SHELF LOGIC® REPORT

For Shelf Logic Master Edition Version 14

USER'S MANUAL

June 26, 2006

Phone (845) 796-4242 • Fax (845) 796-4777

Table of Contents

Table of Graphics

Welcome to Shelf Logic® Report

Shelf Logic® Report is part of the Shelf Logic Family of Planogram Products. With it you can create custom reports from your Shelf Logic Planograms. You can create your own formulas and there are special built-in functions that give you important information for use in formulas or by themselves.

Shelf Logic® Report also includes Shelf Logic® Graph, which has sophisticated 3D graphing capabilities, letting you plot up to 25 different fields or formulas. The resulting graph can be rotated at any angle using the mouse.

Getting Help

About This User Manual

Like the program itself, this manual will keep growing and evolving in response to the needs of our users. Updates will be available for download from the Shelf Logic® web site user section. We welcome your comments on corrections or improvements that will help make this manual more useful. Please email to:

Help@ShelfLogic.com

This manual assumes that you have a basic working knowledge of Microsoft Windows®. If you are not familiar with Windows® terms such as dialogue boxes, mouse-clicks, menus, Windows Explorer, etc., consider reading Microsoft's guide entitled "Getting Started with Microsoft Windows®" or another suitable tutorial. A basic working knowledge of Windows® and its features is essential to effective use of any software program.

This manual assumes that you are using a standard right-handed mouse with the left button set as the primary button. When the manual refers to clicking and double clicking, it is always with the left mouse button, unless otherwise specified. If you are left-handed, you can switch the left and right mouse buttons through the Windows® Control Panel.

Online Help

The Shelf Logic® Help file incorporates the latest features of a Windows Help System. Online Help can be accessed from inside Shelf Logic® Report by clicking on the Help Menu. The online Help System provides step-by-step "How To" instructions, and in some cases refers the user to the appropriate section of the User Manual for more detailed information. If your operating system does not support the most current Help File System, contact Technical Support for assistance.

Technical Support

Normal operating hours for the Technical Support Department are as follows:

Monday – Friday
9:00 AM - 4:00 PM, EST
Phone (845) 796-4242

Your purchase of Shelf Logic® Report includes free lifetime support. All questions regarding the operation of Shelf Logic® software should be sent to:

Help@ShelfLogic.com

System Requirements

- PC compatible Windows 98, ME, NT, 2000, XP
- Pentium III Processor (or equivalent), 700 Mhz
- 96 MB of RAM (higher recommended)
- 16 MB Graphics Card
- 20 MB available hard disk space

Installing Shelf Logic® Report

Instructions for First Time Installations

1. Download your Shelf Logic program from our website: www.shelflogic.com.
2. On the website, logon to the user section with your user name and password. You will see a link to download Shelf Logic Report. When asked, save the file to disk. DO NOT open the file.
3. After downloading Shelf Logic Report, you will have a file called **ShelfLogic_Report_Install.exe**. Double-click on this file to start the installation.
4. Follow the installation instructions.

The installation program will install Shelf Logic® Report into a folder named "C:\Program Files\Shelf Logic Report".

Shelf Logic Trial Version

When Shelf Logic Report is first installed, it automatically becomes a trial version. It needs to be registered in order to become a fully working copy. If the program is not registered, you will see this screen when the program starts:

Figure 1. The Registration Dialog Box

- If you are using Shelf Logic as a trial version, then click on the "Continue with Trial" button.
- If you purchased Shelf Logic and wish to register it, then click on the "Register Program" button. See the next section for information on registering your program.
- If you haven't purchased Shelf Logic and wish to do so. Click on the "Purchase Software" button and you will be taken to our website so that you can purchase the product.
- You can click on the "Cancel" button to exit the program.

Registering Shelf Logic®

After installing the program (but before running it for the first time) you will need to register your Shelf Logic® software and obtain a program key code. You can register on our website or over the phone by calling our office.

To start the registration, click on the "Register Program" button. You will then be presented with a registration number. This registration number is turned into a program unlock key by calling our offices to get a program key, or by going to our web site and registering it online. The URL is:

http://www.shelflogic.com/register.htm

Keep the register dialog box open while you get the program key. If it is closed, you will get a different registration number each time you open the registration dialog box.

Once you get the program key, enter it into the program key field and click on the “Register Program” button. The program will then be registered and fully functional. This only needs to be done once.

The key code you will be issued is only valid for one installation so you will need to obtain a new key code for each copy of Shelf Logic® Report that you purchase.

If you need assistance in registering your software, please contact Technical Support.

☑ ***Note: Please refer to the section on Removing Shelf Logic® which contains important information about moving, reinstalling, and re-registering your Shelf Logic® software.***

Moving Shelf Logic® Report

Please follow these instructions carefully in case you need to move Shelf Logic® Report to a different computer or reinstall at a later date:

1. Copy the DataFile folder, Images folder, and Reader folder to a removable medium (floppy disk, zip disk, tape or network drive) before running the remove program. You will need to transfer these files to the new installation.
2. From the Windows Start Menu, select Shelf Logic® Report/Move.
3. Shelf Logic® Report will be removed from you computer and a **removal code** will be displayed on your screen.
4. **You must write down this removal code and store it in a safe place or send it directly to help@shelflogic.com. **

☑ ***Note***: ***You must have the removal code when you reinstall and reregister Shelf Logic® Report.*** **This removal code is valid for only one reinstall so you must have a new removal code each time the software is moved.**

Reinstalling Shelf Logic® Report

1. Reinstall Shelf Logic® Report following the instructions at the beginning of this section.
2. Copy your data files to C:\Program Files\Shelf Logic Report\DataFile.
3. Copy your image files to C:\Program Files\Shelf Logic Report \Images.
4. Copy your zipped Reader files to C:\Program Files\Shelf Logic Report \Reader.
5. Run Shelf Logic® Register according to the instructions above.

☑ ***You will need both the removal code and the new registration number when contacting Technical Support.***

Starting Shelf Logic® Report

Once installation is complete, you may begin using and learning Shelf Logic® Report. From the Windows Start Menu, select Programs, then the Shelf Logic® Report Program Group. Click the Shelf Logic® Report icon to run the program, or double-click the Shelf Logic® Report desktop icon.

Figure 1. The Main Screen

There are 4 choices that let you create a new report, modify and run and existing report, run an existing report and exit the Report program.

Overview

You can create a report for any Shelf Logic plan. You don't have to worry about the database since the plan selected knows what database to use. You define the report, column by column. You can use a database field or create a formula or use the built-in functions.

Once a report is defined, it can be saved and run or modified at a later time.

When you create a new report or modify an existing report, the "Field Grid" window is displayed, as shown below:

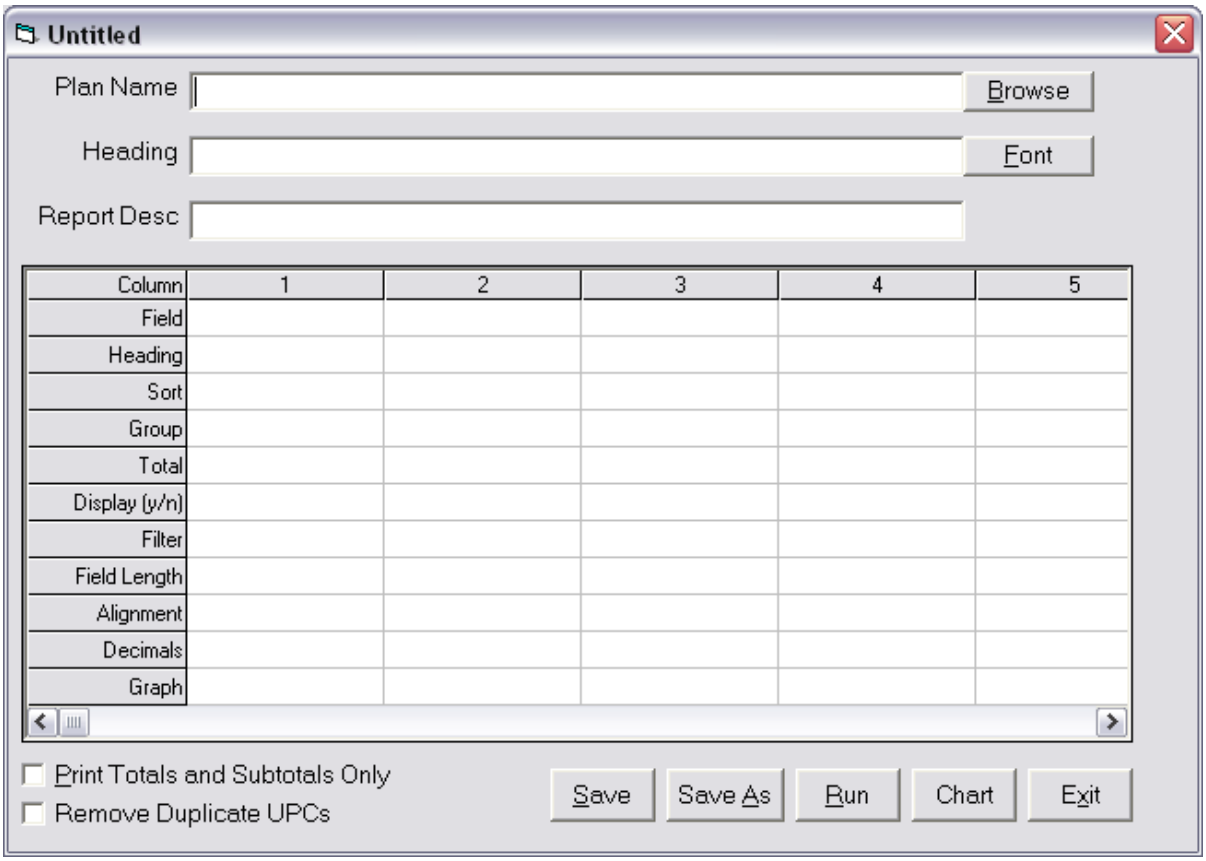


Figure 2. The Report Grid

The columns labeled 1,2,3 etc represents columns on the report. For each report column, you specify the field or formula, the column heading, number of decimals places, etc.

Once that is done, you can save and run the report. If you have indicated that one or more columns is to be charted on a graph, you can click on the "Chart" button. You can print the report and chart graph to the screen or printer.

Information the grid can be changed so fine tune your report. The "Save As" button can save this report under another name, so you can use it to start off a similar report.

When modifying a report, the grid will be filled in with the report information. When you run a report, you won't see this window at all.

How a Report Works

When you run a report, it goes through each face on the plan.. Each line on the report is another face. If there is 20 faces on a plan, the report will have 20 lines (assuming no totals, subtotals or groups, and you haven't checked "Remove Duplicates UPCs" and "Print Totals and Subtotals Only".

At the top is the "Plan Name" field. If this report is associated with a particular plan, you can enter its path and name here, or click the "Browse" button to look for it.

You can leave the Plan Name field blank, in which case it can be used for many different plans. Before the report is run, you will be asked for the Plan Name for that particular report run.

New Plan

To create a new plan, click on the first button marked “New” and you will see the following window. It’s called the “Field Grid” window.

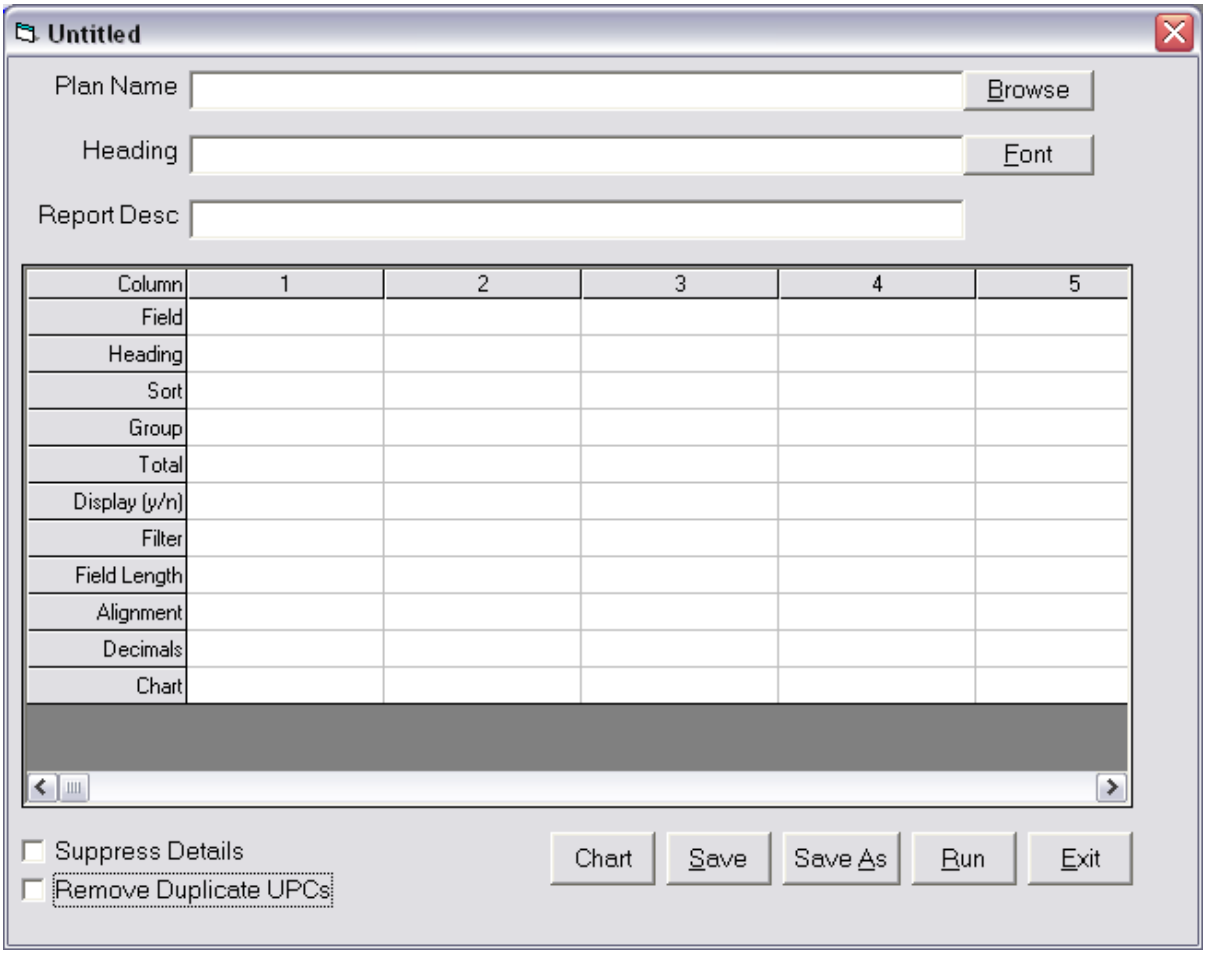


Figure 3. The Report Grid

It is here in the grid that you define the report columns that make up the report. There can be up to 25 columns on a report, reflected by columns 1 through 25. For each column, there are a number of report column details you can specify. Each row represents a another report column detail.

Let’s look at each row.

Field

This is where you enter what’s to be displayed for this report column. It can be a database field, a built-in function or a formula involving both fields and built-in functions.

When you click in the “field” grid, a pull-down box will appear.

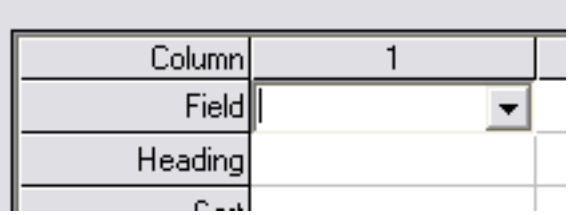


Figure 4.

It contains a list of all database fields. Clicking on the pull-down box’s down arrow displays this list.

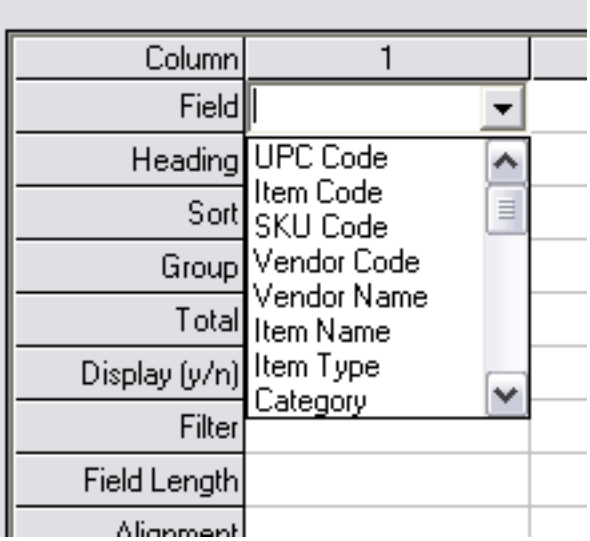


Figure 5. The Field Pull-Down

When you select one of these, it will appear in the “field’ position.

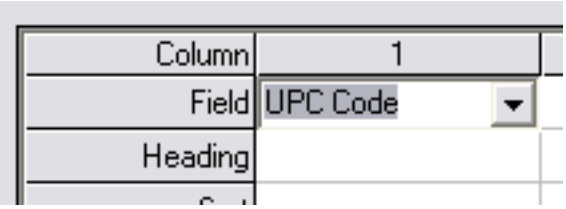


Figure 6. Selecting a Field

So the “UPC Code” will appear as the first column of the report.

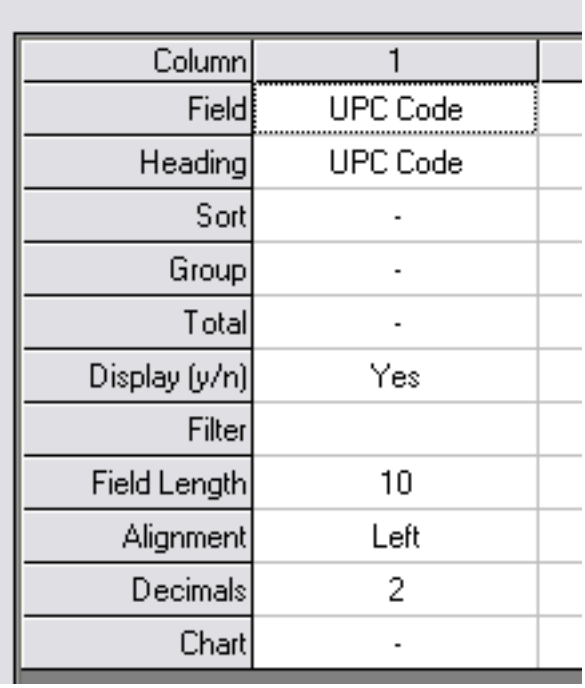
Using a Built-in Function

To use a built-in function, type a dollar sign and a pop-up of all available functions will appear in a listbox. The functions are grouped by Plan, Section, Shelf and then Face. When you select a

function, it will appear with the brackets in place. So you don't have to enter the starting "[" or ending "]" for a function.

This only works if the function is entered first at the end of the formula. So if the dollar sign entered isn't the last character in the grid cell, the pop-up won't appear.

When this field has been specified, you can move to the next column or make changes in the display of the first column. Either way, when then cursor leaves the "field" box, defaults for the rest of the rows for this first column are displayed, as shown below:

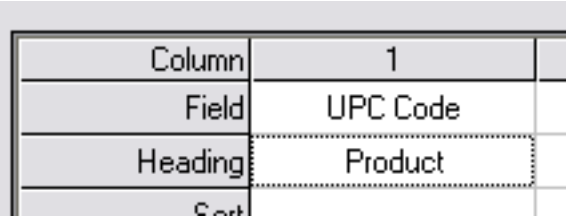


Column	1
Field	UPC Code
Heading	UPC Code
Sort	-
Group	-
Total	-
Display (y/n)	Yes
Filter	
Field Length	10
Alignment	Left
Decimals	2
Chart	-

Figure 7. Column Configuration

Heading

This is where you define the report column heading. This defaults to the field name in the "Field" box above. In the example below, we click in the heading grid cell and changed the column heading to "Product", as shown in the figure below:



Column	1
Field	UPC Code
Heading	Product

Figure 8. Column Heading

Multi-Line Headings

You can create multi-line column headings by using the "^" character to indicate a new line. For example, the column heading "Square^Feet" will be a 2 line column heading, and will look like:

Square
Feet

The above is for a left justified column. If right justified, the column heading will be likewise:

Square
Feet

Sort

This lets you sort the report by this report column. When you click in the "Sort" cell, a pull-down box will appear with the sort choices, as shown below:

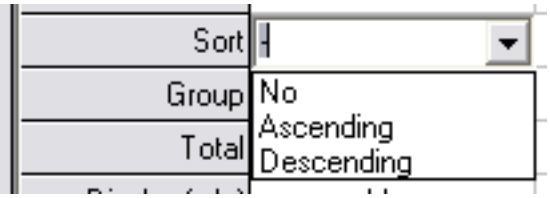


Figure 9. Sort Options

You can choose to sort the column in ascending or descending order, or select "No" to have no sort. The default is "no sort".

We're going to sort the report by the UPC Code field, so we'll select "ascending".

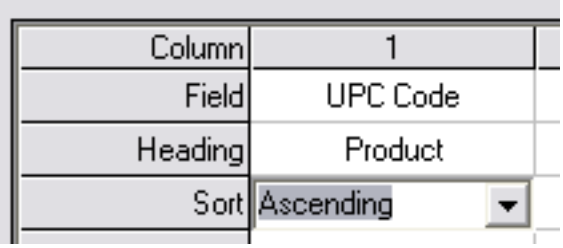


Figure 10. The sort order is chosen

The report can be sorted by any number of fields. The sort order is the same as the column order. So if each column was sorted, then the report is sorted by column 1, then within that by column2, and then within that by column3., etc.

Group

This lets you group similar information together on the report. When you click in the “Group” cell, a pull-down box will appear with the group choices, as shown below:

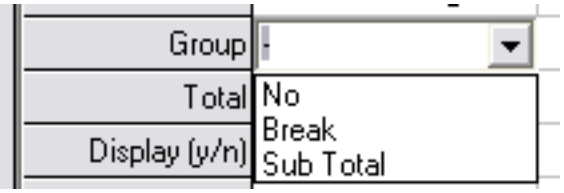


Figure 11. Group Options

You can choose to group the data in this column by choosing “Group”. In this example, since this column displays the “UPC Code”, there will be a blank line after each group of UPC Codes. When you group a field, this field should also be sorted.

Here’s an example of how the grouping looks on the report.

UPC Code
111113-5101
111113-5101
111113-5101
111113-5101
125875-5073
125875-5073
131300-0202
131300-0202
131300-0202
131300-0202
160002-6010
160002-6010
160002-6010
160002-6010

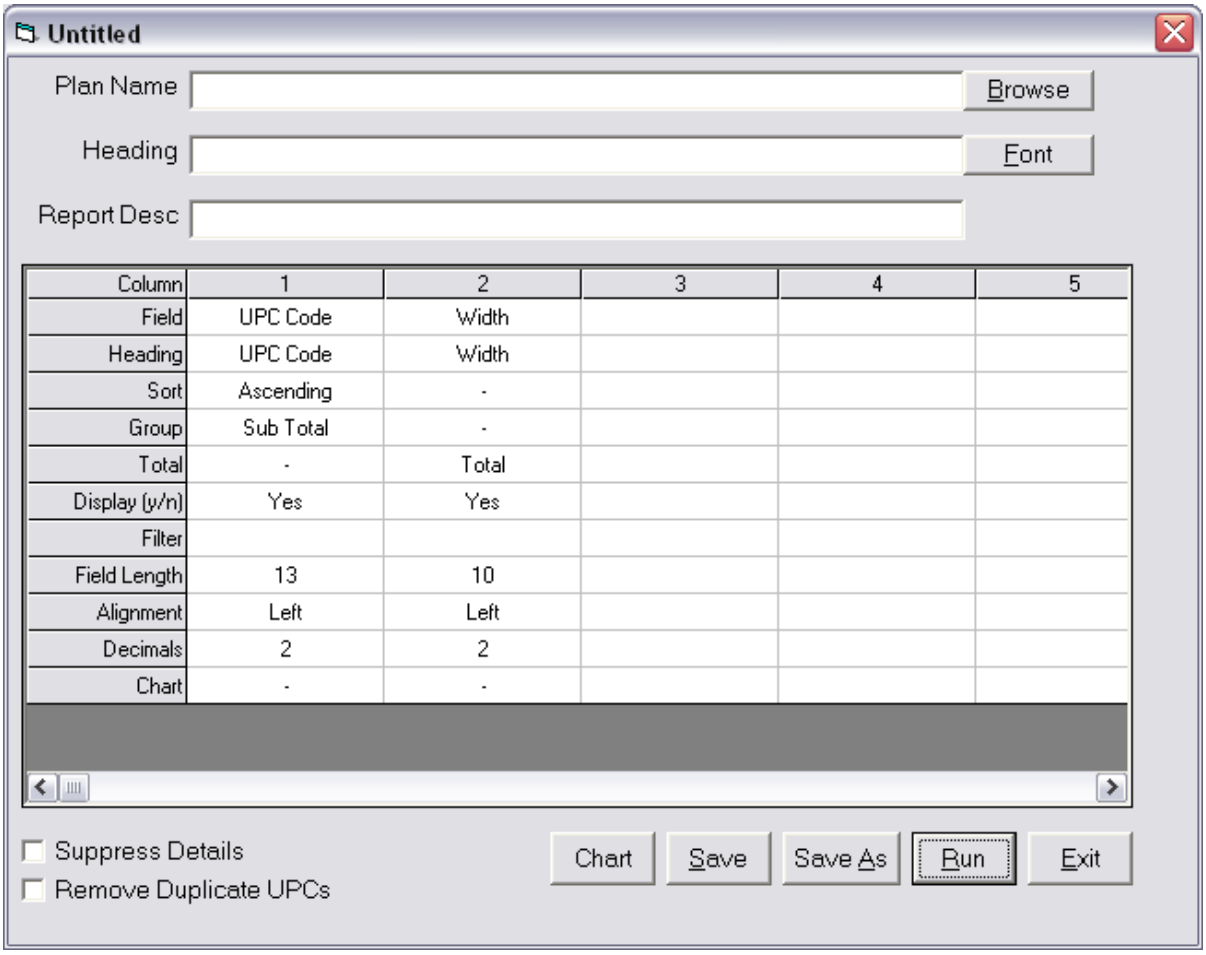
Figure 12. Example of Groups

Group Sub Totals

You can generate sub totals at the end of a group by selecting “SubTotal” for the Group specification.

When you select “Sub Total”, there must be one or more fields that are totaled. A totaled field will generate a subtotal for each grouped field specifying a subtotal.

For example, we’ll make column 2 the face width and make this a total field.



Column	1	2	3	4	5
Field	UPC Code	Width			
Heading	UPC Code	Width			
Sort	Ascending	-			
Group	Sub Total	-			
Total	-	Total			
Display (y/n)	Yes	Yes			
Filter					
Field Length	13	10			
Alignment	Left	Left			
Decimals	2	2			
Chart	-	-			

Figure 13. The Field Grid

When the report is run, there will be a subtotal after each grouping, as shown below:

UPC Code	Width
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
***111113-5101	45.20
125875-5073	9.40
125875-5073	9.40
***125875-5073	18.80
131300-0202	6.46
131300-0202	6.46
131300-0202	6.46
131300-0202	6.46
***131300-0202	25.84

Figure 14. Subtotals

The “UPC Code” column is the one being grouped so the “***” is put in front of the group. The “Width” column is being totaled so the group subtotal for width appears in the “Width” column.

Total

This lets you total up the column. At the end of the report, a total of this column is displayed. If any column is a grouped column indicating a subtotal, then a sub total will also appear in this column.

This is shown in Figure 13 above.

When you click in the total cell, a pull-down will display the choice of no total, totals or averages.

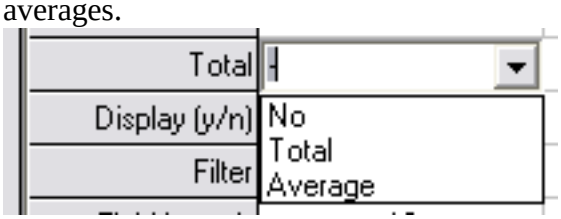


Figure 15. Totals Options

Display

This determines if the column is displayed in the report. There may be times when you want to filter or sort by a certain column without actually displaying it.

When you click in the “Display” cell, a pull-down gives you a choice of “yes” and “no”.

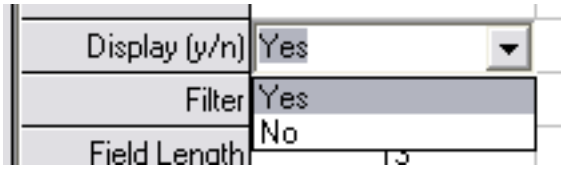


Figure 16. Display Options

The default is “yes”.

Filter

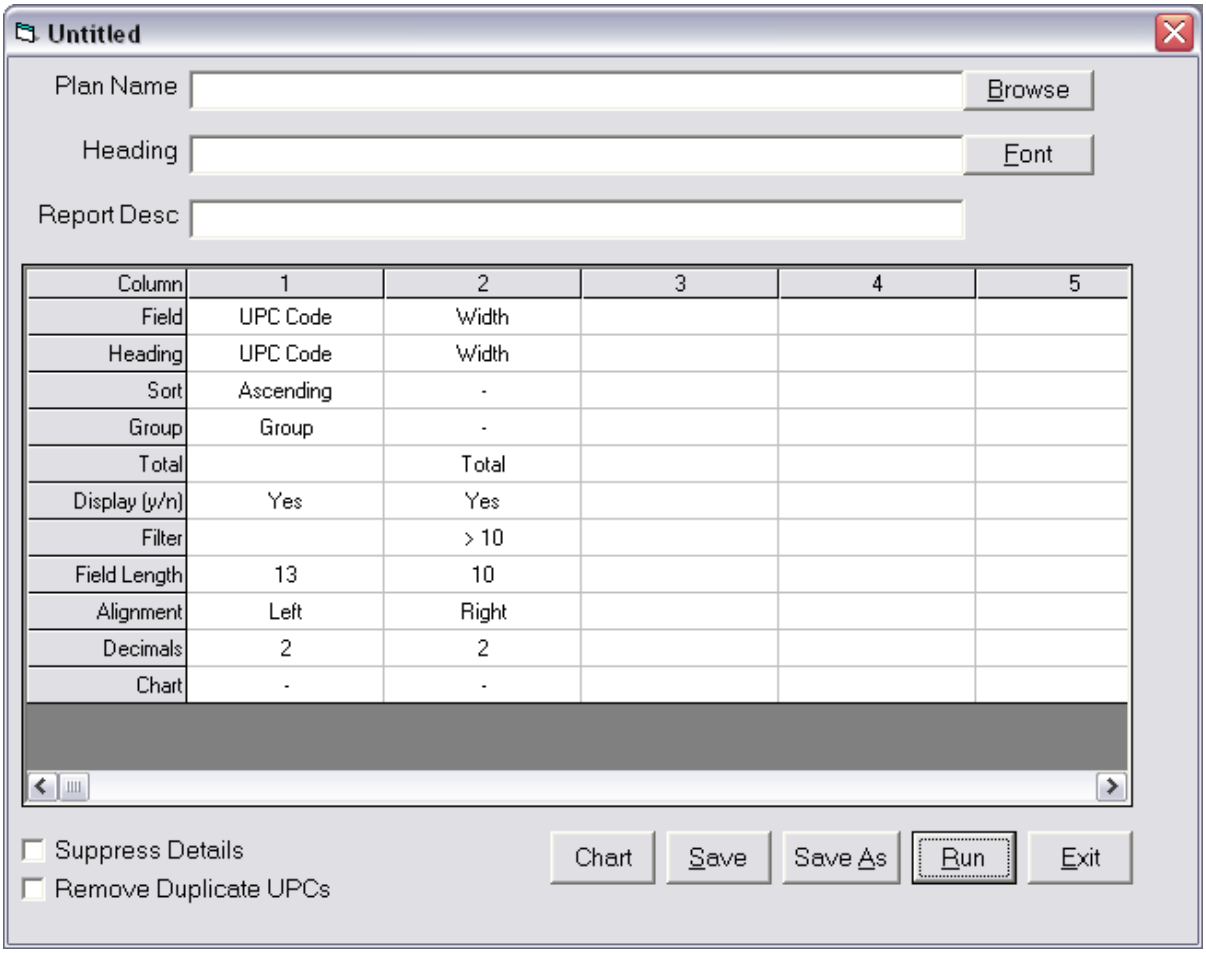
This lets you filter the records that appear on the report. You can use any comparison such as greater than,. less than, etc. Here’s a list:

>	greater than
<	less then
>=	greater than or equal to
<=	less than or equal to
=	equal to
<>	not equal to
like	pattern match (such as “like *ing” which indicates ending with “ing”)

Here are some examples (we are doing this in the “Width” column):

> 6	width greater then 6 (inches or cm)
<= 12	width less than or equal to 12 (inches or cm)

Let’s run our report but only include items where the product width is more than 10 (inches or cm). Here’s what the “Field Grid” looks like:



Column	1	2	3	4	5
Field	UPC Code	Width			
Heading	UPC Code	Width			
Sort	Ascending	-			
Group	Group	-			
Total		Total			
Display (y/n)	Yes	Yes			
Filter		> 10			
Field Length	13	10			
Alignment	Left	Right			
Decimals	2	2			
Chart	-	-			

Figure 17. Using Filters

When run, then report looks like this:

UPC Code	Width
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
370000-66897	11.50
370000-66897	11.50
432893-0427	14.20
432893-0427	14.20
611431-71057	12.20
611431-71057	12.20

Figure 18. Report of Width over 10

You can see that only items with a width more than 10 are included in this report.

You can specify a filter for more than one column. In that case, and “AND” comparison is done with the columns. For example, if the filter for the “UPC Code” column is “like 202*” and the filter for the “Width” column is “> 10”, then the report filter would be:

UPC Code starting with “202” AND Width greater than 10

Field Length

This lets you specify the width of this column on the report. This roughly corresponds with the number of characters. But since each character is a different width, it’s not always the same. The default amount is 10, about 10 characters.

Alignment

This determines the alignment for the column on the report. When you click in the alignment cell, a pull-down gives you a choice of left justified, right justifies, or centered.

Figure 19. Alignment Options

This also controls how the column is sorted. If the column is right justified, then it’s sorted right to left.

Decimals

This determines how the number is formatted on the report and lets you specify the number of decimal places to display. Or, you can specify “0” and have no decimal places.

The default amount is 2. If this is not a number field, then this has no effect.

Graph

This determines if this column is going to be put on a graph. When you click in the “Graph” cell, a pull-down gives you the choice of “yes” or “no”.

The following information is entered at the top of the window, outside of the grid.

Plan Name

This is where you can enter the name of the plan that this report is associated with. You need to enter the full path and name of the plan. You can use the “Browse” button to look for and select your plan.

Generic Reports

If you leave the “Plan Name” field empty, then you will be prompted to enter the plan name each time the report is run. This means the report is ‘generic’ and can be used with any plan.

If a plan name has been entered in the “Plan Name” field for the report, is can be erased and the report made ‘generic’ again.

Heading

This is the heading of the report. Next to it is a button marked “Font”. Clicking on this lets you change the font style and size for the heading.

Report Desc

This is a short description of the report and is used for in report libraries to help identify a report.

Print Totals and Subtotals Only

Checking this will print only the subtotals and totals. The detail lines of the report will not print.

Example:

Here’s a report with subtotals and totals. This checkbox is not checked so the detail lines will also print on the report.

UPC Code	Width
131300-0202	6.46
131300-0202	6.46
131300-0202	6.46
131300-0202	6.46
***131300-0202	25.84
611431-71057	12.20
611431-71057	12.20
***611431-71057	24.40
	50.24

Figure 20. Report Details present

Now here's the same report but the "Print Totals and Subtotals Only" checkbox is checked.

UPC Code	Width
***131300-0202	25.84
***611431-71057	24.40
	50.24

Figure 21. Subtotals and Totals Displayed

Only the subtotals and the total appear on the report. If there was no grouping for the UPC Code column, then only the total will be displayed, as shown below.

UPC Code	Width
	50.24

Remove Duplicate UPCs

The Remove Duplicate UPCs checkbox lets you trim reports by eliminating duplicate upc codes from the report. This assumes that the report is sorted by the UPC code.

Let's look at an example. This is the report with "Remove Duplicate UPCs" checkbox unchecked so duplicates will appear if there is more than one face for a UPC code.

UPC Code	Width
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
125875-5073	9.40
125875-5073	9.40
131300-0202	6.46
131300-0202	6.46
131300-0202	6.46
131300-0202	6.46
160002-6010	7.57
160002-6010	7.57
160002-6010	7.57
160002-6010	7.57

Figure 22. Report with Duplicate Faces

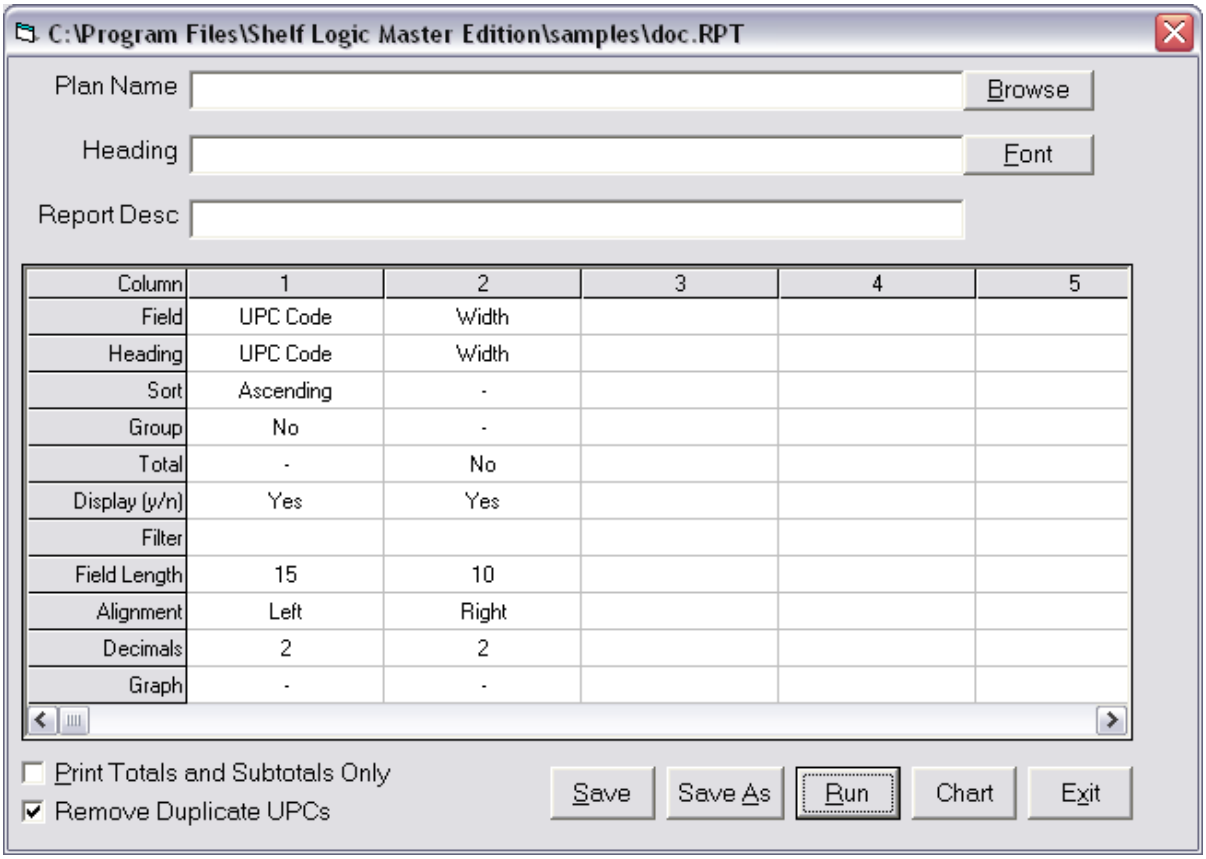
This plan has 4 faces of UPC code "111113-5101", 2 faces of UPC code "125875-5073" and so on.

When the "Remove Duplicate UPCs" checkbox is checked., each UPC code will appear only once on the report, as shown below.

UPC Code	Width
111113-5101	11.30
125875-5073	9.40
131300-0202	6.46
160002-6010	7.57

Figure 23. Duplicate UPC Codes Removed

This is how the Field Grid looks before running the report.



Column	1	2	3	4	5
Field	UPC Code	Width			
Heading	UPC Code	Width			
Sort	Ascending	-			
Group	No	-			
Total	-	No			
Display (y/n)	Yes	Yes			
Filter					
Field Length	15	10			
Alignment	Left	Right			
Decimals	2	2			
Graph	-	-			

Figure 24. The Field Grid for this Report

Save

This button saves the report. If the report hasn't been saved yet, you will be asked for a report name.

Save As

This button saves the report under a different name.

Run

This runs the report. You will return back to the Field Grid after viewing the report.

Chart

This button displays a graph of the columns selected for the graph. Whichever column has a "Yes" for the "Graph" row will appear on the graph.

Here's what the graph of the items widths on the plan.

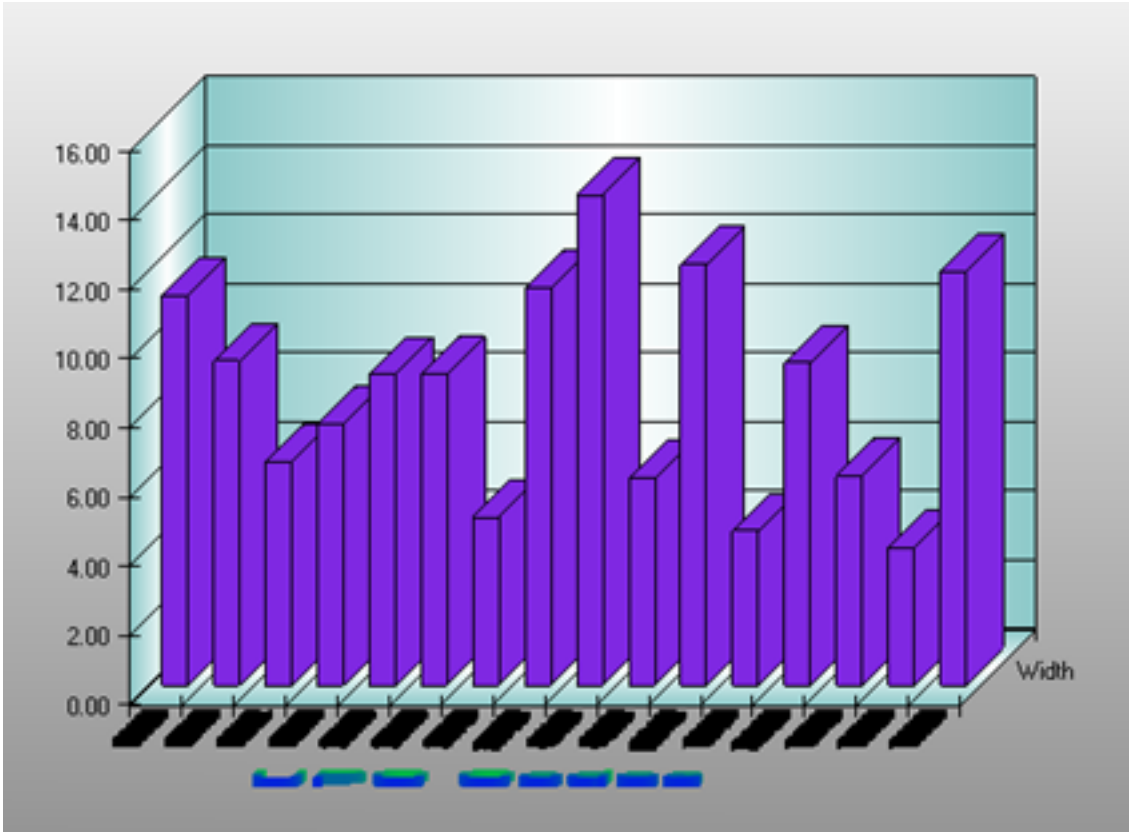


Figure 25. Graph of Item Widths

If you choose more than one field to display, they are displayed together on the same graph, one behind the other. Here's the Field grid for this graph. We will graph the "Cost" field as well as the "Width" field.

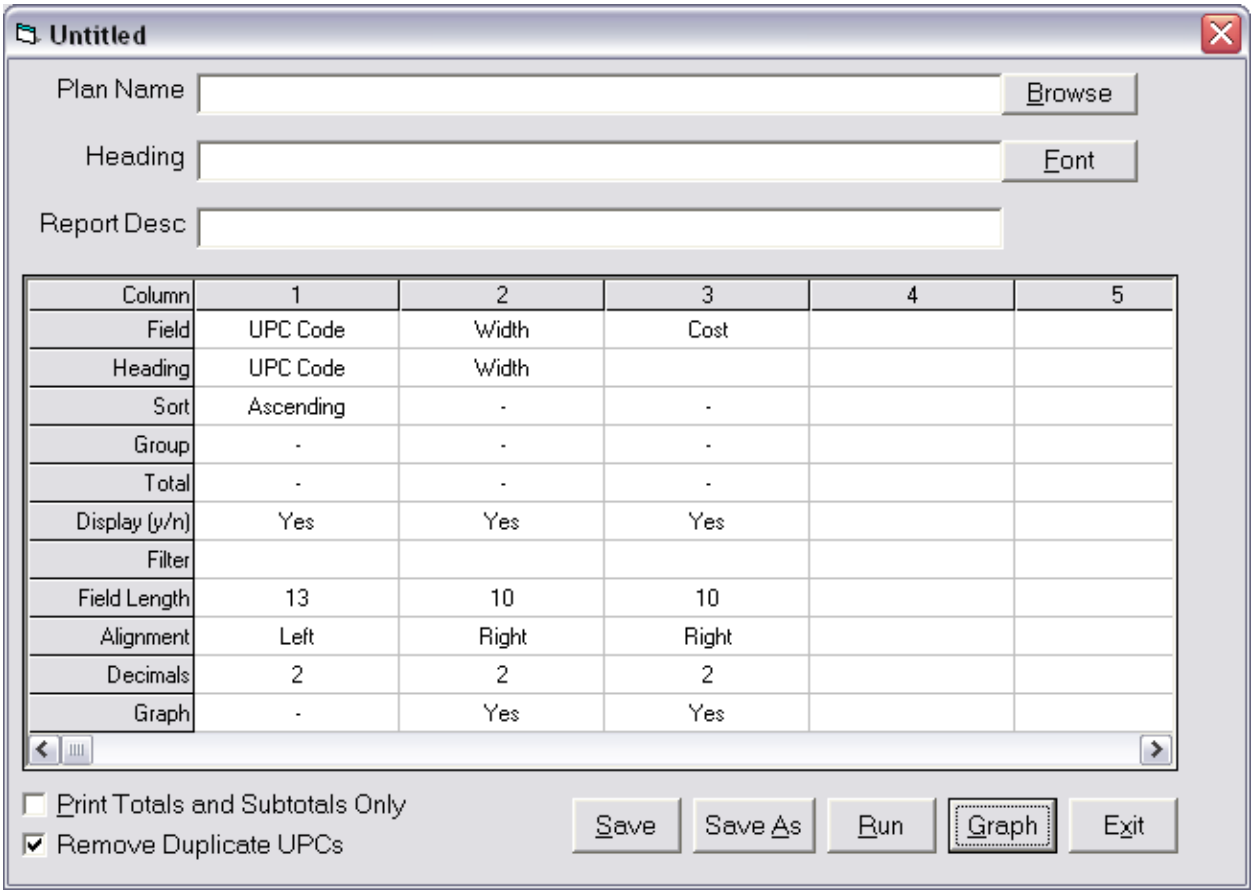


Figure 26. Graphing More than One Column

When the “Graph” button is pressed, the graph will look like this:

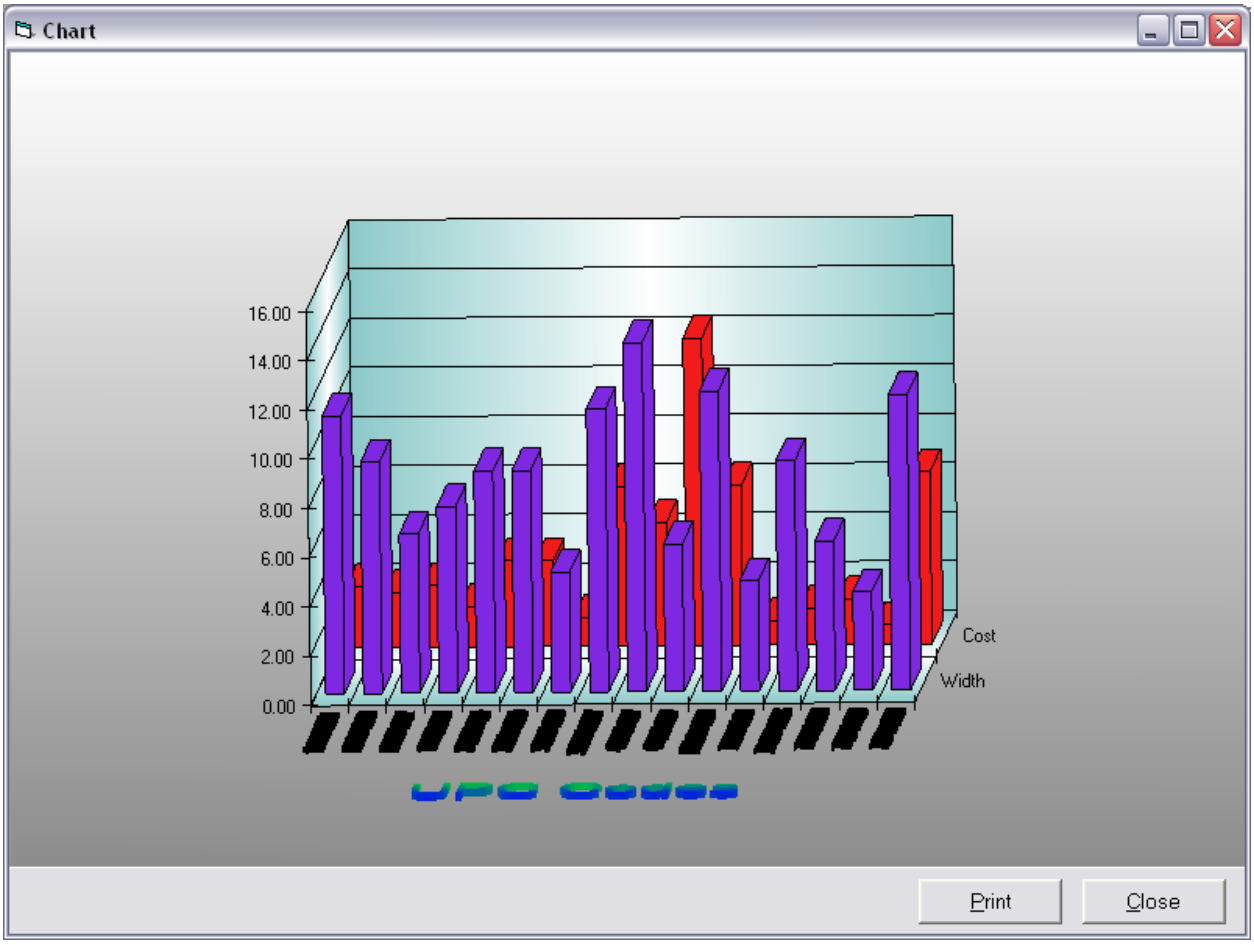


Figure 27. The Graph of Two Columns

The “width” column is on dark purple and the “cost” column is in red.

Shelf Logic Report comes with a large number of built-in functions that can be used by themselves or within formulas. All built-in functions start with a "$" sign and are surrounded with "[]" characters.

These functions are divided in 5 groups, according to the various elements of the plan. These are plan, section, shelf and face. Each function starts with either "plan", "section", "shelf", or "face".

The level tells you what results you'll get. A function starting with "Face" gives you information about a single face. For example, "Face Cube" gives you the cubic feet (or cm) of the current face. If you move up to the Shelf Level, the function "Shelf Face Cube" gives you the total cubic feet (or cm) or all faces on the shelf. Moving up again to the plan level, the function "Plan Face Cube" gives you the total cubic feet (or cm) or all faces on the plan.

Specific Arguments

Some functions can have an argument after it, put in parenthesis. When used with a section level function, it can be used to specify a specific section nbr. So if the current face belongs in section 1, that is the sections used on the report. You can specify a different section number to report on by putting it in parentheses after the function.

For example, the function "Shelf Width" gives you the shelf width for the shelf on which the current face resides. So let's say the first face of the plan resides on shelf 1. "Shelf Width" would give us the width of shelf 1. If you want the width of shelf 2, you would use the function "Shelf Width(2)". The final function as used will look like "[$Shelf Width(2)]".

When used at the section level, you can indicate a specific section. When used at the shelf level, it indicates a specific shelf.

When used at the face level, it can indicate a specific face. Faces have additional arguments. You can put the letters "UPC:" followed by a UPC Code. Instead of the current face, information about a specific UPC Code can be used. You can also use the word "KEY:" followed by a key number.

For example: [$Face Width(UPC:1982730-9928)] gives you the width of the face with UPC Code 1982730-9928.

[$Face Width(KEY:43)] gives you the width of the face with a key number of 43.

When used in the "Field Grid", the function would have a "$" sign in front of it and stat and end with "[]" characters. So in the "Field Grid", "Plan Face Cube" would be written as "[$Plan Face Cube]". In order to make the functions more readable, we will leave out the $ and [] characters

in the list of functions. They will be shown in examples however, so you can see exactly how to use them.

There is a 5th group that doesn't start with "plan", "section", "shelf", "face" and has general functions, like "Days Supply", that also work on the plan level.

All functions are not case sensitive. This means they can be in upper case, lower case or mixed case.

Plan Level Functions

There are functions that operate on the plan level, they give you numbers that are for the entire plan. These functions all start with “Plan”.

Plan Function List

Plan Width – The width of the plan in feet or cm. This is the display width as shown in the “Display Setup” window.

Plan Height – The height of the plan in feet or cm. This is the display height as shown in the “Display Setup” window.

Plan Area – The area of the plan in square feet or square cm. This is the display height multiplied by the display width.

Plan Kickplate – The height of the kickplate in inches or cm. This is defined in the “Display Setup” window.

Plan Shelf Width – This is the total width of all shelves on the plan.

Plan Shelf Height – This is the total height of all shelves on the plan.

Plan Shelf Depth – This is the total depth of all shelves on the plan.

Plan Shelf Area – The total shelf area on the plan in feet or cm. This is the total shelf height x the total shelf depth. It’s the area looking down on the shelves.

Plan Shelf Face Area – The total shelf area on the plan in feet or cm. This is the total shelf height x the total shelf length. It’s the total shelf area looking straight at the plan, and is the area available for facings.

Plan Shelf Cube – The total shelf volume on the plan in cubic feet or cubic cm. This is the total shelf height x the total shelf length x the total shelf depth.

Plan Peg Area – The total peg area of the plan in feet or cm. This is the total peg area height x the total peg area length. It’s the area available for facings.

Plan Sections – The number of sections on the plan

Plan Face Linear – This is the total length of all the faces in the plan touching shelves in inches or cm.

Plan Face Area – This is the total area of all the faces in the plan in square inches or square cm. This is the face height x the face width.

Plan Face Cube – This is the volume of all items on the plan in cubic inches or cubic cm. This is the total of the face height x the face width x the face depth of each item in the facing stack.

Plan Cost – The wholesale value (cost) of all items on the plan.

Plan Retail – The retail value of all items on the plan.

Section Level Functions

Section Level Functions can be for the current section or for a specific section. By putting the section number in parenthesis, you can specify one section. If not, the section in which the current face resides is used. Remember, the reports are done by going through each face on the plan, so the section for each face is determined and is the one used unless a specific section is specified in parenthesis.

For example:

Section Width – is the width of the section in which the faces resides
Section Width(3) – is the width of section three

Section Function List

Section Width - This is the width of the section in inches or cm

Section Left - This is the distance from the left edge of the plan to the start of the section

Section Shelves - This is the number of shelves in the section

Section Faces - This is the number of faces in the section

Shelf Level Functions

Some shelf functions can be for the current shelf or for a specific shelf. By putting the shelf number in parenthesis, you can specify one shelf. If not, the shelf on which the current face resides is used.

For example:

Shelf Width – is the width of the shelf in which the faces resides
Shelf Width(3) – is the width of shelf three

Shelf Function List

Shelf Nbr – The shelf number in which this face resides.

Shelf Width – This is the width of the shelf in inches or cm.

Shelf Height – This is the height of the shelf in inches or cm.

Shelf Depth – This is the depth of the shelf in inches or cm.

Shelf Left – This the distance from the left edge of the plan to the left edge of the shelf in inches or cm.

Shelf Top – This the distance from the top edge of the plan to the top of the shelf in inches or cm.

Shelf Section – The section number in which the shelf resides.

Shelf Thick – This is the thickness of the shelf in inches or cm.

Shelf Area – The shelf area in feet or cm. This is the shelf height x the shelf depth. It's the area looking down on the shelf.

Shelf Area Available – The shelf area in feet or cm. This is the shelf height x the shelf length. It's the shelf area looking straight at the plan.

Shelf Cube – The shelf volume in cubic feet or cubic cm. This is the shelf height x the shelf length x the shelf depth.

Shelf Face Linear – The total linear space taken up by all faces touching the shelf.

Shelf Face Area – The total face area of all faces on this shelf.

Shelf Face Cube – The total cubic feet (or cm) of all items on this shelf.

Shelf Faces Qty – The number of faces on this shelf.

Shelf Item Qty – The number of items on this shelf. That's the number of faces and all items stacked behind the faces.

Shelf Face Cost – This is the cost of all items on this shelf.

Shelf Face Retail – This is the suggested retail of all items on this shelf.

Face Level Functions

For the Face Level Functions, there are 2 modifiers you can use after the function. These are “On Shelf” and “On Plan”. When “On Shelf” is used after a face level function, it means the total of all similar faces on the shelf. When “On Plan” is used after a face level function, it means the total of all similar faces on the plan.

Let’s take an example:

Face Area – This function gives you the area of the current facing. That’s the face width x the face length.

Face Area On Shelf – This function gives you the area of this face and all other similar faces on the shelf. Similar means all faces with the same UPC Code. So if the current face is UPC Code “12345678” and it resides on shelf number 2, and there are 3 other items on shelf number 2 with the same UPC Code of “12345678”, then the areas of all four faces added together will be the result of this function.

The “Face Area On Shelf” function is NOT the same as the “Shelf Face Area” function. The “Face Area On Shelf” function gives you the areas of faces on the shelf similar to the current face. The “Shelf Face Area” function gives you the area of ALL faces on the shelf.

This is true for all functions beginning with “Face”. The results apply only to faces the same as the current face. Or if you specify a specific face (see below), then the results are for all items the same as the specified face. This differs from the Plan and Shelf level functions which give results on all faces, the same or not.

Face Area On Plan – This function is like the “Face Area On Shelf” but gives you the area of this face and all other similar faces on the entire plan. Again, this function is not the same as the “Plan Face Area” function. The “Face Area On Plan” function gives you the areas of faces on the plan similar to the current face. The “Plan Face Area” function gives you the area of ALL faces on the plan.

The Face Level Functions are a little different than the other. The face information is for the current face on the plan being reported. Some face functions can be for a specific face instead of the current face. So you can use a face number in parenthesis. In addition to a face number, here you can use the items UPC Code to specify a face. You can also use the face’s key number to specify a particular face.

For example:

Face Width – is the width of the face in which the faces resides
Face Width(2) – is the width of face #2
Face Width(UPC:123456789-0) – is the width of a face with UPC Code of 123456789-0
Face Width(KEY:2) – is the width of a face with Key Number of 2

Face Function List

Face Nbr – The face number. Faces are numbered according to which was placed first, second, etc.

Face Left – This the distance from the left edge of the plan to the left edge of the face in inches or cm.

Face Top – This the distance from the top edge of the plan to the top of the face in inches or cm.

Face Side – The current side of the face. 1 is front, 2 is side and 3 is top.

Face Hook – For a peg item, this is the peg hook length in inches or cm.

Face Stack – This is the number of items stacked in the facing.

Face StackMax – This is the maximum number of items that will fit the facing.

Face Width – This is the width of the face in inches or cm.

Face Width On Shelf – This is the total width of all faces with the same UPC Code.

Face Width On Plan – This is the total width of all faces with the same UPC Code.

Face Height – This is the height of the face in inches or cm.

Face Height On Shelf – This is the total height of all faces with the same UPC Code.

Face Height On Plan – This is the total height of all faces with the same UPC Code.

Face Depth – This is the depth of the face in inches or cm.

Face Depth On Shelf – This is the total depth of all faces with the same UPC Code.

Face Depth On Plan – This is the total depth of all faces with the same UPC Code.

Face Cost – This is the cost of all items in this facing.

Face Cost On Shelf – This is the cost of all items in all facings on this shelf.

Face Cost On Plan – This is the cost of all items in all facings in the plan.

Face Retail – This is the suggested retail of all items in this facing.

Face Retail On Shelf – This is the suggested retail of all items in all facings on this shelf.

Face Retail On Plan – This is the suggested retail of all items in all facings in the plan.

Face Area – This is the area of the face in square inches or square cm. This is the face height x the face width.

Face Area On Shelf – This is the total area of the faces on this shelf in square inches or square cm. This is the face height x the face width.

Face Area On Plan – This is the total area of all the faces in the plan in square inches or square cm. This is the face height x the face width.

Face Cube – This is the volume of all items in the facing in cubic inches or cubic cm. This is the total of the face height x the face width x the face depth of each item in the facing stack.

Face Cube On Shelf – This is the volume of all items in the similar facings on the shelf in cubic inches or cubic cm. This is the total of the face height x the face width x the face depth of each item in the facing stack of each facing on the shelf.

Face Cube On Plan – This is the volume of all items in the similar facings on the plan in cubic inches or cubic cm. This is the total of the face height x the face width x the face depth of each item in the facing stack of each facing on the plan.

Face Linear – This is the face width of this face is touching a shelf. If the face is on a peg hook or not directly on a shelf, zero will be the result of this function.

Face Linear On Shelf – This is the total length of all faces touching this shelf in inches or cm.

Face Linear On Plan – This is the total length of all faces touching all shelf and in peg areas in inches or cm.

Face Qty – This is the number of facings (always 1 in this case).

Face Qty On Shelf – This is the total number of all similar facings on the shelf.

Face Qty On Plan – This is the total number of all similar facings on the plan.

Face Item Qty – This is the number of items stacked in this facing.

Face Item Qty On Shelf – This is the total number of items stacked in all similar facings on the shelf. Similar means the same UPC Code.

Face Item Qty On Plan – This is the total number of items stacked in all similar facings on the plan. Similar means the same UPC Code.

Face Key Nbr – The key number of this face as it appears when the plan is printed.

Face Key Qty – The number of faces assigned to a particular key number (used with the combine key number option).

Keep in mind that unless the function has the word “Item” in it, the function refers to the first item in the face, not all items stacked in a facing.

General Level Functions

The following functions are mostly financial functions that work with the entire plan.

Annual Profit – annual profit for all items on the plan.
Item Annual Profit(UPC Code) - annual profit for all items on the plan.
Gross Margin Rtn Invent
Days Supply
Demand
Fill Stock
Item Gross Margin Rtn Invest
Gross Margin Invest
Turns
Sales Sq Ft
Sales Cu Ft
Sales Linear Ft
Retail Value
Shelf Profit
Shelf Gross
Retail Gross Margin
Plan Retail Movement
Retail Movement
Wholesale Value

Column Formulas

Instead of entering a database field for the column, you can enter formulas using fields, constants and the built-in functions.

You can use operations that perform multiplication, division, addition and subtraction. You can use parenthesis to group operations. When database fields or built-in functions are used in formulas, they must be surrounded with "[" and "]". So the UPC Code database fields when used in a formula would be "[UPC Code]". Don't worry about the capitalization of letters in database field names or in the built-in functions.

Let's look at some examples, entered exactly as it should look in the "Field" cell:

[Width] * [Height]

This is the width of the current face multiplied by the height of the current face. This gives us the area of the face. Here it is used in a report.

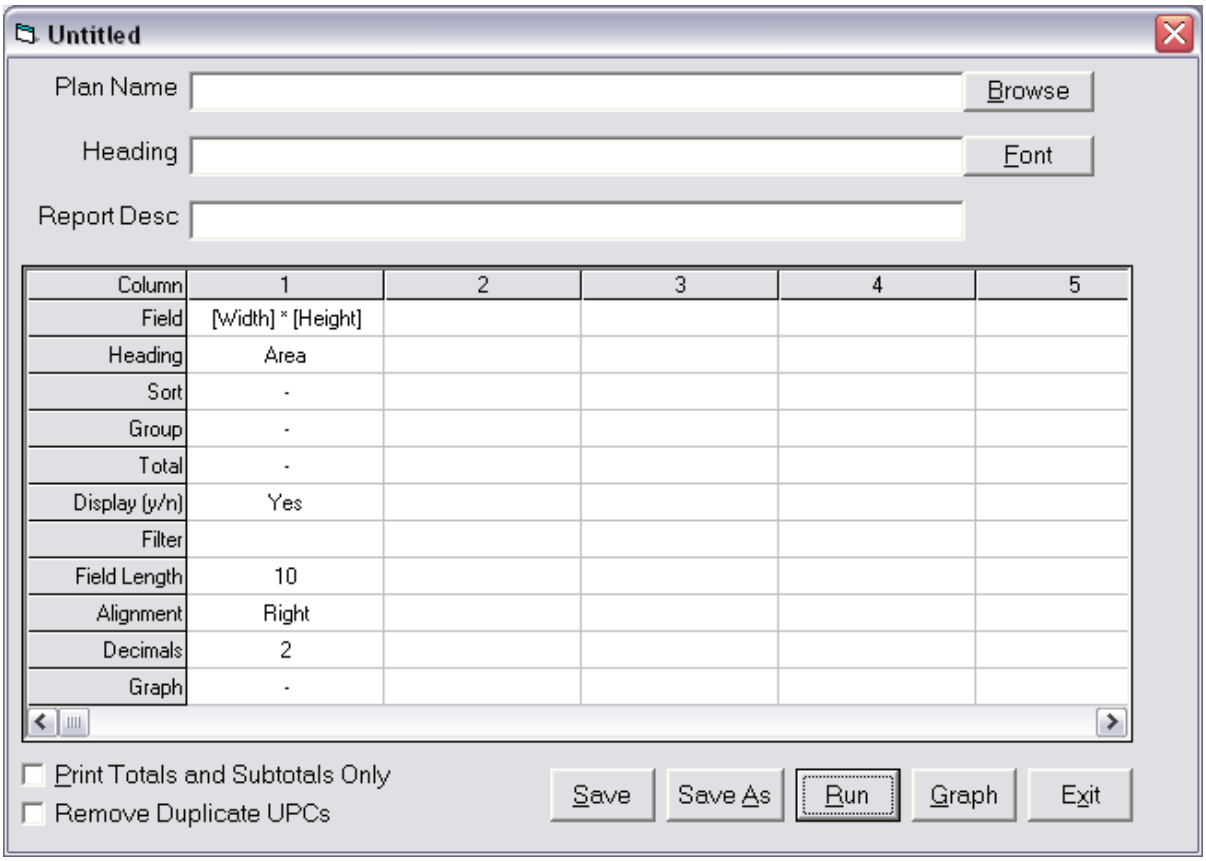


Figure 28. Using a Formula

In the “Field” cell, you can see the “[Width] * [Height]” formula. The heading was changed to “Area” and the justification was changed to “right” justify.

When the report is run, it will look like this:

Area
194.35
194.35
164.70
164.70
63.92
63.92
60.02
60.02
81.00
81.09

Figure 29. The Result of the Formula

Since the width and height are in inches or cm, each figure represents square inches or square cm.

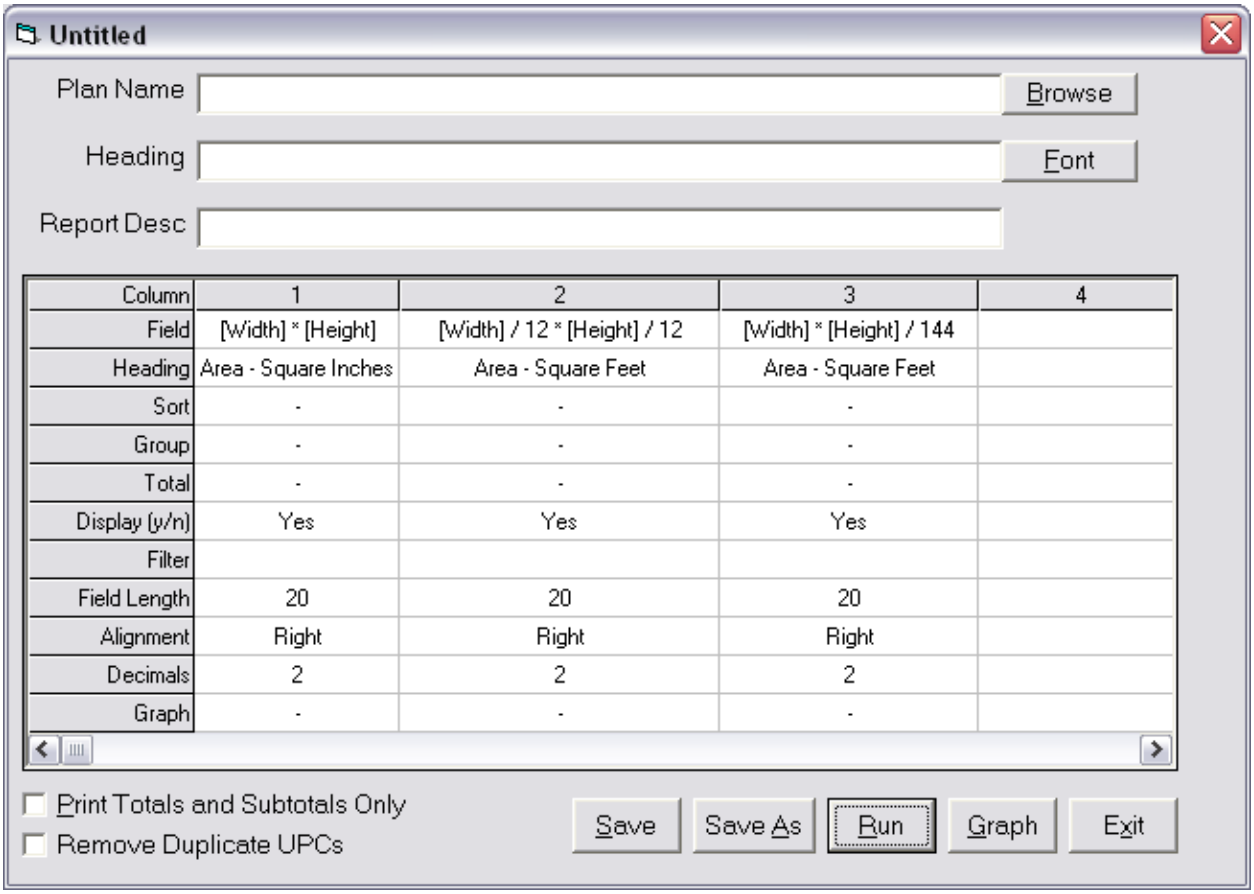
If we want to express the result if terms of square feet instead of square inches, you can divide the width and height by 12 so they represent feet and then multiply them together. The formula would be:

[Width] / 12 * [Height] / 12

You could also use:

[Width] * [Height] / 144

We’ve done it both ways to compare and put it next to the original formula giving square inches.



Column	1	2	3	4
Field	[Width] * [Height]	[Width] / 12 * [Height] / 12	[Width] * [Height] / 144	
Heading	Area - Square Inches	Area - Square Feet	Area - Square Feet	
Sort	-	-	-	
Group	-	-	-	
Total	-	-	-	
Display (y/n)	Yes	Yes	Yes	
Filter				
Field Length	20	20	20	
Alignment	Right	Right	Right	
Decimals	2	2	2	
Graph	-	-	-	

Figure 30. Getting Square Feet from Square Inches

Notice the original “width x height”, and then 2 ways to get square feet. When run, the report looks like:

Area - Square Inches	Area - Square Feet	Area - Square Feet
194.35	1.35	1.35
194.35	1.35	1.35
164.70	1.14	1.14
164.70	1.14	1.14
63.92	0.44	0.44
63.92	0.44	0.44
60.02	0.42	0.42
60.02	0.42	0.42
81.00	0.56	0.56

Figure 31. The Comparison of Square Inches to Square Feet

Using Parenthesis in Formulas

Parenthesis can be used to group expressions together in a formula.

([suggested retail] – [cost]) / [suggested retail]

This formula uses parentheses to group the subtraction operation so it’s done first. That result is then divided by the “suggested retail” field.

Here are some basics to creating reports.

Include UPC Code

First, since the report goes face by face through the plan, you will probably want to display the UPC Code to identify the face. And you will probably want to sort by the UPC Code as well.

Remove Duplicates or Not

For reports, you have a major choice of displaying each face or just a single UPC Code, removing duplicate UPC Codes from the report. This is useful since most other information (like width, cost) about each face with the same UPC Code is also the same.

In this next report, we display each face and where there are multiple faces of the same item, all faces are displayed.

UPC Code	Width
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
125875-5073	9.40
125875-5073	9.40
131300-0202	6.46
131300-0202	6.46
131300-0202	6.46
131300-0202	6.46
160002-6010	7.57
160002-6010	7.57
160002-6010	7.57
160002-6010	7.57

Figure 32. A Report with All Faces

You can see there are 4 faces of UPC “111113-5101”, 2 faces of “125875-5073” and so on.

In this next report, we check the “Remove Duplicate UPCs” and the report will look like:

UPC Code	Width
111113-5101	11.30
125875-5073	9.40
131300-0202	6.46
160002-6010	7.57

Figure 33. Report with Each Item Once

The report is much shorter, each UPC Code is listed only once. When you use the "Remove Duplicate UPCs" feature, make sure the report is sorted by the UPC Code.

Notice that the value in the "Width" column doesn't change when duplicates are removed.

Let's extend this example and individually total up the widths of all items.

We'll do this be having a subtotal grouping on the UPC column and totaling the Width column. The Field Grid will look like:

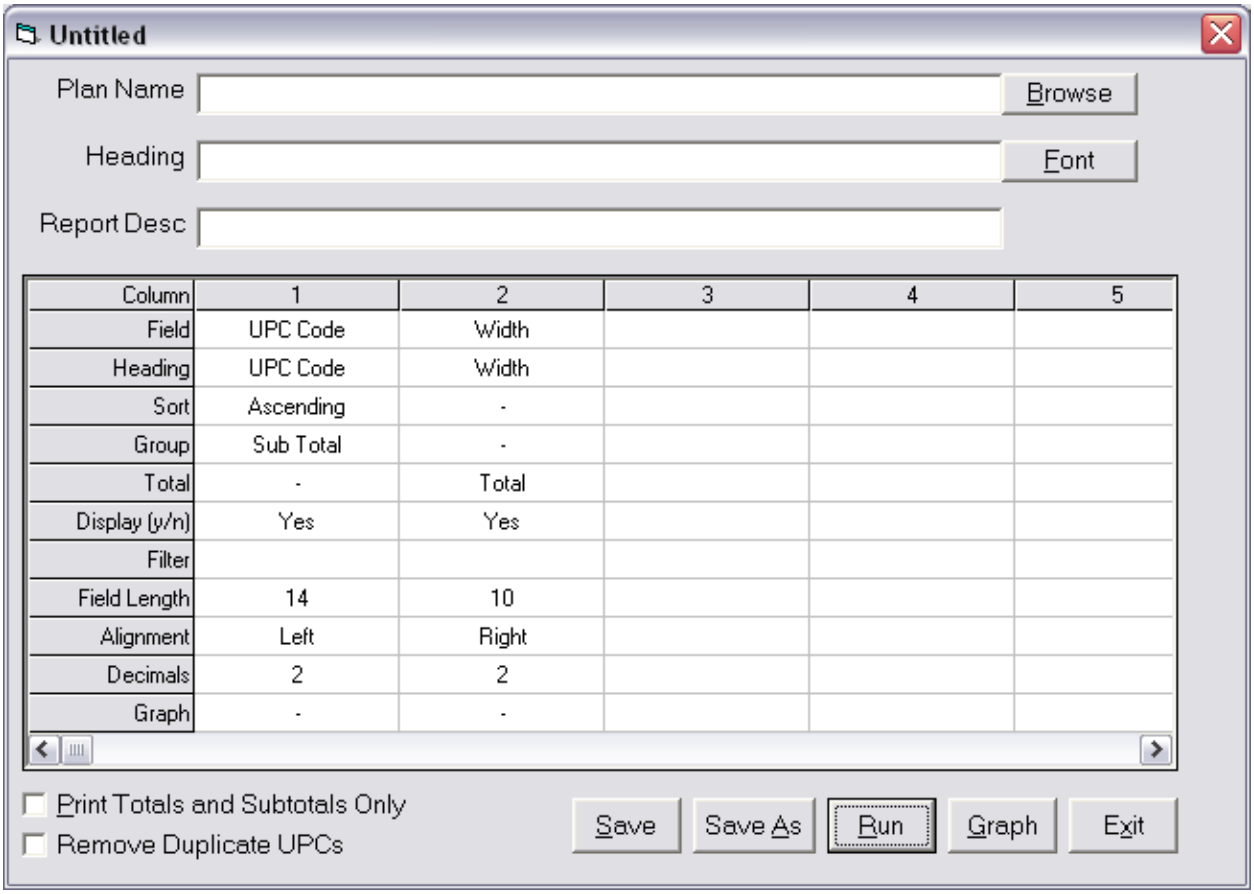


Figure 34. The Field Grid for Subtotaling the Widths

When run, the report looks like:

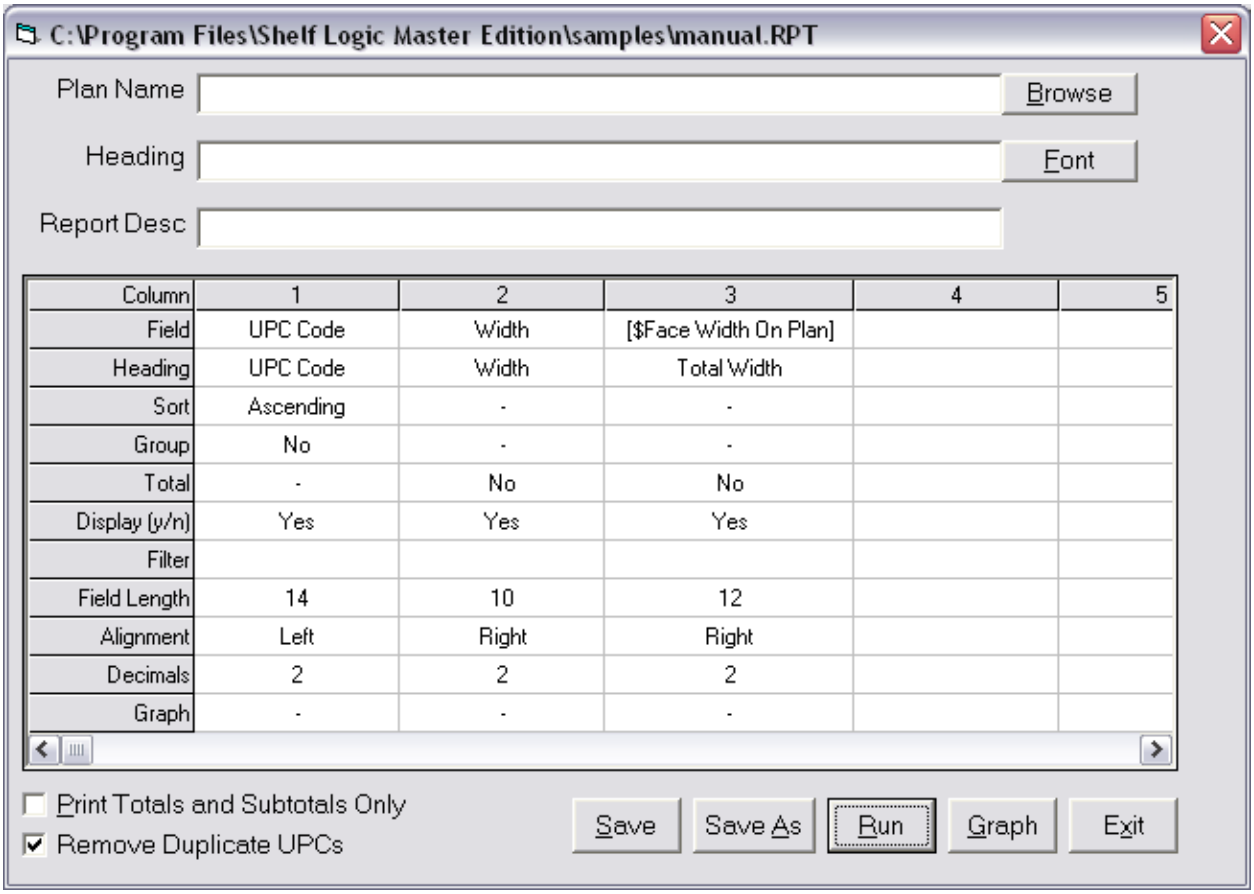
UPC Code	Width
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
111113-5101	11.30
***111113-5101	45.20
125875-5073	9.40
125875-5073	9.40
***125875-5073	18.80

Figure 35. The Subtotaled Report

The individual faces are shown on the report with a subtotal for each UPC Code. The subtotal represents the total width of all similar items on the plan.

If you remove duplicates from the report and wish to get a total width for all UPC Codes on the plan, you would use of the built-in functions. The function to use is the “Face Width On Plan” function. It gives you the total width of all faces of similar items on the plan. So when the report is run and the first line of the report is UPC Code “111113-5101” (as it is in the above example), the “Face Width On Plan” function will give you the total width of all faces with UPC Code “111113-5101”.

Let’s do this report but we’ll remove duplicates and use the “Face Width On Plan” function. Here’s the Field Grid we’ll use.



Column	1	2	3	4	5
Field	UPC Code	Width	[$Face Width On Plan]		
Heading	UPC Code	Width	Total Width		
Sort	Ascending	-	-		
Group	No	-	-		
Total	-	No	No		
Display (y/n)	Yes	Yes	Yes		
Filter					
Field Length	14	10	12		
Alignment	Left	Right	Right		
Decimals	2	2	2		
Graph	-	-	-		

Figure 36. Using a Built-in Function

We don't need subtotals on the "UPC Code" column since our "Face Width On Plan" function gives us the subtotal for each group of similar items, so it was set to "No" for the "group". When run, the report looks like:

UPC Code	Width	Total Width
111113-5101	11.30	45.20
125875-5073	9.40	18.80

Figure 37. Report with Built-in Function

The UPC Codes are listed once. The "Width" column gives the width a single face. The "Total Width" column (which is our built-in function) gives you the total of all faces with the same UPC Code.

The bottom line is that when removing duplicates, you have to decide if information is for a single facing or all facings on the plan and use the appropriate field or built-in function.

Let's look at the included reports to get an idea of how they work and how to build reports.

Product Listing Report

We'll start with the Product Listing Report. Here's what one looks like:

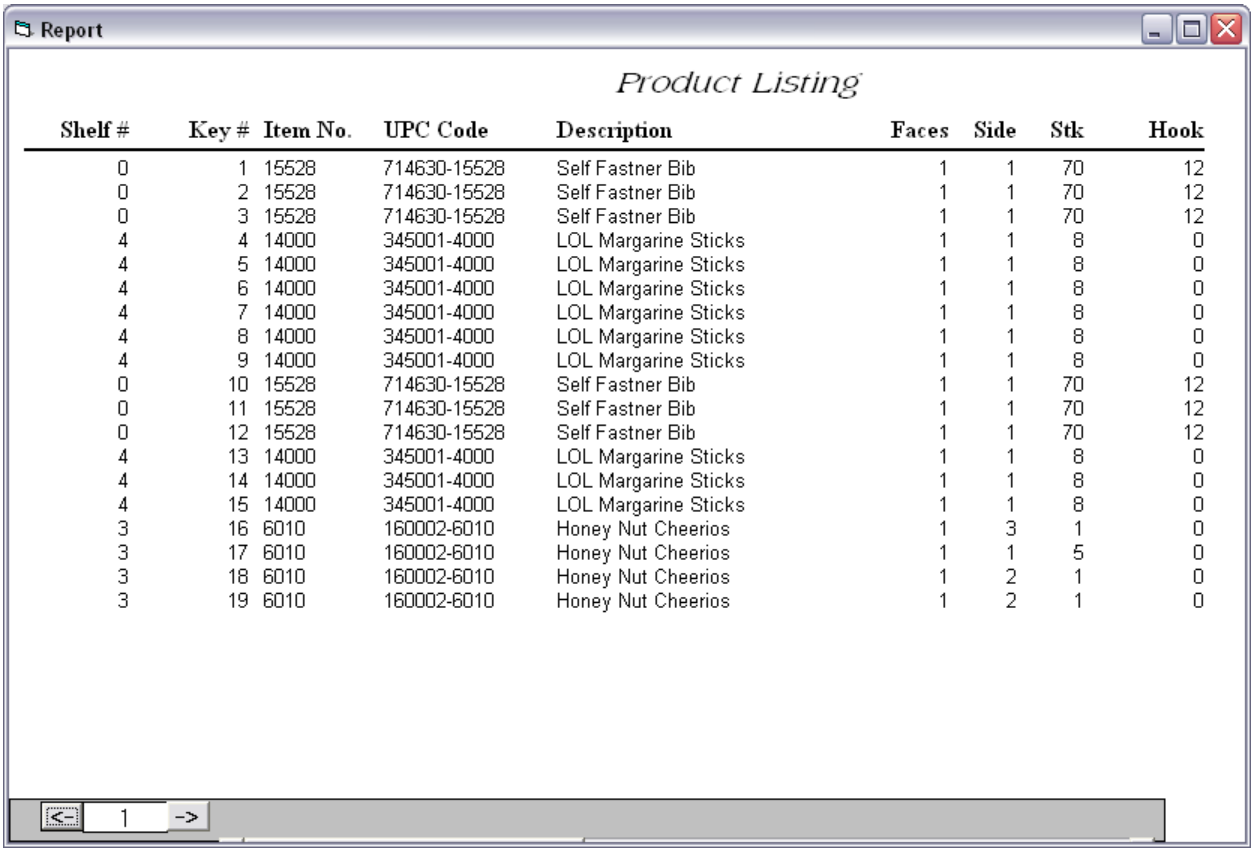
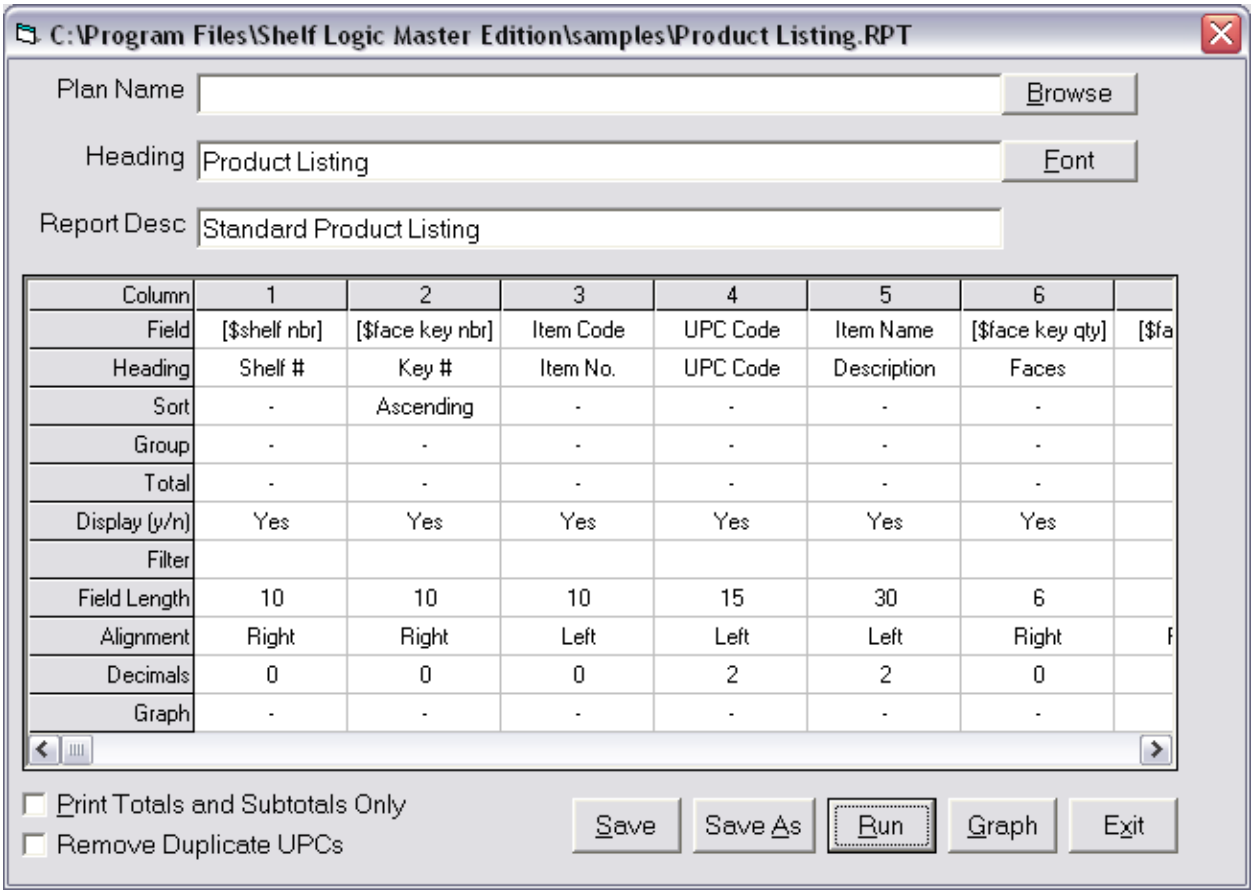


Figure 38. Product Listing Report

It identifies each facing according to its Key Number. It's sorted by Key Number and displays the UPC Code and item description. Also displayed is the side onto which the item is placed and the number of items stacked in the facing. If the facing is on a peg, then the hook length is also displayed.

Here's the Field Grid for this report:



Column	1	2	3	4	5	6	
Field	[$shelf nbr]	[$face key nbr]	Item Code	UPC Code	Item Name	[$face key qty]	[$fa
Heading	Shelf #	Key #	Item No.	UPC Code	Description	Faces	
Sort	-	Ascending	-	-	-	-	
Group	-	-	-	-	-	-	
Total	-	-	-	-	-	-	
Display (y/n)	Yes	Yes	Yes	Yes	Yes	Yes	
Filter							
Field Length	10	10	10	15	30	6	
Alignment	Right	Right	Left	Left	Left	Right	
Decimals	0	0	0	2	2	0	
Graph	-	-	-	-	-	-	

Figure 39. Definition for the Product Listing Report

Let's look at each column on the report.

Column 1. Shelf #
This displays the shelf number on which this face resides. We use a built-in function, "Shelf Nbr" that displays the shelf number for a face. The function has a dollar sign in front of it and is surrounded by [] characters.

Column 2. Key #
This displays the Key Number for the face. We use the built-in function of "Face Key Nbr" to display the face's Key Number. The report is sorted by this column so the "Sort" row is set to "ascending".

Column 3. Item Code
This is a field from the item database, the "Item Code" field.

Column 4. UPC Code
This is a field from the item database, the "UPC Code" field.

Column 5. Item Name
This is a field from the item database, the "Item Name" field.

Column 6. Faces

This displays the number of faces assigned to this Key Number. It is used when the “Combine Key Number” option is selected in Shelf Logic. If the option is not selected, as it is in this example, then the Faces column will always be “1”.

We use the built-in function “Face Key Qty”. which gives us the number of faces for the Key Number. This will change automatically if the “Combine Key Number” option is turned on.

Column 7. Side
This column tells us on which side the face is turned. “1” is fro the front view, “2” for the side view and “3” fore the top view. We use the built-in function “Face Side” to give the current side for the face.

Column 8. Stk
This column displays the number of item stacked in this facing. It include the face and all item stacked behind it. We use the built-in function “Face Stack” to give the stack amount for the face.

Column 9. Hook
This column displays the hook length for the face if it is put on a peg hook rather than on a shelf. If the face is on a shelf, the Hook Length will be zero. We use the built-in function “Face Hook” to give the hook length for the face.

Space Analysis Report

The next report we'll look at is the Space Analysis Report. Here's what it looks like:

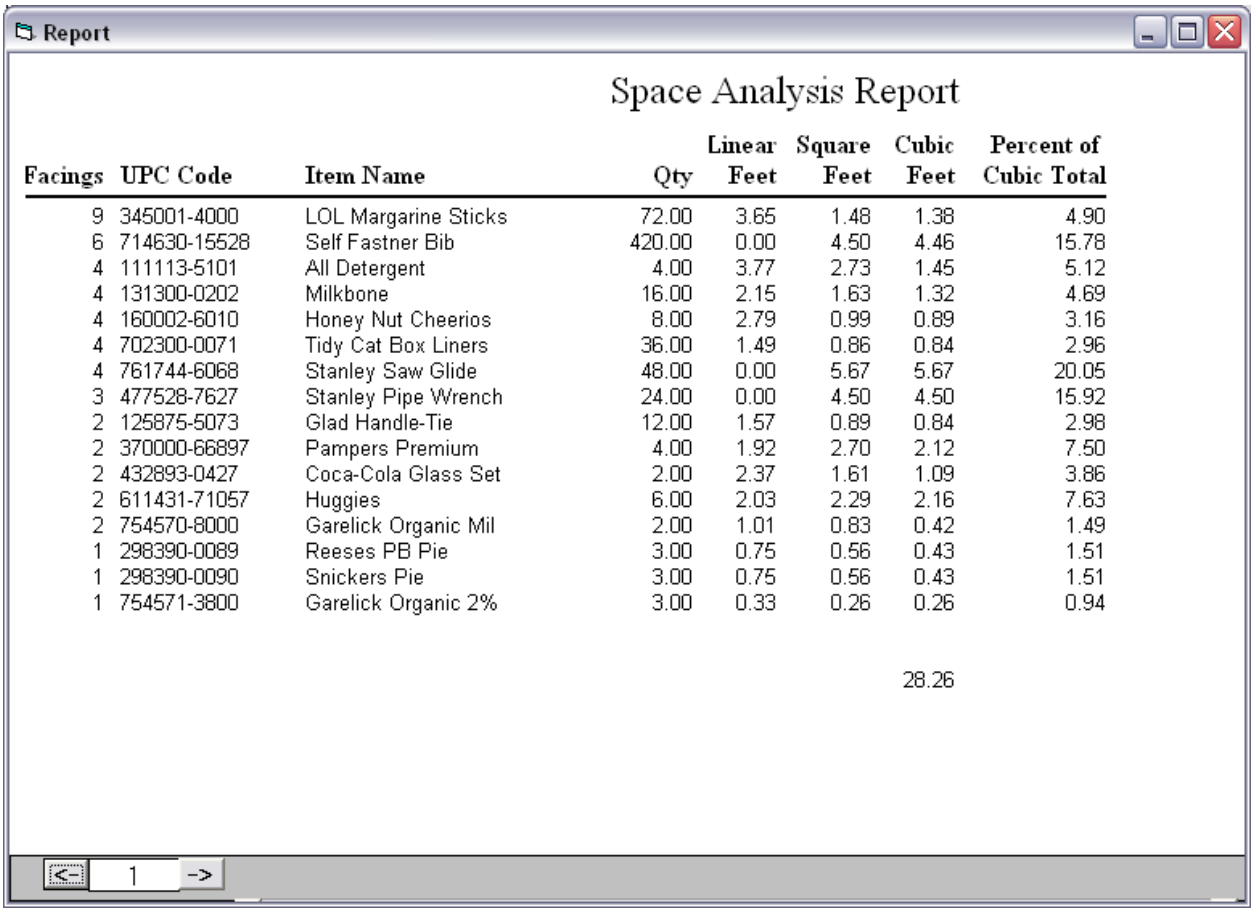


Figure 40. The Space Analysis Report

This report tells you how much space is used by each product on the plan. All faces are summed up together on one report line. The report displays the number of items, the linear feet taken up on shelves, the square footage and cubic footage of each product.. The final column gives the percentage of this product to the total cubic feet of all products on the plan.

Here's the report definition as seen in the Field Grid.

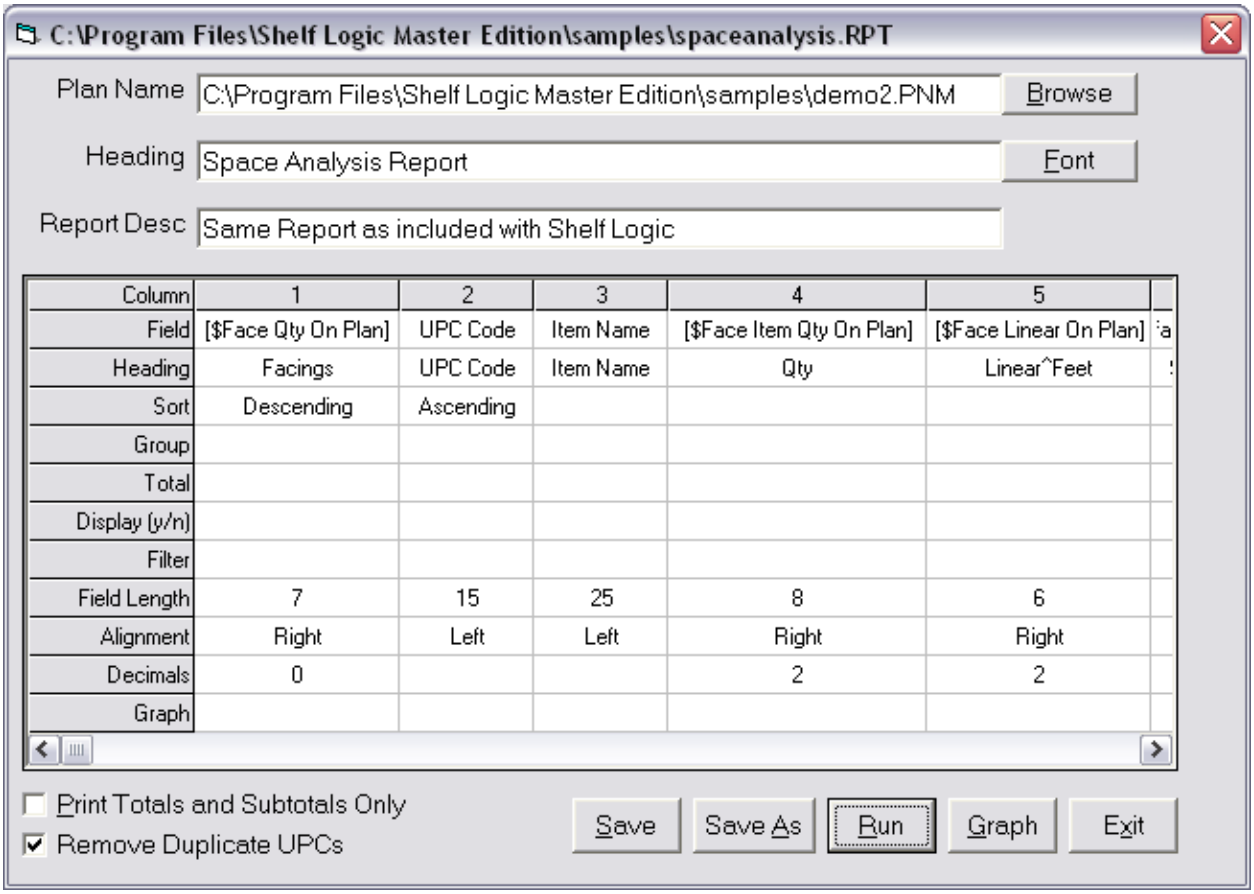


Figure 41. Space Analysis Report definition screen

Let's look at each column of the report in detail.

Column 1. Facings
The first column tells you the number of facings for this UPC Code. This is done using the built-in function "Face Qty On Plan", which gives you the number of faces on the plan for a particular UPC Code. *Note*: this is the number of facings, not the total number of product stacked behind a facing.

The report is sorted, in descending order, by this column. This ways, the products with the most facings are seen first.

Column 2. UPC Code
This is a field from the item database, the "UPC Code" field. The report is sorted by this column, but sorted within the facing sort.

Column 3. Item Name
This is a field from the item database, the "Item Name" field.

Column 4. Qty
This gives you the total number of products on the plan for this UPC Code. This of the number of facings multiplied by the number of items stacked in each facing. This uses the built-in function "Face Item Qty On Plan", which gives you the total qty on the plan for a particular UPC Code.

Column 5. Linear Feet
This column tells you the number of linear feet taken up by all product with this UPC Code. Linear feet means the number of feet touching the shelf, if the item is on a shelf. If you have a one foot wide item on a shelf and another item stacked on top of this item, then the linear feet is 1, since only one foot of the item is touching the shelf. If the item were sitting on the shelf next to the first one, instead of on top, there would be 2 linear feet.

The widths of items on peg hooks are always included in linear feet.

To get the total linear feet on the plan for this UPC Code, we use the built-in function "Face Linear On Plan".

Note: If you notice the heading for this column is "Linear^Feet" The "^" character skips down to the next line so you get a 2 line column heading.

Column 6. Square Feet
This column displays the total square footage of all faces for this UPC Code. Unlike the Linear footage, faces don't have to be touching the shelf to be counted. To do this we use the built-in function "Face Area On Plan" which gives us the total square footage of all faces with this UPC Code.

Column 7. Cubic Feet
This column displays the total cubic footage of all faces for this UPC Code. To do this we use the built-in function "Face Cube On Plan" which gives us the total cubic footage of all faces with this UPC Code.

Important Note: When doing functions with cubic feet, we are always dealing with all products, not just faces. The Linear and Square footage function operate on faces only. With Cubic feet, faces AND all items stacked behind the faces are used for the calculation.

Column 8. Percent of Cubic Total
This column displays the percentage that this UPC Code takes up compared to the total of all items on the plan. For this we use a formula that uses built-in functions.

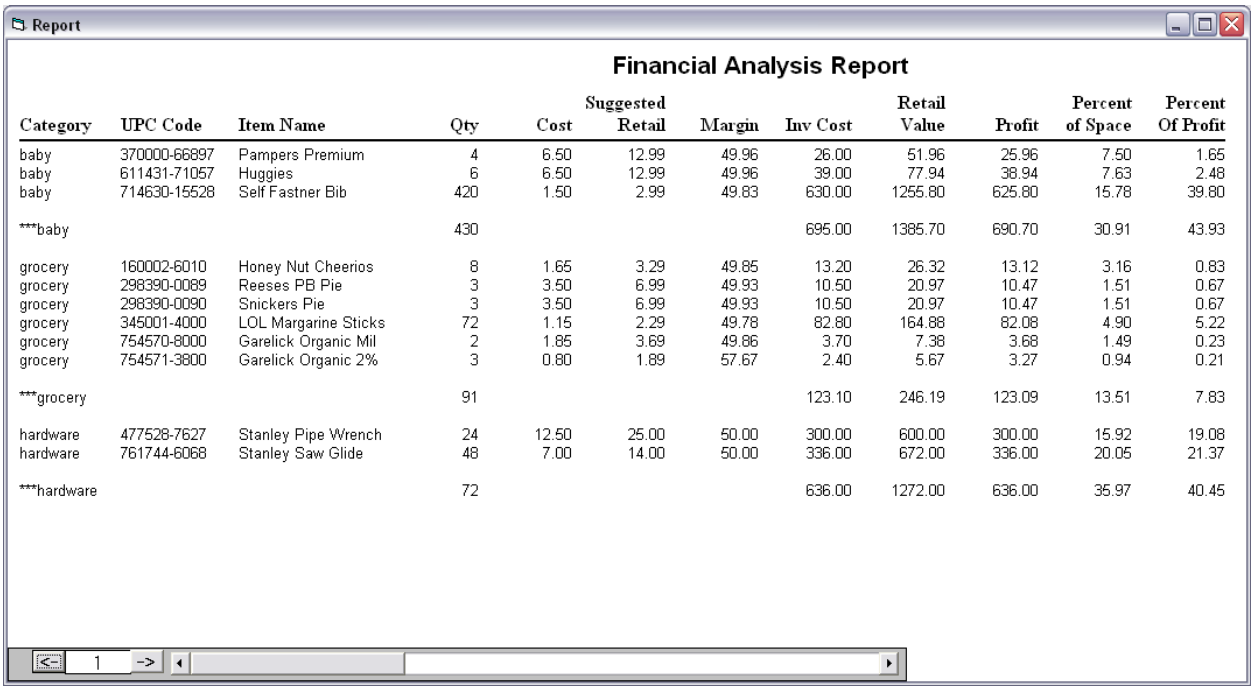
([$Face Cube On Plan] / [$Plan Face Cube]) * 100

The formula is the ratio of cubic feet for this UPC over the total of all UPCs.

The "Face Cube On Plan" function gives us the total cubic feet of all item of this UPC Code. This is divided by the "Plan Face Cube" function, which gives us the total cubic feet of all items in the plan. The result of this is then multiplied by 100 to get a percentage.

Financial Analysis Report

Our final report is the Financial Analysis Report, which gives you potential profits from our planogram. Here's the Financial Analysis Report:

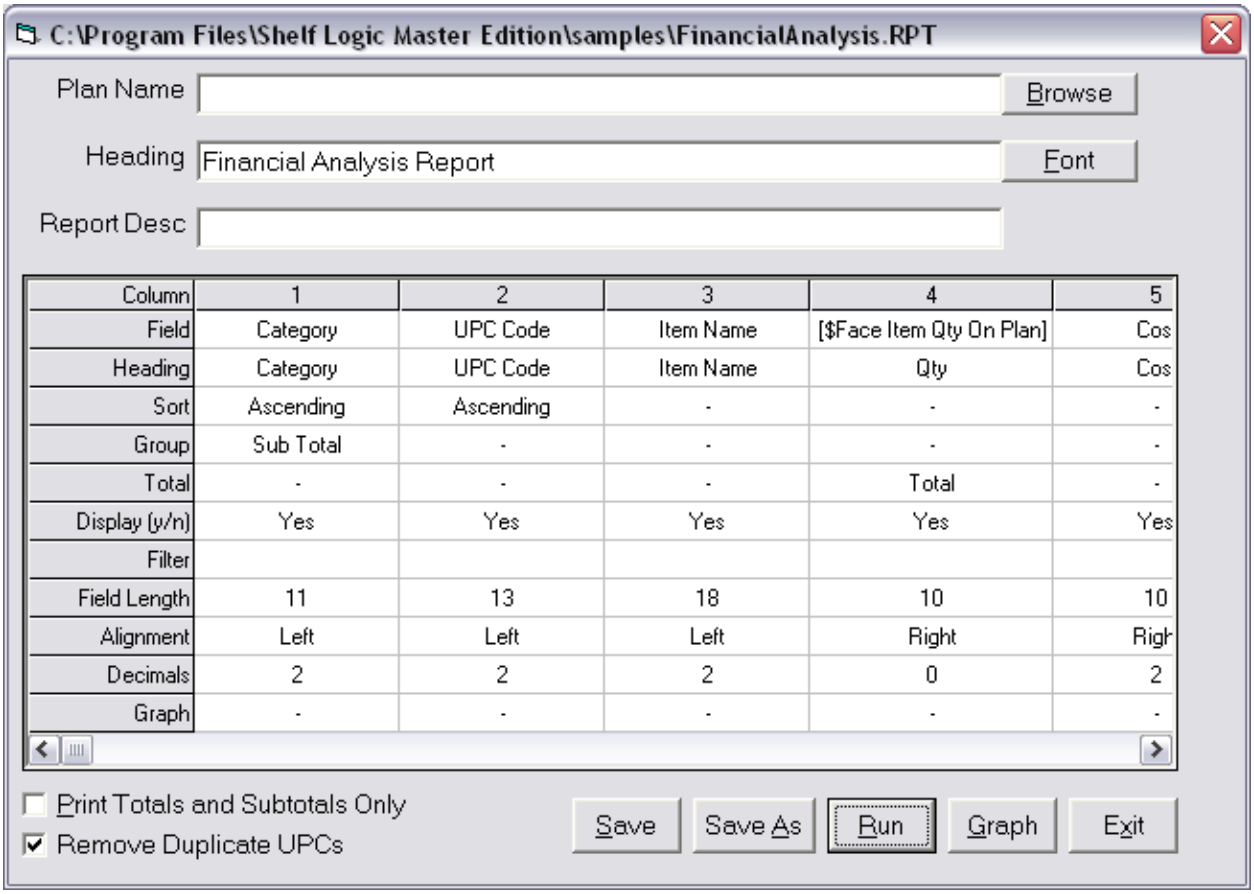


Category	UPC Code	Item Name	Qty	Cost	Suggested Retail	Margin	Inv Cost	Retail Value	Profit	Percent of Space	Percent Of Profit
baby	370000-66897	Pampers Premium	4	6.50	12.99	49.96	26.00	51.96	25.96	7.50	1.65
baby	611431-71057	Huggies	6	6.50	12.99	49.96	39.00	77.94	38.94	7.63	2.48
baby	714630-15528	Self Fastner Bib	420	1.50	2.99	49.83	630.00	1255.80	625.80	15.78	39.80
***baby			430				695.00	1385.70	690.70	30.91	43.93
grocery	160002-6010	Honey Nut Cheerios	8	1.65	3.29	49.85	13.20	26.32	13.12	3.16	0.83
grocery	298390-0089	Reeses PB Pie	3	3.50	6.99	49.93	10.50	20.97	10.47	1.51	0.67
grocery	298390-0090	Snickers Pie	3	3.50	6.99	49.93	10.50	20.97	10.47	1.51	0.67
grocery	345001-4000	LOL Margarine Sticks	72	1.15	2.29	49.78	82.80	164.88	82.08	4.90	5.22
grocery	754570-8000	Garelick Organic Mil	2	1.85	3.69	49.86	3.70	7.38	3.68	1.49	0.23
grocery	754571-3800	Garelick Organic 2%	3	0.80	1.89	57.67	2.40	5.67	3.27	0.94	0.21
***grocery			91				123.10	246.19	123.09	13.51	7.83
hardware	477528-7627	Stanley Pipe Wrench	24	12.50	25.00	50.00	300.00	600.00	300.00	15.92	19.08
hardware	761744-6068	Stanley Saw Glide	48	7.00	14.00	50.00	336.00	672.00	336.00	20.05	21.37
***hardware			72				636.00	1272.00	636.00	35.97	40.45

Figure 42. The Financial Analysis Report

The report is sorted by category and then by the UPC Code. Each category is grouped and has a subtotal displayed for several columns. For each UPC Code, there's the total number on the plan, it's cost and retail, and the potential profit. There is also a comparison of this UPC to the total plan based on percent of space used and percent of profit compared to the other profits.

Here's the Field Grid for this report.



Column	1	2	3	4	5
Field	Category	UPC Code	Item Name	[$Face Item Qty On Plan]	Cos
Heading	Category	UPC Code	Item Name	Qty	Cos
Sort	Ascending	Ascending	-	-	-
Group	Sub Total	-	-	-	-
Total	-	-	-	Total	-
Display (y/n)	Yes	Yes	Yes	Yes	Yes
Filter					
Field Length	11	13	18	10	10
Alignment	Left	Left	Left	Right	Righ
Decimals	2	2	2	0	2
Graph	-	-	-	-	-

Figure 43. Financial Analysis Report in the Field Grid

Let's look at each column of the report in detail.

Column 1. Category
This is a field from the item database, the "Category" field. The report is sorted by this column, and there is a group break with a subtotal displayed.

Column 2. UPC Code
This is a field from the item database, the "UPC Code" field. The report is sorted by this column, but sorted within the category sort.

Column 3. Item Name
This is a field from the item database, the "Item Name" field.

Column 4. Qty
This column gives the total quantity of products with this UPC Code. We want the total of all items, not the nbr of faces. For this we use the built-in function "Face Item Qty On Plan", which gives us the total number of items on the plan for this UPC Code.

Column 5. Cost
This is a field from the item database, the "Cost" field.

Column 6. Suggested Retail

This is a field from the item database, the “Suggested Retail” field.

Column 7. Margin
This column gives us the profit margin for this UPC Code. It is a formula field:

([Suggested Retail]-[cost]) / [Suggested Retail] * 100

The “Suggested Retail” minus the “Cost” gives us the profit dollars. When divided by the “Suggested Retail” field, it gives us the retail profit margin. This is then multiplied by 100 to get a percentage.

Column 8. Inv Cost
This column gives us the total cost of all product with this UPC Code. For this we use the built-in function “Face Cost On Plan”, which gives us the cost of all similar items on the plan.

Column 9. Retail Value
This column gives us the total retail value of all product with this UPC Code. For this we use a formula which multiplies the total number of items for this UPC Code by the retail cost of an item. For this we a built-in function “Face Retail On Plan”, which gives us the retail price of all similar items on the plan.

Column 10. Profit
This is the potential profit for all items on the plan with this UPC Code. This is done using a formula with two built-in functions. We use the “Face Retail On Plan” function which is the total retail value of all similar items on the plan and subtracts the “Face Cost On Plan” function, which is the total cost of all similar items n the plan. The result is the profit amount for all items having this UPC Code.

Here’s the formula:

[$Face Retail On Plan] - [$Face Cost On Plan]

Column 11. Percent of Space
This gives us the amount of cubic feet taken up by all similar items as compared to the total cubic feet of all items on the plan. This is the percentage of space taken up by this UPC Code. For this, we use a formula that compares the space used by this UPC with all items. The “Face Cube On Plan” function gives us the total cubic feet taken up by all items with this UPC Code. This is divided by the “Plan Face Cube” function, which is the total cubic feet of all items on the plan. This is then multiplied by 100 to get a percentage.

Here’s the formula:

([$Face Cube On Plan]/[$Plan Face Cube])*100

Column 12. Percent of Profit
This gives us the amount of profit of this UPC Code compared to the total profit of all items on the plan. For this we use a formula with several built-in functions. First we get the profit for this

UPC Code by taking the total retail value of this UPC Code (the “Face Retail On Plan” function) and subtracting the cost of this UPC Code (the “Face Cost On Plan” function). Then we get the total profit by taking the total retail value of the plan (the “Plan Retail” function) and subtracting the total cost of all items on the plan (the “Plan Cost” function). We then divide the profit for this UPC Code by the total profit and multiply by 100 to get a percentage. Here’s the formula:

(([$Face Retail On Plan] - [$Face Cost On Plan])/([$Plan Retail] - [$Plan Cost]))*100