

Tip/Trick Of The Month...



STG Retail Tip: Calculating, Rounding & Reporting Sales Tax

Retailers must carefully track the amount of sales tax they collect. Retail Pro provides sales tax reporting to assist the retailer in meeting the requirements of taxing authorities as well as to evaluate the tax collected across merchandise lines. This memo seeks to explain how sales tax amounts are calculated, stored, rounded, and reported within Retail Pro, as well as why there are slight differences in the tax shown on various report types. The dilemma faced by retailers (and by Retail Pro) in calculating sales tax is this: when a percentage is applied to monetary values there is always a mathematical possibility of rounding differences. These differences become evident when you look at the various ways sales tax can be reported. Consider this simple example: three receipts are made selling two taxable items, Product A and Product B, each with a sales price of \$ 0.93 per unit. The sales tax rate is 7.90%. *The three receipts look like this:*

Receipt # 1					
Product	Qty	Price	Tax Rate	Stored Item Tax	
Product A	1	0.93	7.90%	0.07347	
Subtotal		0.93		0.07347	
Tax		0.07			
Receipt Total		1.00			

Receipt # 2					
Product	Qty	Price	Tax Rate	Stored Item Tax	
Product A	1	0.93	7.90%	0.07347	
Subtotal		0.93		0.07347	
Tax		0.07			
Receipt Total		1.00			

Receipt # 3					
Product	Qty	Price	Tax Rate	Stored Item Tax	
Product B	1	0.93	7.90%	0.07347	
Subtotal		0.93		0.07347	
Tax		0.07			
Receipt Total		1.00			

Tax on individual items is calculated to five decimal places, subtotaled, and then rounded to arrive at the total receipt tax.

Now let's look at Retail Pro report types and how these sales, and more specifically taxes, can be reported. The reports applicable to this issue fall into two categories: Document-based reports sum the document totals for a specified period. Document-based reports include X/Z-Out Reports, Sales Journals, and Sales Transaction Summaries. These reports add up the rounded document tax totals. Document-based reports provide the exact amount of tax actually collected. *An X/Z-Out report would list our sales like this:*

X/Z Report	Normal	Return	Net
Sales	2.79	0.00	2.79
Total Taxes	0.21	0.00	0.21
Transactions	3.00	0.00	3.00

The total tax on document-based reports equals the sum of the rounded receipt tax from individual documents.

Merchandise-based reports collect information on selected merchandise across the documents in the specified period. This report category includes Merchandise Reports and Sales Summaries. Merchandise-based reports can be used to see how a particular line of merchandise contributes to the overall sales tax total. Merchandise-reports attribute a portion of the sales tax collected on the sale of the item(s) included in the report. These reports do not necessarily match the exact amount of tax collected, due to the way the information must be gathered, summed, and rounded. *A merchandise report of our sales, filtered for Product A only, might look like this:*

Merchandise Report				
	Qty	Price	Stored Tax	Report Tax
Product A	1	0.93	0.07347	
Product A	1	0.93	0.07347	
Total		1.86	0.14694	0.15

Stored item tax is read from each document that the item is listed on in the report period.

Stored tax amounts are summed and then rounded. The rounded amount is the total tax shown on the report.

Now, suppose that Product B is also included on the merchandise report (see sample below). The same methodology would apply individually to Product B, and it would be shown with a sales tax of \$0.07 on the report. The report grand total for sales tax would be the rounded sum all the individual item taxes, or \$0.22 in this case. It can be seen there is a \$0.01 difference between this and the \$ 0.21 actually collected and reported on the X/Z-Out Report.

The report, filtered for Product A and B, and subtotaled for each, would look like this:

Merchandise Report				
	Qty	Price	Stored Tax	Report Tax
Product A	1	0.93	0.07347	
Product A	1	0.93	0.07347	
Sub		1.86	0.14694	0.15
Product B	1	0.93	0.07347	
Sub		0.93	0.07347	0.07
Grand Total	3	2.79	0.22041	0.22

Tax amounts are summed and rounded independently on the subtotal and grand total lines.

STG Microsoft RMS Tip: Inventory Wizard Option

Inventory Wizard

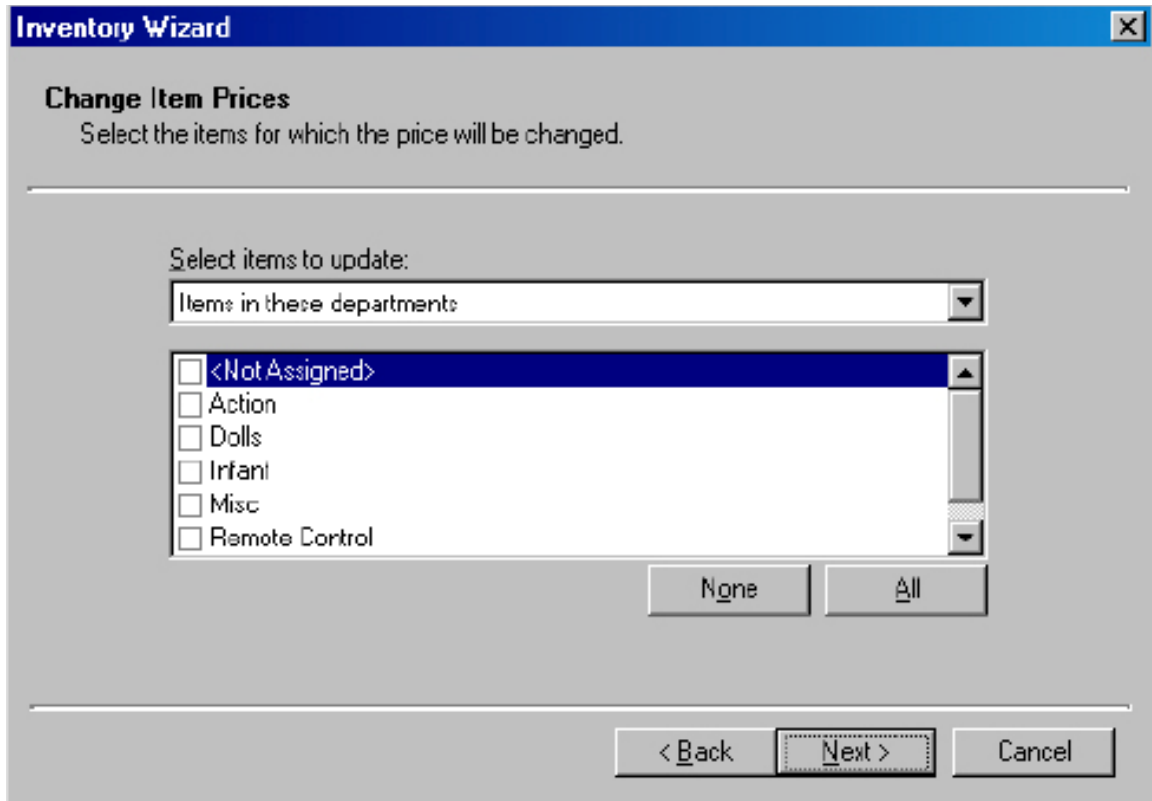
The Inventory Wizard enables you to change item properties in your database all at once. Use this wizard to automatically update item prices, change item price limits, update costs, modify reorder and quantity information, and assign item sales tax. This way, you do not have to waste time by manually changing/updating each individual item.

When you click Inventory Wizard from the Wizards menu, you will see the "Welcome to the Inventory Wizard!" window, which briefly introduces the wizard.

When you click [Next](#), you will see the "Select Inventory Task" window. Use the drop-down list to select the applicable task (i.e., Task 110: Change Item Prices; Task 120: Change Item Price Limits).

Note: Each task involves varied fields. The following information pertains to the [Task 110: Change Item Prices selection, which uses additional wizard screens.](#)

After you select **Task 110: Change Item Prices**, click [Next](#). You will see the "Change Item Prices" window. On this window, you can change (update) items in selected departments, categories, or suppliers. Or, you can choose to manually add the items.



Select items to update:

Items in these departments: If selected, the Inventory Wizard will update only those items that are in the specified department(s). Use the available list box to select the applicable department(s). At least one department must be selected. If you select the [<Not Assigned>](#) option, the Inventory Wizard will update those items that are not assigned to a particular department.

Items in these categories: If selected, the Inventory Wizard will update only those items that are in the specified category(ies). Use the available list box to select the applicable category(ies). At least one category must be selected. If you select the [<Not Assigned>](#) option, the Inventory Wizard will update those items that are not assigned to a particular category.

Items from these suppliers: If selected, the Inventory Wizard will update only those items that are supplied by the specified supplier(s). Use the available list box to select the applicable supplier(s). At least one supplier must be selected. If you select the [<Not Assigned>](#) option, the Inventory Wizard will update those items that are not assigned to a particular supplier.

Add items manually: If selected, you will need to manually add the applicable items to the Inventory Wizard Workpad. You will perform this in a later step. If you select this option, some fields on the following screens will be grayed out (not editable).

Items from this filter: If selected, Store Operations will update items based on the selected filtering criteria. After you select this option and click [Filter](#), you can define your filter criteria (i.e. Item Lookup Code, Description, Price, etc.)

After you click [Next](#), you can specify the Price Change Method and Price to be Changed.

Inventory Wizard

Change Item Prices

You may perform price changes using discount or markup formulas and assign the new price to any of the item price fields.

Price change method: Discount from regular price

Percentage: 0.00%

Price to be changed: Sale Price

Start date: 8 / 2 / 2002

End date: 8 / 9 / 2002

< Back Next > Cancel

Note: If you selected the Add Items Manually option in the previous window, you can only specify the Price to be Changed.

Price change method:

Discount from regular price: If selected, the prices of the affected items will be discounted by the percentage entered. For example, if the item has a regular price of \$1.00 and the percentage entered is 10% (effectively, \$0.10), the Inventory Wizard will update the price to be \$0.90. The calculation formula is as follows: $\$1.00 - (\$1.00 \times 10\%) = \$0.90$.

Markup from cost: If selected, the prices of all the affected items will be set based on a percentage markup from their respective costs. For example, if an affected item has a cost of \$0.50, and the percentage entered is 50% (effectively \$0.25), then when the option is finished, the item's new price will be \$0.75 or as calculated: $\$0.50 + (\$0.50 \times 50\%) = \$0.75$.

Set profit margin: If selected, the prices of all the affected items will be set so that the entered percentage is obtained as a profit from cost. The profit margin is equal to the price minus cost, then divided by the price.

For example, if an affected item has a price of \$1.00, cost of \$0.50, and the percentage entered is 100%, the Inventory Wizard will then update the price to be \$1.50. The calculation formula is as follows: $[(\$1.50 - \$0.50)/\$1.00] \times 100 = 100\%$

Offset from regular price: The prices of all the affected items are set so that the entered amount is added to the current price. For example, if an affected item has a price of \$1.10 and the amount entered is \$0.25, the Inventory Wizard will update the price to be \$1.25. The calculation formula is as follows: $\$1.10 + \$0.25 = \$1.35$

Offset from cost: The prices of all the affected items are set so that the entered amount is added to the current cost. For example, if an affected item has a price of \$1.10, a cost of \$0.50, and the amount entered is \$0.75, the Inventory Wizard will then update the price to be \$1.25. The calculation formula is as follows: $\$0.50 + \$0.75 = \$1.25$.

Percentage: The effective percentage amount. For example, enter 90 to represent 90%.

Price to be changed:

Regular: If selected, the newly determined prices will be set as the items' new Regular price. Any previous values will be overwritten.

Level A: If selected, the newly determined prices will be set as the items' new Level A price. Any previous values will be overwritten.

Level B: If selected, the newly determined prices will be set as the items' new Level B price. Any previous values will be overwritten.

Level C: If selected, the newly determined prices will be set as the items' new Level C price. Any previous values will be overwritten.

Sale: If selected, the pricing changes will reflect the sale price (set on the Pricing tab in the item properties). The sales event period is entered using the **Start Date** (beginning of sale period for qualifying items) and **End Date** (ending of sale period for qualifying items).

When you click **Next**, you will see a window that enables you to round the prices to realistic retail values based on the rounding rules you specify.

Perform price rounding: Select this option to specify the rounding method and rounding rules. You can choose from three rounding methods: Round to nearest, Round up, or Round down. Whenever Store Operations rounds item prices, it uses the specified price ranges and rounding rules to determine what the final prices will be.

Price Range: Enter one or more price ranges to apply price rounding to items within particular price ranges, for example, \$0 to \$20.00.

Rounding Rules:

Enter the rules to round to a particular amount. For example, to round to the nearest dollar and have the prices end with .95, select the [Make price a multiple of](#) check box and enter 1.00, and then select the [Then end price with](#) check box and enter 0.95.

Rounding method:

Select one of the following rounding methods.

Round to nearest: If selected, Store Operations will round the discounted/updated price(s) to the nearest retail value.

Round up: If selected, Store Operations will round the discounted/updated price(s) to the nearest retail value that is above or equal to the changed price.

Round down: If selected, Store Operations will round the discounted/updated price(s) to the nearest retail value that is below or equal to the changed price.

Example 1: Rounding discounted prices to the nearest dollar

Assume that you want to apply a 20% discount to all your books priced within the range of \$0.00 to \$20.00. If you did *not* perform price rounding, the book price of \$6.49 would automatically be discounted to \$5.19 (a simple 20% discount). But, what if you wanted all your discounted prices to be rounded to the nearest dollar? You would need to perform price rounding.

To set up these rules, you should first select the [Perform price rounding](#) option and specify the rounding method. Using our example, you want Store Operations to round the values to the nearest dollar. Therefore, you would select the [Round to Nearest](#) option.

Now, when you use the rounding rules for the first time, you will see that all the fields have a zero value. Under [Price Range](#), you should define your price range(s). Using our example, you would enter the amount \$0.00 in the [From](#) box and the amount \$20.00 in the [To](#) box. Store Operations will round all the prices that are less than or equal to \$20.00. Use the additional field boxes to define more ranges (i.e., from \$21.01 to \$50.00).

After you define the price range, you should set up the rounding rules. Using our book example, select the ['Make price a multiple of'](#) check box, and then enter \$1.00. This means that Store Operations will round the discounted prices to the nearest \$1.00.

So far, based on the rounding rules you just specified, Store Operations would round the discounted price of \$5.19 to the nearest dollar, which would be \$5.00. Conversely, if you had selected the [Round Up](#) option as the discount method, Store Operations would round the discounted price of \$5.19 up to \$6.00.

[Example 2: Rounding discounted prices to the nearest dollar that all end with a value of \\$0.95.](#)

To take Example 1 a step further, you can also set up the rounding rules to not only round the discounted prices to the nearest dollar, but also have them all end with the value of \$0.95 (or any desired value).

Select the [Then end price](#) with check box and then enter \$0.95. Based on these new rounding rules, Store Operations would round the discounted price of \$5.19 to either \$4.95 or \$5.95 (your specified discount method will determine which price Store Operations uses). Because you selected the [Round to Nearest](#) option for the discount method, Store Operations would set the discounted price to \$4.95. Conversely, if selected the [Round Up](#) option as your discount method, Store Operations would round the discounted price up to \$5.95.

Note: The best way to learn the Price Rounding feature is to experiment. After you click Finish, you will see the Inventory Wizard Workpad, which lists all the applicable items and their regular price and discounted/updated price. This way, you can review the new prices and decide if you want to commit the changes to the database. You can always cancel the action and re-configure your rounding rules.

After you click Next, you will see the "Completing the Inventory Wizard" window. When you click Finish, you will be able to view/edit the changes on a workpad.

Workpad

The Inventory Wizard Workpad displays the items that the Inventory Wizard will update. You can use the right-click mouse commands to perform additional functions, such as adding items, deleting items, copying data as table, and hiding (or displaying) columns.

Click [Add](#) to add an item to the list.

Click [Delete](#) to delete an item from the list.

Click [Import](#) to import items from a file. After clicking Import, specify a file name and file type.

Click [Export](#) to export the list to a file. After clicking Export, specify a file name and file type.

Click [Print](#) to print the list.

Click [Commit](#) to apply the changes to the database.

Click [Cancel](#) to cancel the wizard. The database will not be affected.

If all the information is correct, click [Commit](#). Store Operations will display a window confirming that changes will be made to the database. Click [Yes](#) to continue. You will then see a window that displays the number of records that were updated in the database.

For Any Questions...Contact STG's Help Desk!
1-800-811-5803



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