ANTHOLOGY

Sales and Inventory Costing in Anthology

When reports such as Inventory Status for the current value of the inventory or Sales History are run, costing information is calculated using some specific rules. Good receiving practices will result in accurate costing information. Note, Book type items traditionally have their List=Retail prices due to the typical Vendor discount offered. Sideline type items are generally treated as markup type items with no vendor discounts, so their List price is the exact cost, with the Retail price being the higher amount they'll sell the item for.

Anthology uses the FIFO (first in, first out) accounting method to calculate the cost/value of inventory items. As an item is sold, the program counts back through Receiving history to find the order the item was received on. The Receiving List price and any existing Vendor Discount on the item are used to calculate the cost, which is stored as part of the sales history. If an Inventory Status report is being run, the same count back process is used to calculate the likely value of the item. If not enough receiving history is found to account for all copies, the program uses the last receiving memo in hand to calculate a close approximation of cost. If no receiving history at all is found for an item, the program uses the "Default Purchase Discount for Costing" found in the Department an item is assigned to and subtracts that discount from the Inventory List price. Ultimately, if no receiving history is found, nor a departmental default purchase discount is found, then the Inventory List price of the item becomes the assumed cost.

The rest of this document covers in greater detail how costing is calculated, how sales numbers are calculated as well as the different methods that can be used to correct cost info well after an item is received or sold.

Additional training videos can be found on our www.youtube.com/user/AnthologyChannel website, in particular the video on "Modify Cost of Goods Sold".

Contents

Understanding Sales Metrics in Anthology

Anthology's reports and displays refer to several key metrics, as defined below:

- **Units:** The number of units (e.g. books) sold for a given SKU, Department, etc. Note that selling qty 1 of a dozen <u>unit of measure</u> would result in 12 units sold.

- **Retail:** The price the item(s) sold at. This is not necessarily the same as Retail1 price in the Inventory file, depending on whether discounts or markdowns were taken.

- **Cost:** The cost of goods sold (COGS) as calculated by the FIFO (first in, first out) methodology.

- **Margin$:** Sometimes referred to as "Gross Profit", this is the difference between the cost of the goods ("Cost" as defined above) and the price they sold at ("Retail" as defined above). For example, if a book is sold for $10.00 and you paid your vendor $6.00 for the book, the Margin on the sale would be $4.00.

- **Margin%:** Sometimes referred to as "Average Discount". It is calculated as follows: (Margin $) / (Retail $). If you are buying your books at a 41% discount from your vendor, the Margin expressed as a percent for the sale of those books will be 41%-assuming that no discounts or markdowns were taken off the List price.

- **Markup$:** Also referred to as "'Maintained Markup". This is the same as the Margin$ described above and for that reason not usually displayed in Anthology.

- **Markup%:** Also referred to as "Gross Rate of Return" or "Margin% on Cost". Calculated as (Margin$) / (Cost$). For example, in the example given under Margin$ above, the margin would be 66% ($4.00 / $6.00).

- **Turns:** Turn is a measure of how often your inventory turns over. In Anthology, Turns are calculated as follows: (UnitsSold) / (AvgOH). There are a number of ways to calculate this value; we think this one is the most accurate, as well as one of the easiest to understand. Turn values are always displayed in Anthology on an annualized basis. That is, when we show a Turns value of 2.1 for a given month, it does not mean that the item or category being tracked actually turned 2.1 times in that month; rather that over the course of a year it would turn 2.1 times if inventory and sales levels remained the same.

- **GMROI:** Gross Margin Return on Investment is an annualized value calculated as follows: 'Markup %' x TurnsOH.Turns. GMROI is one of the retailer's most useful sales metrics, as it allows you see what return was earned by dollars invested in the item or category being tracked.

Cost of Goods Sold (COGS)

This article explains how Visual Anthology calculates the COGS for an item in inventory. It also covers how to re-calculate the COGS if the original information is either incorrect or missing. Of course, the best way to insure accurate costing is with good information supplied up front. This means complete and accurate receiving information.

How does Visual Anthology find the Cost Of Goods Sold?

Anthology calculates the cost of goods sold by using the FIFO (first in, first out) methodology. FIFO may be best explained by an example. The example below assumes that the item was received via the Receiving screen and now has history associated with it. The dates and numbers used are for illustration purposes.

- On Jan 1 you receive 5 copies of book "A". List and Retail prices are $20, and the discount is 50%

- On Feb 1 you receive 4 copies of book "A". List and Retail prices are $20, and the discount is 30%

- On Feb 10th you sell 1 copy of the book. This information is stored in the Inventory table as "Total Sold". Visual Anthology uses this information and counts back in receiving history to find the first time the item was received. This is the FIFO method (First In First Out). It is found in the Receiving done on Jan 1. Visual Anthology looks at the List Price - $20 and Discount of 50% and determines that the COGS for this book is $10. This information is stored in the Sales Detail record associated with the sale. This will be used in the Sale History report in the Cost column.

- Over the next few days, you sell 4 more copies of the book and the same thing happens. Then you sell the 6th copy of the book. Visual Anthology counts back in receiving history (we are now on the receiving for Feb). It looks at the List price of $20 and the discount of 30% and determines that the COGS for this sale is $14.00.

- This action goes on behind the scenes every time books are received and sold. The COGS will fluctuate with changes in the List Price and discount.

- If you ran the Sales History report right now you would see Retail$ = $120.00 (6 books at $20), Cost = $64.00 (5 books at $10 and 1 book at $14), and the Profit would be $56.00 ($120 - $64).

Items that are entered directly into inventory. Bypassing the Purchase Order and Receiving procedures will influence the COGS. Remember that at the time of sale, Visual Anthology looks for Receiving History. If none is found, the default discount will be applied. If you are using NET pricing, you should leave the default discount in the Department screen blank.

Sale History report breakdown

- The *Retail $* column is not necessarily the retail price listed in Inventory. It is the price the item sold for. If you had a book that (in Inventory) showed a retail price of $50, and you sold it $30 the retail on this report would be $30.

- The *Cost* column shows the cost of the item based on the FIFO method for inventory control. As items are sold, Visual Anthology calculates the COGS for the item based on the List price found in the receiving history. It then subtracts the discount listed in receiving history. If receiving history cannot be found Visual Anthology will look for a default discount first in the Department table and next in the Options table. If one cannot be found zero is used. In such a case, the List price becomes the cost for the item.

- The *Profit* column is the Retail $ - Cost.

- The *Margin%* is the profit margin for the items sold. For example, if your retail$ = 489.99 and your cost = 242.94 your margin would be 50.42%.

- The *Markup%* shows the amount of markup. In the example above the markup would be 101.69 %.

You need to remember that the first two columns, *Retail$* and *Cost*, are summary fields. If you sold a single title 3 times 1st =$10, 2nd =$10, and 3rd =$8.50 the *Retail$* column would be $28.50. If the book were received at a 50% discount at a List price of $10, the *Cost* column would be $15. This would show a profit of $13.50.

How did I get negative numbers and zeros in the Profit column?

The most common way is by adding records directly to the Inventory file and bypassing the Receiving process. If you don't have default discounts setup in the Department or Options screens, the list price will become the Cost. If the cost and the selling price (retail) were the same, then the profit would be zero. If you had discounted the book at the time of sale, the selling price would be less than the cost and the item would show a negative profit.

How do I fix this problem?

If the item has Receiving History, you can use the Edit Receiving History and Recalculate COGS functions available on the **Action** menu. These functions are available while on the Details page of the Receiving screen. They allow you to edit either the Retail Price, List Price, or Discount for

items already received and recalculate the COGS in the Sale Detail records for those items. The Sales History report pulls information from the Sale Detail file when building the report.

If the items do not have Receiving History, you can still assign the Department or Options level default discount for costing. This adjustment is done through the Inventory screen using the **Recalculate COGS** menu option. This only works on items that do not have receiving history.

1. First, in Inventory locate the item that is showing the 0.00 profits on the Sale History report.

2. Move to the Details page. The **Action** menu options we need are not available unless you are on the Details page.

3. Make sure you have assigned a default discount in either the Department or Options screen.

4. Select the **Action | Recalculate COGS** menu option.

5. Select the **Zero Priced Sales** option. This option applies the changes to only those items where the COGS are zero.

6. Select the option labeled "**All**". This option will look at all sales of this item.

7. **Re-calculate** starts the process.

How does Anthology Calculate Cost for items that don't have discounts, like Sidelines?

Remember that Visual Anthology will look in Receiving History first. If there is no discount associated with this item a zero is applied to the discount and the List Price becomes the Cost. If history cannot be found Visual Anthology checks to see if a default discount is used. If Visual Anthology cannot find either receiving history or a default discount, the List price in Inventory becomes the cost for the item. If the list price (cost) is less than the Retail price a profit will be shown. Here's an example:

- If you received a sideline and paid $20 for it – your List Price in receiving would be $20.

- If you plan to sell the item for $60 your Retail Price in receiving would be $60.

- When the item is sold Visual Anthology counts back and finds the item in Receiving History. There is no discount associated with this item, so the List Price is used ($20). This becomes the Cost of the item. If the item is sold for more than the cost, a profit is shown.

Estimating COGS using Department defaults

The default purchase discount is located on the **Master Files | Departments | Details** screen. It is used as a safeguard to estimate the cost of an item in the event Anthology cannot locate the supporting records in history to correctly calculate the cost of a given item.

Typically, booksellers deal within a percent or two of discount they receive from a particular vendor. When you set up your departments, Anthology provides a way for you enter a default value to use as the discount for costing when no other information can be found. Most booksellers set this value at 40% which for most seems to be about right. This will not nor is it intended to produce exact costing figures. It is, however, more accurate than no information at all, which is its intended use.

Important Note: You should not set this option for departments that are used for NET priced items, such as sidelines. These items are purchased and recorded differently in your Anthology Inventory records. Doing so may result in the miscalculation of the cost of these items. For this reason, it is best to create a separate department to hold your sideline items.

Remember that this value will be used any time Anthology cannot locate receiving history information for an item. Therefore, modifying this value has the potential to affect the costing of all future sales for the items in the corresponding department. Department discount can also affect historical sales costing records for this item. When using Department discount to change historical records, you need to select the option for **Zero-cost Sales Only** on the Recalculate Cost of Goods Sold screen. Please view [Using Recalculate COGS function](#) for more information.

How to use this function

The following example assumes that you have sales records showing in your Sales History Report that have no costing information. This is typically identified by a margin 0%.

1. Open the **Master Files | Department** screen.

2. Select the department that contains the inventory items you are working with.

3. Move to the Details page and note the value in the **Default purchase discount for costing** field.

    1. If this department is used for NET priced items and is blank, leave it that way. You should not use this function for NET priced items.

    2. If this department is used for Discount priced items, such as books and is blank, add in the default value here. As mentioned above, 40% is typical.

4. With your default value set, open your Inventory Screen and locate the item you wish to adjust the costing on.

5. Move to the Details page of the Inventory screen for that item.

6. Select the Action -> Recalculate Cost of Goods Sold menu option.

7. Select **Zero-cost Sales Only**. This will add the new costing information to only those records where there is no costing information.

8. Click the *Recalculate* button to begin.

Anthology will now go through your sales history and locate sales that contain this inventory item.

•   If the *Cost* field is blank, the new calculation will be inserted.

•   If the *Cost* field contains data, it is skipped.

Modifying Historical COGS

Overview

Cost of Goods Sold is calculated at the time of sale. When an item is sold, Anthology looks back through your receiving history to determine the cost of the item using the first in first out (FIFO) method. This is either determined by the discount given by the vendor or if NET pricing is used, by the value in the **List Price** field of the Inventory record. This cost is what Anthology stores with the sale information and is used in reporting. For a complete description, please see the Cost Of Goods Sold (COGS) section. If an associated record cannot be found in Receiving History, Anthology will refer to the Department table information and look for a "Default purchase discount for costing" value. Please see the description in the section Department Configuration > Default purchase discount for costing. If a value cannot be found in either of these two locations, Anthology cannot determine the cost of the item and does not assign one at the time of sale. For items that rely on discounts your "list" and "retail" prices will be the same and therefore show the COGS and retail price as the same. This will show your "margin" as 0. Not very useful information.

Because COGS is based on information that may or may not be provided at the time the inventory records are created, Anthology provides a means to go back and "fix up" historical records that have been affected by incomplete or incorrect receiving records.

There are three ways to fix the COGS via the Anthology interface. It should be noted here that each of the methods only effect one record at a time. There is no function within Anthology to make these changes on multiple records. The methods described below are found on the **Action** menu. For complete descriptions please visit these topics.

- Modify COGS with Edit Receiving History function - This function is used with your Receiving Shipment records and allows you edit the discount or price from a particular shipment.

- Modify COGS with Force Cost function - This function is used when there is no Receiving record. Using force creates a Receiving record for Anthology to reference when an item is sold.

- Estimating COGS using Department defaults - This function is used set the default for all "future" sales as well as historical records if you choose to recalculate COGS.

 Remember that these functions only correct information stored in the historical sales records. Further, these functions only act on a single inventory item at a time. The extent to which sales records are modified depends on how you set the Recalculate Cost of Goods Sold function. Please visit the section Using Recalculate COGS function for more information.

Modify COGS with Edit Receiving History function

Overview

This method of recalculation has its roots in the Receiving file and allows you to modify all or one of the items listed on a given shipment record. It allows you to modify the exact shipment record that item came in on. It is important to stress that the "Edit Receiving History" option is only available on the **Action** menu when you are viewing Shipment records and then only from the Details page.

When the **Actions | Edit Receiving History** menu option is available and selected, the Receiving screen allows certain fields to be edited.

- List
- Retail
- Disc%

By changing one or all of the fields and then using the Recalculate Cost of Goods Sold function to apply those changes, you will affect the COGS for selected item or items.

How to use this function

1. Open your Inventory Control -> Receiving screen

2. Locate the Shipment record that contains the item or items you want to change costing information on.

   a. You may have to un-check the "Open POs Only" option on the Receiving List screen to see your shipment records. This is located on the left side of the screen just below the **Search** field.

3. Move to the Details page of the Receiving screen.

4. Choose the item you want to edit

5. Select the **Action | Edit Receiving History** menu option.

6. You should notice that several fields are now available to edit. The ones we are concerned with are **List Price**, **Retail Price**, and **Discount %**.

7. Choose the item to be edited from the Details page grid.

8. Change or add a value to the appropriate field.

9. You will repeat steps 7 & 8 as necessary until all items have been edited as desired.

10. Click *F10* to save your changes

11. Select the **Action | Recalculate Cost of Goods Sold** menu option. See section Using Recalculate COGS function for more information.

    a. At this point, you have the option to choose All records on the PO or Current Record Only.

Modify COGS with Force Cost function

The Force Cost function is the quickest and easiest to use of the three methods defined. When you select this option, you are simply inserting a new "seed" Receiving record that Anthology uses during the count back procedure. See Cost Of Goods Sold (COGS) for more information.

This option is typically used when there are no receiving history records for a particular item; neither is there a default discount for costing defined in the Departments screen.

How to use this function

This option is found on the **Action** menu when the Inventory -> Details page is active (selected).

1. Open the Master Files | Inventory screen

2. Locate the item for which you want to Force a cost.

3. Move to the Details page of the Inventory screen.

4. Select the **Action | Force Cost** menu option.

5. Enter the dollar amount to represent the cost for this item.

6. Click *F10* to save your changes

7. Select the **Action | Recalculate Cost of Goods Sold** menu option. See section [Using Recalculate COGS function](#) for more information.