infrared scanner hooked up to a computer can instantly recognize the product being scanned.

When this system is used for checkouts, labor costs are reduced, as are chances for error. Also, through its increased accuracy in controlling inventory, the bar code system can decrease the number of dollars tied up in inventory.

This system is called the Uniform Product Code and is available through the Uniform Code Council, Inc., 8163 Old Yankee Street, Dayton OH 45458 (513) 435-3870. An example of a bar code used for a jar of *TownHouse Dill Pickles* is shown below.
4 Steps to Setting-up an Inventory Control System

1) **Determine** your ideal inventory level.
   - Find out average inventory turnover rate for industry (see trade journals).
   - Determine ideal inventory level based on factors such as amount of capital available, consumer demand, historical sales patterns, quantity discounts, storage space, and supply levels.
   - Calculate inventory carrying costs.
   - Calculate EOQ & inventory turnover rate.

2) **Establish** a purchasing plan.
   - Establish guidelines for buying and selling inventory items.
   - Find suppliers.
   - Establish an incoming order inspection policy.
   - Calculate reorder points for each item in your inventory.
   - Establish a discontinuation policy.

3) **Set-up** a inventory record keeping system.
   - Pick an inventory control system and record keeping method.
   - Develop an “Inventory In-stock Record” & “Period Ending Inventory Record.”

4) **Other** concerns.
   - Establish a markdown policy for products that don’t move quickly enough at normal price levels.
   - Establish a policy for valuating inventory to determine cost of goods sold.
## Comparing Suppliers

<table>
<thead>
<tr>
<th>Name of Supplier</th>
<th>Address of Supplier</th>
<th>Phone/Fax Number</th>
<th>Cost</th>
<th>Discounts Offered</th>
<th>Delivery Time</th>
<th>Shipping &amp; Del. Costs</th>
<th>Reorder Policies</th>
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</table>
# RECEIVING REPORT

**REPORT #**

**Date**

**Our P.O. #**

<table>
<thead>
<tr>
<th>Received From:</th>
<th>For:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong></td>
<td><strong>Name:</strong></td>
</tr>
<tr>
<td><strong>Address:</strong></td>
<td><strong>Address:</strong></td>
</tr>
<tr>
<td><strong>Phone/Fax:</strong></td>
<td><strong>Department</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shipped VIA</th>
<th>Freight</th>
<th>Express</th>
<th>Transport</th>
<th>Mail</th>
<th>Delivery Charges</th>
<th>Prepaid</th>
<th>Collect</th>
<th>C.O.D. Charges</th>
<th>Bill of Lading #</th>
<th>No. of Packages</th>
<th>Total Weight</th>
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</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
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<th>Item #</th>
<th>✔️</th>
<th>Weight</th>
<th>Accepted</th>
<th>Rejected</th>
<th>Description</th>
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</thead>
<tbody>
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</tr>
</tbody>
</table>

**Received by**

**Inspected by**

**Complete**

**Partial**

**NOTES:**

**FRICK**
### MANUFACTURER’S COST OF GOODS SOLD

**Cost of Goods Sold FOR** – Nick’s Widget Inc.  **From** – Jan 1, 1995  **To** – Dec 31, 1995

<table>
<thead>
<tr>
<th>Materials Used to Make Products</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials Inventory (Beg. of Fiscal Period)</td>
<td>160,000</td>
</tr>
<tr>
<td>ADD Purchases</td>
<td>750,000</td>
</tr>
<tr>
<td>LESS Returns and Allowances</td>
<td>3,500</td>
</tr>
<tr>
<td>TOTAL Materials Available for Use</td>
<td>906,500</td>
</tr>
<tr>
<td>LESS Materials Inventory (End of Fiscal Period)</td>
<td>99,000</td>
</tr>
</tbody>
</table>

(A)  TOTAL MATERIALS CONSUMED  $907,500

(B)  LABOR COSTS  $650,000

<table>
<thead>
<tr>
<th>Factory Overhead</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect Labor (administrative)</td>
<td>130,000</td>
</tr>
<tr>
<td>Salaries</td>
<td>110,000</td>
</tr>
<tr>
<td>Payroll Taxes</td>
<td>52,000</td>
</tr>
<tr>
<td>Power</td>
<td>11,000</td>
</tr>
<tr>
<td>Heat</td>
<td>6,000</td>
</tr>
<tr>
<td>Light</td>
<td>5,100</td>
</tr>
<tr>
<td>Factory Supplies</td>
<td>4,000</td>
</tr>
<tr>
<td>Depreciation – Building</td>
<td>10,000</td>
</tr>
<tr>
<td>Depreciation – Equipment</td>
<td>65,000</td>
</tr>
<tr>
<td>Repairs and Maintenance</td>
<td>13,000</td>
</tr>
<tr>
<td>Patent Expenses</td>
<td>7,000</td>
</tr>
<tr>
<td>Tool and Die Expenses</td>
<td>30,000</td>
</tr>
<tr>
<td>Insurance for Building &amp; Equipment</td>
<td>3,000</td>
</tr>
<tr>
<td>Other Overhead</td>
<td>1,000</td>
</tr>
</tbody>
</table>

(C)  TOTAL FACTORY OVERHEAD  $447,100

(A+B+C)  TOTAL MANUFACTURING COSTS  $2,004,600

| ADD Work in Process Inventory (Beg. of Fiscal Period) | 230,000 |
| LESS Work in Process Inventory (End of Fiscal Period) | 110,000 |

COST OF GOODS MANUFACTURED  $2,124,600

| ADD Inventory of Finished Goods (Beg. of Fiscal Period) | 93,000 |
| LESS Inventory of Finished Goods (End of Fiscal Period) | 98,000 |

COST OF GOODS SOLD  $2,119,600