

Millennium Professional Estimator

Millennium Professional Estimator (c) 2011-2017 by S. Thatcher of GraphiTech Computer Systems Version 2.4.70

File Edit Actions Reports Maintenance Help

Basic Information
Customer & Phone: 800-634-8324
 GraphiTech Computer Systems
Run Options
☒ Sheetwise ☐ W&T
Job Type
☐ Flat Sheet ☒ Booklet
Mode Selections
☐ New Quote ☒ Retrieve Quote
☐ New Job ☐ Retrieve Job
Layout
☒ Portrait ☐ Landscape

Job Description
 Estimated By: sdt
 32 page booklet 4/4 no bleed, plus 4 page 4/0 croamcoat cover, Fold, stitch and trim. Add 3 hole standard.

Sect No 1 of 2
 1
 Speed: 4678
 Waste: 2.7037%
 TimeOnEst: 00:07:06
☐ OP ☒ MU ☐ FF ☒ NT
☐ SS ☐ OR ☐ FC ☐ SV

Press Information
 Offset: 5C Heidelberg
Gripper
☐ Width ☒ Depth
☒ Finished Bleed
 MAX Press Size 23x35
 0.187
 Gutter 0.125
 Runs 4 Sigs 2
 Parts: 1
 %OvrRun:
 1st Quantity 1000
 2nd Quantity 2500
 3rd Quantity 5000
 4th Quantity 7500

Stock, Plates & Imaging
 0001-20# white bond, 23x35
 Size 23x35 Inv OnHand 9.65
 1Ctn 55.00 2Ctn 55.00 4Ctn 55.00
 Total Plates 16 Type LL Metal
 Out 1 Cal 0.004 WashUp 4
 Up 1 On 1 Sides 2 Pgs 32
 Pre Flight \$ 0 Design \$ 0
 Add \$/Type 0 Rip \$/Paste 0
 Blk Ink % 0 Imaging \$ 0
 Color Ink % 0 Ad'll % MU 5

Bindery
 Fold, Baum-1 1 2005
 Cutting, Press-33
 Cutting, Parent-61 4 3005
 Drilling-4 3
 Cutting, Finish-60
 Gathering-43
 MBColator-35
 Stapler-36 2
 Numbering-37
 Trim-62 3

SetUp SRPD Help

Cell Descriptions Click Here to Add Notes
 Enter Additional Costs here for PreFlighting Customer Supplied Media. To specify hours associated with this cost, enter hours after a slash (/) as in 25.5/5 which represents a cost of \$25.50 and 0.5 hours or 30 minutes of time.

Finished Layouts

Verification Count 1st Quantity
 Press Clicks 4000
 Press Stk Count 2000
 Inventory Count 2000
Dimension Sort Options
☐ Square Inch ☒ 1st Dimension

Quote Number: 00000003 Job Number: Current Date: 01/17/15 Due Date: 01/23/15

By GraphiTech Computer Systems

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Installation

Loading Professional Estimator

Once you have installed GraphiTech's Professional Estimating software, you will almost be ready to run the program and start estimating.

But before you start, there are just a few things we need to consider before actually starting to perform estimates.

1. First, we'll just **load/install** the program.
2. Then we'll look at what **changes** may need to be made with the file structure.
3. Next we will **start** the program for the first time.
4. Next, we'll look at the **fundamentals** of using the program.
5. Finally we will review several estimates and their reports.

1. Load/Install from Download or Installation Media

1. Double-Click Setup.exe
2. Select all the Defaults
3. Answer YES if asked to keep existing files.
4. Reboot after installation

2. Possible Changes to File Structure

The GraphiTech Professional Estimator may be run as a stand-alone program or one that integrates to Job Costing, Invoicing and Shop Floor Data Collection. In addition, a separate program called Digital Estimator uses parts of the Professional Database as well as its own Database. All of these databases rely on the use of the Main Access Database called GTDATA.MDB, plus others as specified.

Stand-Alone

The Stand-Alone version may be used as soon as it is installed but the network version should be disabled during demonstration use. Once you have mastered the demonstration examples, the Network Option may be enabled.

3. First Start



Figure 1

Splash Screen

As soon as you double click the SETUP.EXE from your installation folder or media, you will see the Splash Screen identified in Figure 1. This may be eliminated at a later time. See below for more information.

Welcome Screen

The Welcome Screen simply identifies the services and the locations for various functions of the Professional Estimator. Should you wish to disable this from displaying each time you load the program, simply click on the small box in the lower left of the screen.



Figure 2

Main Estimating Screen

After a short time, the Main Estimating screen will appear showing the Professional Estimating Worksheet. See Cover screen shot.

A portion of the Worksheet is shown in Figure 3 and depicts the selections available from the Menu Item called "File".



At the bottom of this list, you may elect to hide the **Splash Screen** shown in Figure 1. This allows the Worksheet to load must faster, especially if you also decide to disable the Welcome Screen (see Figure 2, lower left corner).

Note that you may re-enable either or both of these screens as desired.

Figure 3

4. Fundamentals of Using Program

After you have installed the Professional Estimator, you will note that the local folder for the program will be located under **Programs\Millennium Professional Estimator** (for Windows XP) or under **Programs(86)\Millennium Professional Estimator** (For Vista, Win7, or Windows 10).

Also, depending on how you have Win10 set up, the program will appear on the desktop under the GraphiTech folder when using the Start menu of Windows 10 (as opposed to the explorer menu).

Icon Transfer

The Icon may be transferred to your desktop by dragging or copying from the location shown in your start page menu (lower left of Windows) or from the Explorer menu.

Right click on the name in the menu or file and left click copy. Right click on the desktop and left click paste. You should then see an icon on your desktop for accessing the program directly.

In some cases, you may also see an option that enables you to "Create a Shortcut" which in effect copies the linked icon and makes it a copy in the Program List or it may actually place it on your desktop.

Setting Path

If you change the Path, you need to be certain that your Database exists in the chosen path.

In some cases, previous versions of GraphiTech's Order Entry program, Job Costing and Shop Floor Data Collection modules were placed in a folder called \Millennium\Data and your path will need to reflect this.

If not using previous versions, then accept the default location (local hard drive) and if, at a later date, you wish to network this program, simply copy GTData.mdb, FrontDesk.mdb and/or Invoicing.MDB to the folder that will be your chosen server.

The "Location of Est" path is NOT used with this program. If you need to transfer older "Dos" data, call **GraphiTech** (800-634-8324) for instructions.

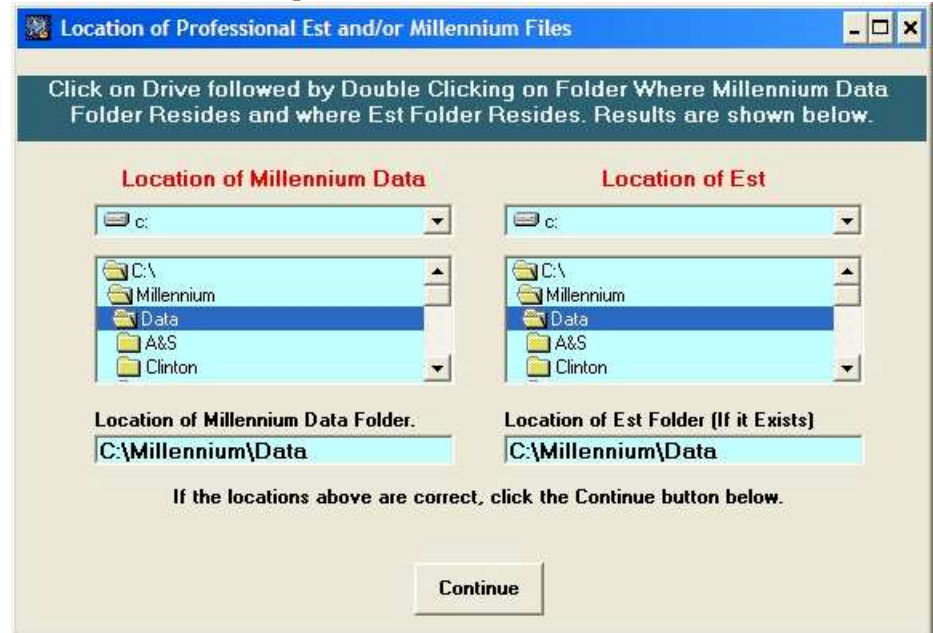


Figure 4

Default Bindery Files



Figure 5

The Default Bindery file is created in the local folder when you modify which bindery operations will display. Be careful changing the displayed bindery files, or at

least be sure you do not delete any bindery files from your database unless you are sure they have not been used in any quotes.

The result of changing the Path will also require you to re-examine your Default Bindery data. Since you may be changing from the stand-alone database to your Millennium database, the default bindery information may be different and may need to be changed. See Figure 5.

License Code

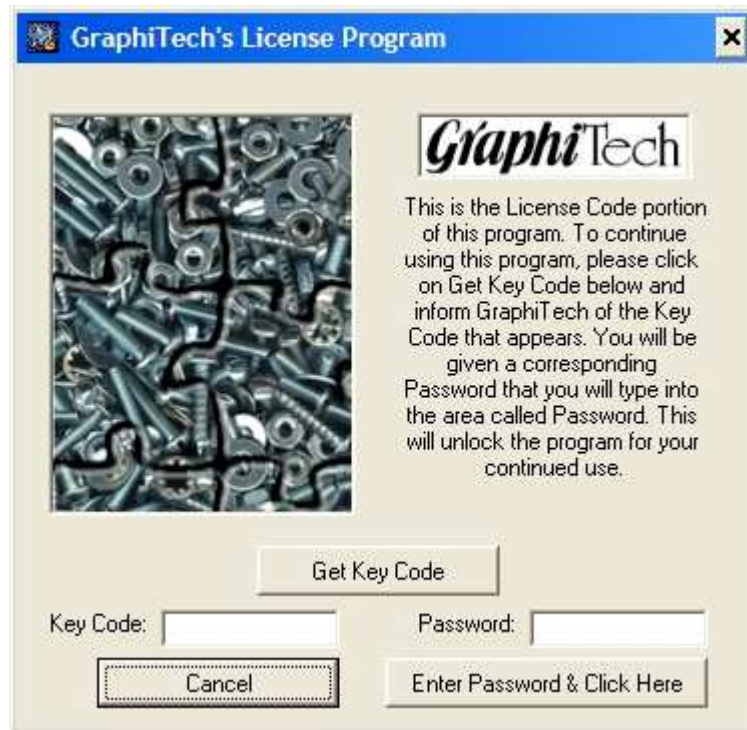


Figure 6

The **License** screen shown in Figure 6 will permit (without a Password Code) unlimited use of the program for a limited amount of time. Once you are familiar with capabilities of the Professional Estimator, you should then request your password to unlock the program for permanent use.

You have approximately 200 quotes available when using the program without a license (and you will be given a countdown to let you know how close you are to the end of the demo period).

At any time during the demo, you may obtain a license for the program.

Call GraphiTech at 800-634-8324. Give the Key Code to the person answering the phone.

Once payment has been made, you will be given the Password that unlocks your program for full operation.

Default Imaging

This simply allows you to have certain items appear in the worksheet as defaults. Available after Vers 2.4.70



Figure 7

Setting Up Default Worksheet

Currently, the **Default Values** assigned to the Worksheet are obtained by accessing the Default Worksheet item from the "Maintenance Menu" shown in Figure 7b. By clicking the Word "YES", the current values of the Worksheet which include Press, Finished Size, Press Size, Plates, Runs, Difficulty, Sheets or Signatures, Stock Item and 1st quantity are saved. Each time you click on the "Eraser Icon" in the Worksheet, the values saved as Default, will populate the worksheet.

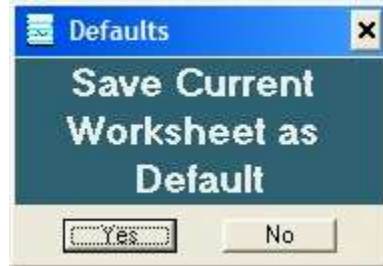


Figure 7a

Defaults, they will automatically be added to the respective list before saving the default values.

The Default values are used for all worksheets in the network and should be coordinated with the Senior Estimator.

Maintenance

The Defaults may be set up by clicking on the "Maintenance Menu" and entering the correct password. One of the items in the Maintenance area includes the Default Worksheet and once you select that item, the small screen shown in Figure 7a will appear.

Note that you must enter the password first before clicking on one of the selections. The current Password is 11111.

If the Finished Size and/or Press Size do not exist in the list of sizes that you are saving as



Figure 7b

Quick Start

Performing a Quick Estimate using the Help Guide

Retrieving a Quote

So let's get started with the Professional Estimator by retrieving a quote and obtaining a price for the job. First, load the Professional Estimator so that you have the Worksheet in View as show in Figure 8 below.

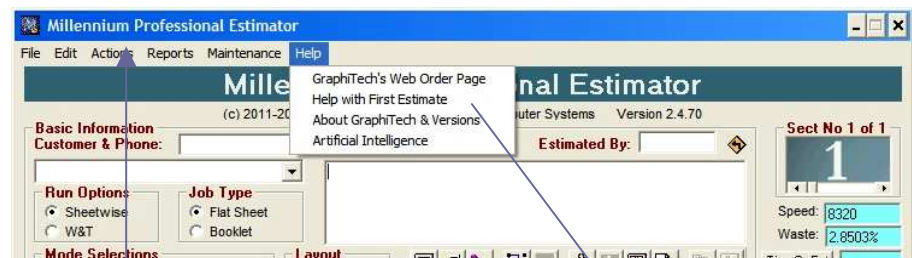


Figure 8

The **Menu Bar** at the top of the screen contains Help. Click it now and select "Help with First Estimate".

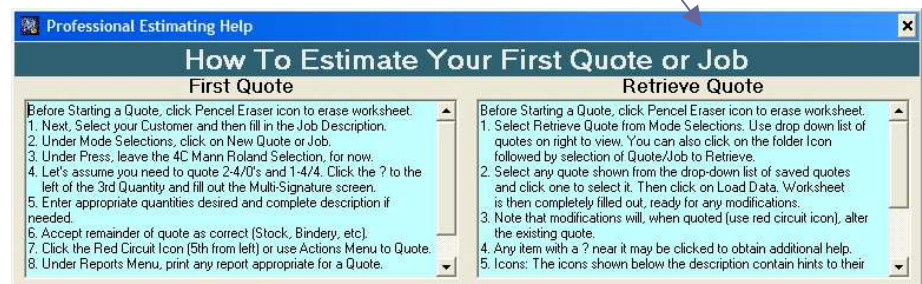


Figure 9

As you can see, there are 2 help screens shown. One describes how to create a quote or job and the other on how to retrieve a quote or job. If you look at Figure 9 & 10, the numbers shown in the help screen above are shown as they correspond to the Icon Toolbar below.

Starting with the right side help screen, it reads, "...click Pencil Eraser to erase Worksheet". This basically starts you out with a clean slate so that you don't accidentally leave any hidden items as part of the next quote.

In Figure 10, each item in the "Retrieve Quote" help screen area will be illustrated either as an icon or a drop down list.

Let's start with the **Eraser**. Simply click it and the Worksheet is erased. It doesn't affect any saved quote, only the contents of the Worksheet.




Figure 10

Item 1 (right side of Figure 9) will retrieve a quote or job. It is shown as a **folder on The Icon Bar**. As soon as you click on the folder, a drop down list of potential quotes and jobs will appear as shown in Figure 11. If you click on the "Retrieve Quote" button, the drop down list will show all saved quotes. The same is true for clicking on "Retrieve Jobs".



Figure 11

Also, in Figure 11, if you click on the **down list**, you will see all the quotes. If you click on any item in the list, it will appear in the **white portion** of the window and by then clicking on "**Load Data**", the Worksheet will be filled with the contents of the quote or job.

 The Question Mark in Figure 11 will take you to a search screen that permits a global lookup of description, sizes, etc.

After clicking "**Load Data**", you can then make any changes to the quote that you desire. If ready to price out the quote or job, press the **Red Circuit Diagram** (5 icons from left on bottom row) and you have an instant quote.

Once prices are showing, you can then print any of the reports (except for Work Order and Delivery Ticket since these require a Job Number).

Your First Quote

The left side of the "Help with your First Estimate" contains instructions for your First Quote. See Figure 12.

As in the first example, you will want to click on the eraser to eliminate any items that might be carried over from a previous quote.

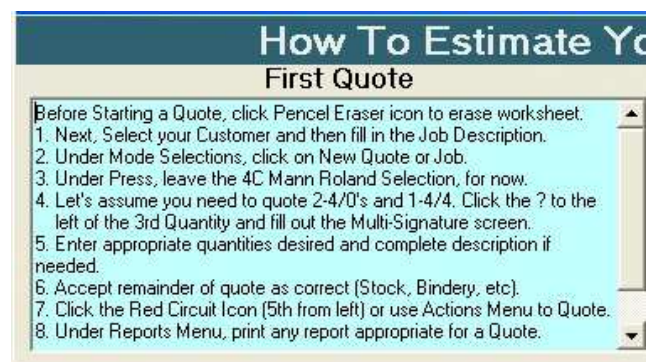


Figure 12

Note that it is very unlikely that you will have extraneous data however, the only sure way for the program to know you are starting a new quote, is by clicking on the eraser.

Item Number 1 of Figure 12 states that you will want to select the **Customer** and then fill out the **Description**. (see Figure 12a)

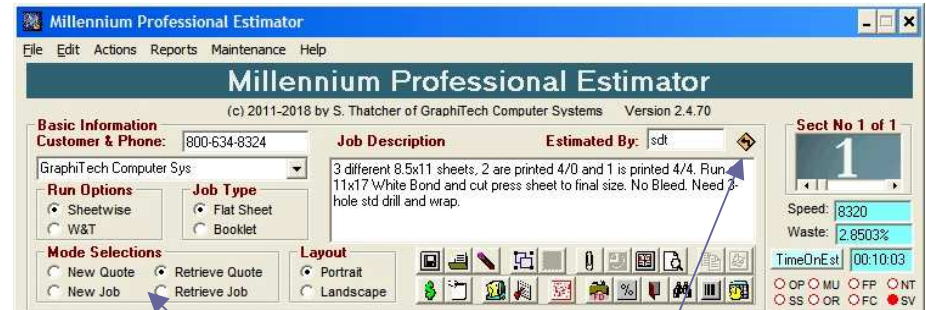


Figure 12a

Now since you do not have any actual customers loaded at the moment, you could either select from the drop down list, one of the customers that are in the list or you can simply type in the name of your customer. (Note that typing in the name of a customer is temporary and does not load it to the customer file, but does save it with the quote).

The Job Description may be entered next. Up to 255 characters is available in this section. If you wish to use the **AI (Artificial Intelligence)** button, then click on the help menu later and learn what commands may be entered into the description that will help in automatically filling out the worksheet. (Note that the AI button is a work in progress so it may not accurately interpret what you have typed).

Item 2 of Figure 12 now states for you to look at the **Mode Selections** (See Figure 12a) and select new quote or job. This will assign the next quote or job number to your quote. **Note:** If you wish to set up your own Quote and/or Job Numbers, click on the Menu item called "Edit" and select "Job & Quote".

Note that the "Run Options" and "Job Type" are generally left as is. Flat sheet work may require use of W&T but is most often set as Sheetwise. Only use **Booklet** if you are running booklets, magazines, newsletters, etc.



Figure 12b

Item 3 says to currently leave the **Default Press** (4C Mann Roland) for this quote although we could very easily change to any press desired as shown in the **Press drop down list**.

Item 5 asks you to enter up to four **quantities** desired.

This example suggests in Item 4 of Figure 12 that the customer has requested a quote for 3 different sheets, 2 of which are printed 4 color on one side only and another sheet that is printed 4 colors both sides.

The easiest way to enter that information is to click on the ? to the left of the third quantity which will bring up a **Signature Display** as shown in Figure 12c.

# of Orig	B&W	Color	Col & B&W
1/0		4/0 2	4/1
1/1		4/4 1	0/0

Exit Calculate Sig/Run/Plate Count

Figure 12c

If any other quantities are showing in the various signatures other than 2-4/0 and 1-4/4, be sure to zero them out. Note that any combination of colors on the back side would require use of the 4/4 descriptor., even if the job was required to be run as a 4/2 or 4/3. This would then require a modification of the number of plates. An Alternative, for Vers 2.5.0 and later, is to enter the description of the number of signatures with different colors per side and press the AI button above the description.

Test Question: What if the customer asked you for a blank sheet as part of this job so that they could hand them out along with these catalog sheets? How would you enter that information?

Answer: Simply place a 1 in the 0/0 cell. This will cause the actual quote to add in only the paper to the quote but will not print on it.

Test Question: How would that extra sheet of **Blank Paper** appear in the worksheet?

Answer: You would see the number of sheets increase by one, but Runs and Plates would stay the same.

Test Question: Suppose we wanted to enter in the Bindery Operations for this quote.

Answer: The Worksheet shown in Figure 12b shows how you enter cutting, drilling and wrapping. For more information on how to enter Bindery Operations, see the chapter entitled, "Bindery"

For now, we'll assume the balance of the items are correct (although in the screen shots shown, we have entered in some bindery) and we'll quote the job by pressing the Red Circuit Icon described above (5th icon from left on bottom row).

Note: Whenever you click the Quote Button (Red Circuit Icon), your quote or job is saved (assuming prices appear in the time cost summary screen lower left) Also, remember that a red light will appear next to the word "Saved" (SV) if the quote or job has actually been saved.

Fundamentals

The Worksheet

Now let's take a look at the Worksheet itself which is where all your estimating will be done.

Although it may look slightly intimidating at first, you will find that having all the information about a job immediately in front of you makes estimating and job creation a snap.

Main Estimating Screen is Called the Worksheet

Millennium Professional Estimator

File Edit Actions Reports Maintenance Help

Millennium Professional Estimator

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Basic Information
Customer & Phone: 800-634-8324
Job Description: 3 different 8.5x11 sheets, 2 are printed 4/0 and 1 is printed 4/4. Run on 11x17 White Bond and cut press sheet to final size. No Bleed. Need 3-hole std drill and wrap.
Estimated By: sdt

Run Options
Sheetwise
W&T

Job Type
Flat Sheet
Booklet

Mode Selections
New Quote
Retrieve Quote
New Job
Retrieve Job

Layout
Portrait
Landscape

Press Information
Offset: 4C MANN ROLND
Gripper: 11
Finished Size: 8.5x11
Finished Bleed: ☒
Press Size: 11x17
Speed/Difficulty: 5
Runs: 4
Sheets: 3
Parts: 1
1st Quantity: 1000
2nd Quantity: 2000
3rd Quantity: 3000
4th Quantity: 4000
%OvrRun: ?

Stock, Plates & Imaging
0001-20# white bond
Size: 23x35
Inv OnHand: 24.70
1 Ctn: 55.00 2 Ctn: 55.00 4 Ctn: 55.00
Total Plates: 16
Type: LL Metal
Out: 4 Cal: 0.004 WashUp: 4
Up: 2 On: 1 Sides: 1 Pgs: 1
Pre Flight \$: 0 Design \$: 0
Add \$/Type: 0 Rip \$/Paste: 0
Blk Ink %: 0 Imaging \$: 0
Color Ink %: 0 Ad1 % MU: 0

Bindery
Fold, Baum-1
Perf, Press-2
Padding-3
Drilling-4
Cutting-33
Gathering-43
MBColator-35
Stapler-36
Numbering-37
Wrapping-38

SetUp SRPD Help

Cell Descriptions
Click Here to Add Notes
Note: Quick Access to FSS Data Entry by Dbl-Clicking Text to left. When selecting the Finished Sheet Size, remember that this is the size of the sheet or booklet delivered to the customer. Always try to use shorter dimension first. Certain bindery operations, such as folding (uses the length) or padding (uses the width), in determining their speed of operation. The first number shown in the dimension is

Finished Layouts

Verification Count 1st Quantity
Press Clicks: 2000
Press Stk Count: 1500
Inventory Count: 375

Dimension Sort Options
Square Inch
1st Dimension

Quote Number: 00000007 Job Number: Current Date: 01/02/18 Due Date: 01/08/18

Figure 13

The main estimating screen shown in Figure 13 provides an incredible amount of information as well as versatility in estimating. Later on we will examine where the data for the estimate is coming from but for now, let's look only at various portions of the Worksheet as well as producing another estimate.

Context Sensitive Help

Note in Figure 13 and to the right, the blue box identified as **Cell Descriptions**. Each item in the worksheet contains a full description of what that item is and how it

applies to the estimate. If you don't understand what an entry box is for, please read the Cell Descriptions first to get a better understanding of its function.



Customer Selection

We need to identify the customer. This can be done using the drop down list of customers or we can simply type in the name of the customer and phone if they are new. Names that are added on the fly are not added to the customer file but are saved with the quote or job. Also note that Customers may change the MU for a job if they have been set up to do this in the Database.

Run Options: Sheetwise or W&T

We stated above that we are running Sheetwise but what does that mean exactly. Well, it just means that each sheet passing through the equipment is printed only one time; on front, back or both sides. Sheetwise requires 2 plates for front and back.

A W&T means that it passes through the press one time, is turned or rotated and run through again using the same plate. On Offset or other presses, this saves plates, makeready and Ripping time while allowing for the running of 2 up. With most Document type presses, you will seldom, if ever, need to select a W&T, since most document presses can print both sides simultaneously.

Job Type (Flat Sheet or Booklet)

Note that the difference between running booklets or flat sheets is significant, especially if your press sheet is say 11x17 and the delivered finished sheet is 8.5x11. A Booklet would have 4 pages while a Flat Sheet would be run 2 up. But more on that later. For now, we plan to use the Flat Sheet mode.

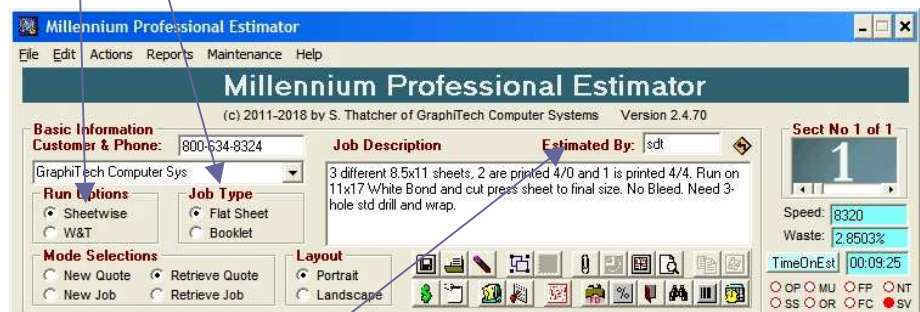


Figure 14

Estimated By

If desired, you may enter your initials to indicate that you are the estimator for this quote or job. It basically provides an audit trail for all entries between the quote and the final job. Multiple initials may be entered. See Fig 14.

Job Description

In Fig. 14, the Job Description allows for up to 255 characters that will appear on all printed forms including Work Order, Quotation Sheet, Delivery Ticket, etc.

Mode Selections

In Figure 15, you just need to indicate if this will be a New Quote or Job or a Retrieved Quote or Job. The Folder Icon also is used to Retrieve a Quote or Job.

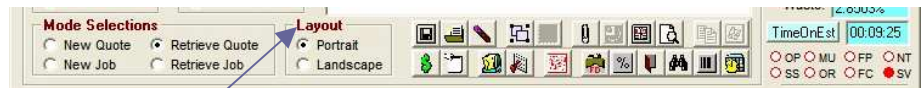


Figure 15

Layout

The selection of **Portrait** or **Landscape** is descriptive only and is used to identify how the sheet will appear when printed. It serves no function as to how a calculated price is determined. Portrait refers to a sheet that has the long side vertical when viewing while Landscape has the long side horizontal.

Icon Selections

Note in Figure 14 and below, a series of Icons from which you may choose. The Icons are explained below.



Figure 16



Save Quote or Save Job. This Icon allows the user to save the Worksheet. You must have a Quote or Job Number assigned, a Customer and a Description before you can save the Worksheet. When you produce a quote with pricing, the Worksheet will automatically be saved. Note in Figure 7 the red dot labeled **Saved**. This will illuminate when the job has been saved.



Retrieve Quote or Retrieve Job. When pressed, a window appears that allows you to select either a quote or job to retrieve, along with a drop down list of the type retrieved and load command and exit command. Once the quote or job is found and selected from the drop down list, simply click load to have it completely fill out the worksheet.



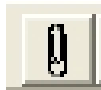
Erase. By pressing this Icon, you erase the contents of the Worksheet. If the job has been saved, it remains saved. An erased worksheet will cause the Default worksheet to be loaded. The Default worksheet can be found under the "Maintenance" menu. (after Vers 2.4.70)



Display Layouts and Print Layouts. By clicking this Icon, a complete layout of the job is shown, both on the Press Sheet as well as on the Parent (or Inventory) sheet. Note that there is also a "Quick View" located on the Worksheet called "Finished Layouts").



Due Date. Here you can reset the due date and select the amount of days between each department (provides days between start and due date). This is a "Quick Entry" to avoid having to go to the Maintenance Menu just to change this. This entry DOES NOT change the file, but only the dates for this quote.



Outside Services. This will bring up the input screen for Outside Services, such as Vendors, etc.



Electronic Job Ticket. The Electronic Job Ticket allows your employees to bring up on their computer screens an exact reprint of the Job Ticket along with Job Description, PrePress Notes, Press Production, Vendor Notes and Bindery Notes. In addition, each employee may add to these notes in order to maintain a complete history of any AA's, phone calls, machine down time, etc.



Fixed Price Quote. This is only available as an expansion after version 2.4.79.



Invoice Jobs & Post to Historical Ledger. This is the smaller Invoicing program (compared to the Millennium Invoicing/QuickBooks Interface sold separately). It provides employees with a tracking invoice as well as populating the Historical Ledger database. Up to nine parts of a job can be instantly accessed and populate the invoice along with line item amounts, freight and tax.



Multi-Part Pricing Grid. If you are performing a multi-part quote or job, this icon will bring up a screen that shows the individual prices for each part of the job, up to nine.



Price List Generator. This item will allow you to create a price list catalog of various products. Often a book that contains pricing for various printed items is helpful to counter and/or sales reps.



Quote Button. This is the most used Icon of them all. This will immediately display all of the pricing and production data for the job. Many of the reports require that the quote or job be priced out before they can display the relevant information. As a side note, this printed circuit is similar to the first product created by GraphiTech in 1979 and was produced by Texas Instruments for GraphiTech.



Front Desk Estimator. By accessing this powerful estimating tool, you are able to allow inexperienced personnel to perform some of the more common estimates using templates created by your Professional Estimator. Simply select a predefined Category followed by a Product and your Worksheet is completely populated waiting for any new items, changes, etc. desired.



Percent Over-run. This program is not available at this time. It is used to specify a percent over-run. See Vers 2.5.0 or later



Historical Ledger. The Historical Ledger is created by the Invoicing Module (which creates printable invoices) and populates the Historical Ledger for that customer. Should you need to see what any previous price was for a particular job, simply click the icon, select the customer and a complete list of all jobs will be displayed.



Legend. This will display a color legend that is used within the Worksheet.

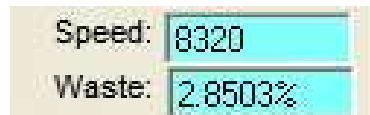


Print Reports. These two items are used to print the Job Ticket and Time Cost Summary. These same reports are available under the Reports Menu so they may be changed at a later date to account for added functionality. If they do change, see the addendum.



Status Buttons. These buttons are not accessible except for **Notes (NT)**, **Percent OverRun (OR)** and **Options (OP)** and all are for

information on the status of the Job. **OP** means that the Outside Services and Options have been selected. **MU** indicates that a **Markup** has been entered. **FP** represents a **Fixed Price** has been entered. **NT** indicates that you have notes in the **Production Notes** area. (Be advised that you can access the Notes by clicking on the words above the cell description or by clicking on the button described here). **SS** represents a **Split-Signature** entry (for example running a 12-page booklet when a single signature can only handle an 8 page). **OR** is an **Over-Run** and allows the user to specify larger than normal quantities. **FC** represents **Fixed Carton** pricing and means that the quantity of stock that falls within a carton will be charged for the full carton. **SV** indicates that the job has been **Saved**. This is something you should generally keep an eye on because if you make a change, the light will go out and you need to make sure that you either quote it again or use the save icon.



Speed and Waste. This simply shows the speed of the equipment and the Press Run Waste Percentage for the first quantity. It is strictly for information since the actual speed and spoilage

are calculated for each quantity of the estimate and can be found in the time summary screen of the Worksheet or in the printed report.



Time on the Estimate. Should you need to record the amount of time you spend on an estimate, simply click this button and while you

are estimating or doing anything else, the timer will keep track of the time you spent on the job.



Section Number. Up to 9 different parts may be created for a single job. An example would be when you need to print a 32 page annual report plus a separate cover printed on a different press with different stock along with a die cut fold-out printed on another press altogether. Other examples might

be letterheads, business cards and envelopes.

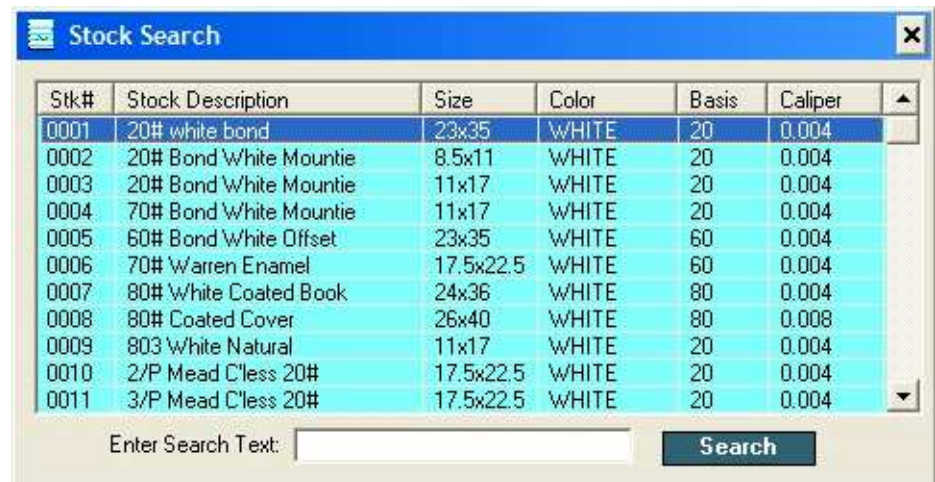
Stock Information (Preliminary Discussion)

As a general rule, it is probably a good idea to enter the stock before starting to enter Press Information. This is because the Parent Sheet of stock will be used to determine if the **Press Sheet**, as well as the **Finished Sheet**, can be cut from the **Parent Sheet (Inventory)**. If you start with the press information first, then if the stock displayed is smaller than either the Finished or Press sheets entered, an error will occur and your entered sizes will revert to the Inventory size.



An alternative to actually starting this way would be to make sure that the default stock is always larger than any press you have and then change the stock after entering the Press Information.

If you need to search out a particular type of stock, simply hit the **Question Mark (?)** and you will be shown a search window similar to that in Figure 17 below.



Stk#	Stock Description	Size	Color	Basis	Caliper
0001	20# white bond	23x35	WHITE	20	0.004
0002	20# Bond White Mountie	8.5x11	WHITE	20	0.004
0003	20# Bond White Mountie	11x17	WHITE	20	0.004
0004	70# Bond White Mountie	11x17	WHITE	20	0.004
0005	60# Bond White Offset	23x35	WHITE	60	0.004
0006	70# Warren Enamel	17.5x22.5	WHITE	60	0.004
0007	80# White Coated Book	24x36	WHITE	80	0.004
0008	80# Coated Cover	26x40	WHITE	80	0.008
0009	803 White Natural	11x17	WHITE	20	0.004
0010	2/P Mead C'less 20#	17.5x22.5	WHITE	20	0.004
0011	3/P Mead C'less 20#	17.5x22.5	WHITE	20	0.004

Figure 17

By entering an item such as **stock #, partial description, size, caliper, etc.** in the search window, a list will be shown of only those types of stock.

Note that the sample database contains only 99 stocks and are used primarily to provide guidance in how to enter various stocks as well as help in some of the sample estimates. You may change them later as you see fit. Currently, you may have as many as 2000-8000 stocks should you desire.

Press Information Section

Select a Press.

This is simply a matter of selecting which of the different presses you have available using the drop down list.

An advanced feature called "AutoPress Select" is available on versions 2.5.0 and on. This enables the user to determine which press would produce the job most economically, disregarding factors such as pre-press and bindery.

Gripper: When the press is selected, you may need to specify the gripper dimension for that press as well as the gripper grab width as well as gutter width (in case of a bleed). Both the **Gutter Width** and **Gripper Width** can be specified within the Press File so you don't need to enter them manually, unless you desire.

Finished and Press

Sizes: The Finished Sizes and Press Sizes are entered by clicking the list arrow to the right of the respective cell.



Figure 19



Figure 18

If you click the ? to left of cells, you will be advised as to how you may enter a size that is not currently in your database.

If you need to enter a new size for either of these cells, Double-Click the **descriptive words** to the left of each cell to bring up the files for the cell (see screen shot to left). If you enter a **new size**, click on the **check mark** to load that to the file and then click X to exit. The size will be entered

into the worksheet for you. If you click on the **check mark** shown here, the approximate size of the Finished Bleed sheet will be entered into the Bleed cell. Should you wish to simply enter the max sheet size of the press into the Press Size, just click on the **MAX** button to the right of the cell.

In addition, you are also able to delete sizes from this data entry screen (See Figure 19) by clicking on the size and then clicking on Delete.

Set Speed and/or Difficulty: Generally, the difficulty is left at 5 for almost all estimating. But if you feel that you need to either increase the price or decrease the price because of the job, customer or how you feel that day, then this is the area to accomplish that goal.

So how does the difficulty work?

The Difficulty is applied to the speed of the press as a multiplier. For example, if the speed was determined to be 8000 iph for a given press with a difficulty of 5, then a difficulty of 1 would yield a speed of 1600. ($1/5 \times 8000 = 1600$)

Now even if the press was set up so that it could not run slower than say 6000, the use of the difficulty would force the press to run below it's design speed in order to obtain a price that was adjusted based on difficulty.

In other words, the speed of the press for the estimate is an adjusted speed based on difficulty. A difficulty of 9 would result in a speed of 9/5 times the 8000 or 14,400.

The rule to remember is this: The lower the number for difficulty, the higher the resulting price.

Any changes to the difficulty will be immediately displayed in the Speed/Spoilage window described earlier.

Runs: Runs represent the number of times a sheet passes through the press. It is calculated automatically when using Figure 12c above.

Test Question: If you are doing a job such as a 4 color on one side (4/0) but running it on a 2 color press, how many runs will you have?

Answer: Two. Because you would need to run it through the press twice in order to lay down four colors.

Test Question: Suppose you have three originals that the customer wants printed and one of them is 4/4, the second one is 4/0 and the third is 2/2. How many runs will you have using a 2 color press?

Answer: Eight. The first would require 4 runs because we can only run 2 colors at a time and we need to lay down 4 colors on each side. The second one would require 2 runs and the third would also require 2 runs.

It is also used to determine the amount of press time and cost that can be attributed to the press itself. For example, if we needed to add an additional run to account for, say, a double black, then all we need to do is increase the runs by 1. A perfecter can print both sides of the paper using a single run but most offset presses need two runs.

Sheets (Signatures):

In 12c above, we discussed the term Sheets while referring to a screen that allows you to enter various sheets and colors per side.

If a customer wanted 2-4/4 sheets along with 1-4/4 sheet (which results in a total of 3 sheets) and the customer wanted a blank sheet added to the job, then simply enter an additional sheet without using any additional runs (or plates). This results in 4 sheets.

Carbonless Forms (Parts): If you will be printing Carbonless forms, then either select the stock as carbonless and the Parts Box will show the number of parts, or enter the number of parts in the area shown above. If you do enter a number greater than 1 in the parts box but are not using a Carbonless stock, you will receive a Warning. It is up to you to change the parts to a valid number after the warning.

By using Parts, this will allow you to accurately estimate **Multi-Part Carbonless** sets without having to determine total number of sheets. You simply enter the number of sets delivered to the customer in the Quantity area.

Quantities: There are up to four quantities available and they almost ALWAYS represents the quantity delivered to the customer and, in sets as well. For example if you were asked to print 1000 sets of 3-part carbonless, you would simply enter 1000 in the quantity area. The same is true even if you have 14 originals, because the customer still only wants 1000 sets.

A quick and shorthand way of entering parts is to enter the first quantity followed by a period and then the number of Parts. For example, if you entered 1000.3 and hit enter or Tab, the Parts would immediately be set to 3 and the quantity reset to 1000.

Convert Quote to Job: If you retrieve a quote that contains more than one quantity as shown in Figure 20, and you are now copying this quote to a job, you will be asked to specify which quantity you want for that job also shown in Figure 20.

Figure 20

The various quantities that were used for the quote are shown and the conversion window seems to imply that you need to choose the first quantity, but you may also choose any of the quantities shown or in fact, a quantity other than what is shown.

Stock and Pre-Press Information

A preliminary discussion was made regarding stock and shown in Figure 17. We will now continue with the column that allows you to enter stock, pre-press values, ink and more.

Once you select a stock, the **size** of that stock will show along with the amount of **Inventory on Hand**, various **Carton Pricing** levels, Caliper and Out.

The Inventory on Hand shows Thousands of Sheets. When a job (Not a Quote) is created, the Inventory on Hand will show a reduction only when the **Work Order** is printed. Display is Now M's OnHand.

Figure 21

The Carton Pricing may be changed by the user for a particular quote but does not change the actual price of the stock in the file. If you enter a change in cost in the first cell and hit **TAB**, then the other 2 cells also change to that price although they may be changed to a different price if desired.

Also, **Out** may be changed as well however the color of the cell will change to indicate that it was manually changed and may not even be a possible entry.

Caliper is used by the program to evaluate certain bindery operations such as cutting, padding, drilling, etc. Be certain the caliper of stock is correct otherwise the cost of these bindery operations may not be correct.

Out is also used to determine the number of Inventory Sheets that will be consumed by the job. If the Number Out is changed to a different number, then the amount of stock will change as well as press and bindery times.

Figure 21a

Additional Press Information: If you have entered the Sheets (Signatures) by the method shown in 12c, or through the use of the AI button (described later), then the number of **Plates** will be automatically determined (as well as Runs).

The **Plate File** (Found in Maintenance under the Press), contains a life and that life may be exceeded during a long run. If it is, then the plate will be removed, returned and remounted to the press along with any corresponding time and costs associated with it. Under the Reports Menu and the Time/Cost Summary or the Cell Description Box, you would then see a doubling of the number of plates for a particular quantity. In some cases, one quantity may have the number of plates you thought it should have while a different (higher) quantity would have double the plates. The **Type** of Plate is used to determine the life of the plate. Of course, all of this depends on how you have entered the information in the Press File.

Each Press File contains an area that describes the number of heads for that press.

Washups are determined based on that head count. If you created or modified a press that had 4 print heads and stated that there were only 2 heads, then the default washups would be displayed as 2 in the Worksheet.

Ink Usage: If you enter the amount of coverage of Black Ink, Color Ink or hit the Question Mark next to Ink, you will be requested to specify the type of ink, the sides that the coverage applies to, the PMS Number if it has one and the actual coverage of that ink on this job.

Figure 22

While we are on the subject of Ink, let's look at some interesting concepts associated with Ink, Porosity, Water Acidity, Humidity, Coverage, Temperatures, etc.

Coverage: If you have an Adobe Product, you can check to determine your total Ink Coverage, as well as individual ink coverages using just a PDF of the page. This is extremely helpful since estimating coverage is very difficult without that kind of help. Of course the longer you have been estimating, the more accurate your results. Also, many printing and imposition software will have the ability to determine on a page by page basis, the amount of coverage. All of this assumes you already have

access to the press ready layouts. But if not, then you will need to simply estimate the percent of coverage of each color.

Water Acidity: Ink will join with between 10 and 30% of the fountain solution (water) but generally the coverage is not affected significantly although other problems can develop.

Humidity: Humidity can change not only the paper, but the ink as well. If the ink absorbs water from the air or the sheet itself has absorbed water, changes in coverage can occur.

Temperature: When the press room is hot, the viscosity of the ink actually changes and the coverage also changes.

Porosity: Various stocks are able to provide different coverage values for the same ink. For example, Black Ink may be specified as having between 275,000 to 425,000 sq. in. of coverage per pound for Antique vs Enamel finishes respectively. In general, we might use an average of 335,000 without regard to the paper we are using. But we'll look at both the high and low values for the sake of the estimate.

Let's assume the cost of a pound of ink is roughly \$1. Let's look at the cost of printing 20,000 sheets of an 8.5x11 sheet with 20% black coverage.

$8.5 \times 11 \times 20,000 \times 0.20 = 374,000$ sq. in. of coverage. Since we can get an average of 335,000 sq. in. per pound, we will use, on average, $374/335 = 1.12$ lbs or \$1.12.

If the selling price of printing this job was \$500, then the Ink represents $1/500$ of the price, or a cost of \$0.22 per \$100 or 0.2%.

If we look at the maximum coverage (100%) and minimum sq inches per lb of ink (220,000 for Cyan on Antique) and a cost of \$2 per pound, this would give the worst case scenario.

$8.5 \times 11 \times 20,000 \times 1 = 1,870,000$ sq. inches of coverage at 100%. At 220,000 yield, we will use $1,870/220 = 8.5$ lbs or \$17. This represent $17/500$ of the price of the job, as the worst possible case (or 3.4%).

In other words, for every \$100 of selling price, ink will account for only \$3.40. In a National Study it was found that ink generally represents 2% of gross revenue.

Because ink is such an insignificant portion of the job, we generally do not go into much detail as to percent coverage, porosity and other factors which will ultimately take a tremendous amount of time and yet yield no significant change in the price of the job. It is however handy in knowing ahead of time, how many pounds you will need of a particular ink.

Additional Markup: Should you decide that you would like to charge the customer more or less than the calculated price, simply enter the percentage in the Additional % MU cell. You can use either a positive or negative number. For example, if you want to increase the price by 5%, enter a 5. If you want to discount the price by 10% enter a -10.

Pre-Press: In Figure 21b, **Pre-Press** looks at the following items: Pre Flight, Design, Additional \$ or Typesetting, Ripping and/or Paste-up and Imaging. For the most part, you can enter a simple dollar amount in these areas.

If you also want to specify an approximate time for each activity, you can make an entry like **50/1** which would represent a cost of \$50 and 1 hour of time.

The **Question Mark** to the left of the PrePress cells will bring up an expanded method of entering items in these cells. See Figure 24

If we had entered **50/1** into the Pre

Flight \$ area of Figure 21b, and then clicked on the Question Mark, we would see the display shown in Figure 23. Notice that the upper left item has a check mark next to the **Pre-Flight** item and a small **Magnifying Glass**. The Check Mark indicates that there is some data entered in that cell of the Worksheet and is specified by clicking on the Magnifying glass. The Pre-Flight Cost Data is the same as that entered into the worksheet (not shown).

Figure 23

Figure 24 shows the full Pre-Press Input. The **five items at the top of the screen** are the same values as found in the worksheet. Below them is the **Primary Information** regarding pre-press activity. It is not used in the estimating process but it is used when a job jacket or work order is created.

The next section is **Output**. Again not used for the estimate. The **Notes** section is used in the Electronic Job Ticket. The last 2 items (**Scans and Cam/Rip**) permit you to

Figure 24

specify much more detail and are used in the estimate. The Specs for this area are included in the pre-press data files. See File Maintenance with Vers 2.4.80 for complete access. For earlier version, use OE/Est 1.5.0281 to access Pre-Press.

Finished Layout Preview

At the bottom of the worksheet you will see an area called Finished Layouts. This area is simply a way of helping you visualize the kind of layout you expect. It shows how the finished sheet is imposed on the press sheet but is not an imposition program. It only allows you to visualize how you would print a multi-up or how to pagenate a job.

In the example shown in Figure 25, we are printing 2x3.5 business cards on an 8.5x11 press sheet. There is no bleed however there are two ways to print the job. One will yield 10 up and the other will yield 12 up. If grain is a consideration, you would need to decide how you will layout the job.

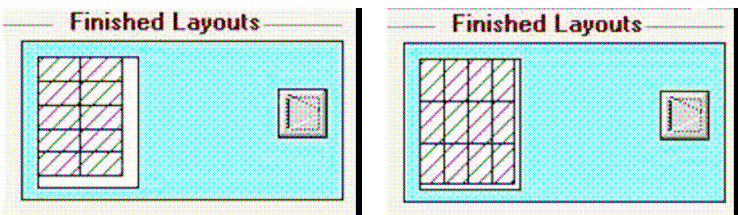


Figure 25

Verification Count 1st Quantity

The Verification Count applies only to the first quantity (without any waste factors) in order to visualize the correct number of press clicks and stock requirements for the job. If it doesn't look like what you expect, there's a good chance that an incorrect entry was made.

In Figure 26 below, we are running 1/0 with a finished size of 8.5x11 on a press sheet of 11x17 from a parent (Inventory) sheet of 23x35 with a delivered quantity of 20,000. We know we need 20,000 finished pieces, thus we need 10,000 press sheets.

Verification Count 1st Quantity	
Press Clicks	10000
Press Stk Count	10000
Inventory Count	2500
Dimension Sort Options	
<input checked="" type="radio"/> Square Inch	<input type="radio"/> 1st Dimension

Since we know that an 11x17 will cut 4 out of a 23x35, we also know that we will need to pull 2500 sheets of 23x35.

And if we look at the Verification Count, that is exactly what we see. Thus we have verified that the entries are correct.

Figure 26

D

Dimension Sort Operation only refers to how you want to be able to view our Finished and Press sizes. Sorting can be done by square inches, which generally provides a good list but if you need to have the first number sorted, you can do it that way as well.

In the next section we are going to review Bindery Input. Although not complicated, Bindery does offer us much more flexibility when it comes to input should we elect to use the Help Button.

Bindery Input

Description: As you can see from Figure 27, 3 of the 10 bindery items have a blue tint indicating that they must remain as specified. There is no drop down that allows you to select a different bindery operation as can be seen in the **drop down shown for the last item called Wrapping**. You may select any item in the drop down list of the remaining 7 items.

Setup: Next to the Description area is the Setup. Setup consist primarily of a single number from 1-several hundred, depending on the bindery items.

For example, if we are cutting a press sheet in half, then we would use a 1 to indicate we have one setup. If another cut of the same sheet was required, we would enter a 2. Note that at this time, we make no distinction as to which sheet we are cutting. Finished, Bleed, Press or Parent). And there is in fact a difference in cost depending on the sheet we plan to cut.

Another example would be if we chose wrapping. If we enter a 1 in setups, then the file is constructed to use the default number of sheets per package. If we wanted to specify our own number of sheets per package, then we might enter 50, 100 or some other quantity. This example is also true for padding (unless carbonless in which case we only use a 1).

SRPD: This acronym means Sheet, Runs, Percentage and Difficulty. Each item can only be a single digit number and if no value (or a zero) is entered, it defaults to 100% of Finished Sheets, with no additional runs, at a normal difficulty.

? The **Question Mark** brings up a **Help Screen** that allows you to enter SRPD without having to memorize how it is entered. After a while, you may not need the help but initially you should use it to specify what is required. See Figure 28.

Bindery Comments: Should you wish to add notes to the Bindery Operations in order to help Production Personnel understand the exact requirements of the job, be sure to include them in this help screen.

Figure 27

Figure 28

Menu Items

The Menu Items at the top of the Worksheet provide access to various functions as their heading illustrate.

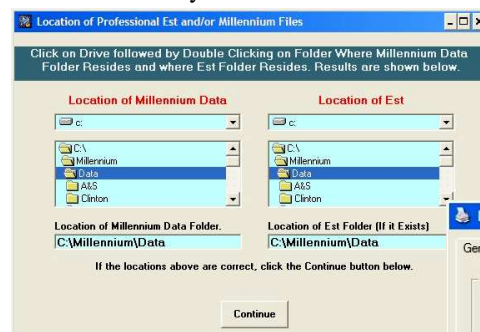
File

Clicking on the File Menu permits access to the Path as shown below, Print Setup, Default Bindery, License Code, Welcome Screen Hide and ability to show or hide Flash Screen.

Path: Generally the Path

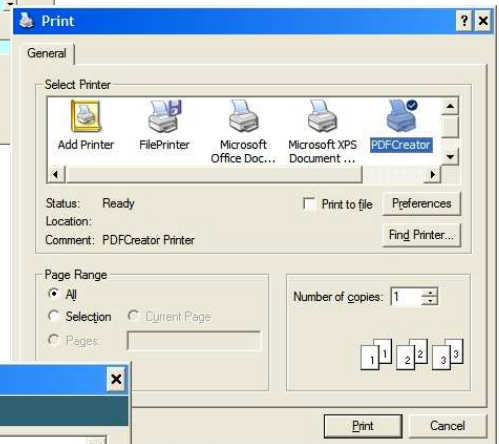


Figure 29



OE/Estimating, then the path you will need to use is called \Millennium\Data.

Print: You generally should select your printer here before you actually try to print any reports. The reports



and other printed items go directly to the printer that is set up here.

Default Bindery Files: Whenever you erase the Worksheet, the Bindery area in the Worksheet is loaded with your Default Bindery items. If you see a message in the Worksheet that a Bindery File doesn't exist, go to this area and correct the file.

License: A License is required for continued use of the program.



Figure 29a

Edit

The Edit Menu is used to modify your Job and Quote Numbers. In fact one or more companies use this area on a daily basis in order to keep their existing job numbers synced with this program. The Default Values have been moved to the Maintenance Menu and brings up the ability to save the Worksheet data.



Job & Quote Numbers: Simply enter the desired numbers and click Save & Exit. Be sure you don't enter a number smaller than the current value or you will

receive a warning (but it will still let you do it).

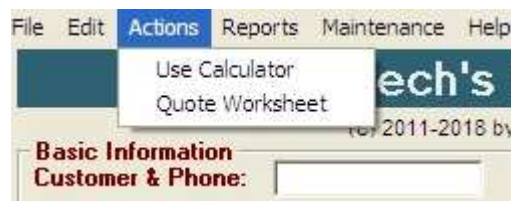
Due Date: By entering the number of days that each department may take on

average to complete a given job, the Due Date is calculated. If you include the weekends as well, then the Due Date would generally become less. If desired, you can leave the days portion as they are and just change the due date manually.

This is true of the start date as well.

Product Categories: Add these products as you deem necessary. To delete one or more, click on the check box and hit Delete.

Actions



The Action Menu allows you to bring up a calculator for quick answers to common calculations and another method for quoting the Worksheet.

Some of the menu items that used to reside on this menu have been

moved to the Edit menu. In Vers 2.4.71.

The Calculator: This small calculator is for use in case you lost your smartphone, computer calculator, wristwatch, etc.

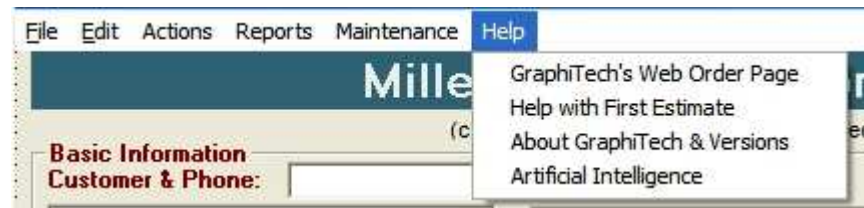
Reports

Reports, in general, print immediately. Exceptions to this are those reports in which you must select something in the report.

Maintenance

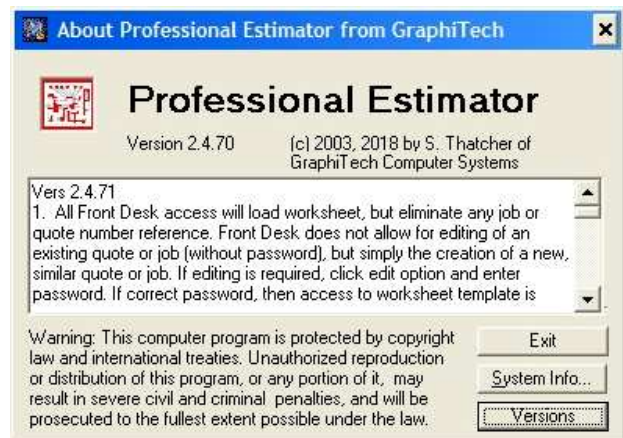
The selection of this Menu Item will be discussed under the heading of File Maintenance.

Help



The Help Menu consists of immediate access to GraphiTech's Web Page, Help with First Estimate (Reviewed Previously), About Screen and Versions and a short discussion of Artificial Intelligence (AI)

About: The About Screen contains much of the standard displays such as version numbers, copyrights, etc., but also allows you to review the history of every build that occurred with this program. Click on **Versions** for build review.



File Maintenance

Maintenance Access

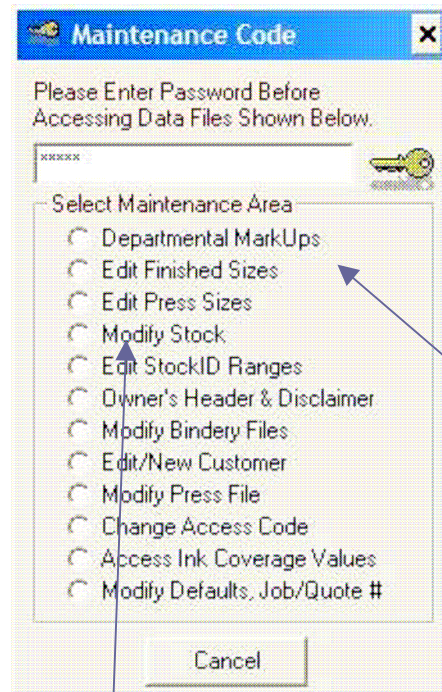


Figure 30

pricing and then put a markup into the file at that time. The Markup is multiplied times the cost to determine the Retail or Selling Price. It is not to be confused with Margin.

Modify Stock

The Stock File contains up to 99 stocks as the default, although up to 9,993 may be entered. The stocks may be modified as desired by clicking on the Modify Stock shown above.

Some companies simply use the default file and use those stocks as house grade. In that way they minimize the number of updates to pricing that might be required.

The **Last Price Update** is automatically updated whenever you change the pricing.

File Maintenance requires that you enter the Password (11111) and then select the item you wish to review. The screen shot here represents the extent of File Maintenance for vers 2.4.70 with further access in later versions.

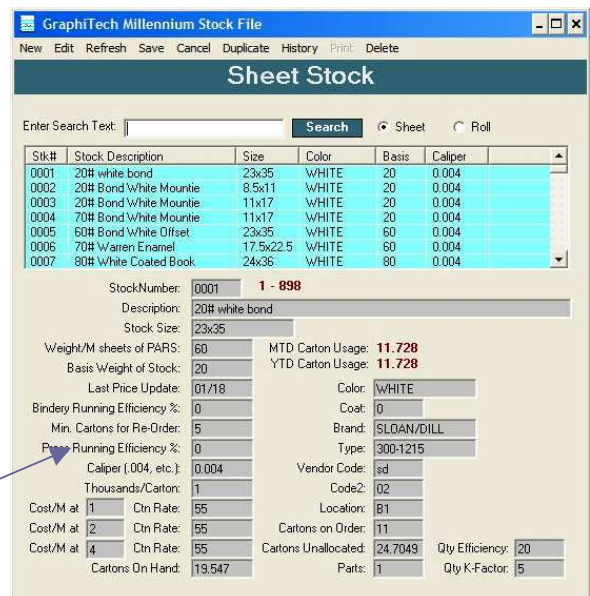
As mentioned earlier, the Finished and Press sizes can be accessed directly from the Worksheet without the need of a password.

Departmental Markups



Once the cost of a job is determined, it is marked up by the percentage shown above. Many customers will start out with a 0

percentage until they have a good feel for the pricing and then put a markup into the file at that time. The Markup is multiplied



It's important to try and be accurate when entering items such as caliper, basis weight, weight per M sheets, Press & Bindery Efficiency and Carton pricing. Many of these items are used in the estimating process to evaluate both press and bindery. Even the number of Cartons on Hand is important if you plan to maintain an inventory system. The Worksheet will display the Number of Cartons On Hand and actually deplete stock once you create a job and print a WorkOrder. (Note that a Job Ticket will not deplete stock, only a Work Order).

Press Efficiency & Bindery Efficiency: If the stock will cause any type of problem with Bindery or Press, you can specify a Running Efficiency for the stock. For example, if you enter 90 (for 90%) on the Press Efficiency line, what ever speed occurs normally will multiplied times 0.9. If you do not enter anything, then it is assumed that no penalty exists when using that stock.

Thousands per Carton: This represents the number of Parent Sheets (in thousands) per carton. If you have 5000 sheets per carton, then you would enter the number 5.

Cost per Thousand at 1 Carton Rate: Determine from your price book how the stock is priced. Generally it is in 1, 4 and 16 carton and sometimes skid pricing. If it is 1, 4 and 16 then look up the cost per thousand for each bracket and enter those values for Cost/M. For example, the 1 Carton pricing might be \$65/Thousand while the 4 Carton pricing might be \$59/Thousand and the 16 Carton at \$54/Thousand. When pricing out various quantities in the Worksheet, the program will look at the quantity of Parent Sheets that is required, then compare that quantity against the number of sheets required and use the correct price per thousand based on that quantity. If, in the stock example above, the quantity estimated in the Worksheet was 15,000 11x17 Finished Sheets and a carton consisted of 1000 sheets of 11x17, then the pricing would be based on the 4 Carton level (because it is less than 16 Cartons or, in this case only, less than 16,000 sheets).

Parts: If you are entering Carbonless Stock it is very important for you to enter the correct number of parts of each carbonless set and price it per thousand sets. In that way, when you specify in the worksheet that you want 5000 sets of 3-part carbonless (5000 is entered in for quantity and 3 is entered for parts), a look up is made of the stock to determine if the number of parts of the stock matches the number of parts in the Worksheet.

Qty Efficiency and Qty K-Factor: At present, these two values have not been implemented. In general, they modify the markup based on the quantity of the job. At present the Minimum Markup is always used. This will be implemented in later versions.

Edit Stock ID Ranges

If you plan to use the Inventory Program to maintain your inventory, you'll note that you can add prepress, press, roll stock, ink, etc., into the various categories identified here. Currently, Vers 2.4.70 only allows access to both Sheet and Roll stock. Versions later than 2.4.70 will also allow you to enter other inventory items as well.

Category	From	To
Sheet Stock	0001	0898
Roll Stock	0899	0900
PrePress Stock	0901	0995
Other Stock	0996	0999

Owner's Header and Disclaimer

The information contained in this file is used for Invoices, Quotations, Delivery Tickets and more.

If you wish to change the wording of the disclaimer, be sure to avoid changing the <%PCT%> that appears within the disclaimer as that is used to place the actual down payment percentage into the text.

The "Thank You" section also appears on the Quotation and elsewhere as required.

Owner's Account & Header Information

Header Information, Disclaimer, etc.

Please provide header information for the bid/quotation.

Company Name: Alpha Engineering

Address: Suite 212
4174 Larch Ave

City/State/Zip: West Palm Beach FL 33401

Phone/Fax: 561-622.4327

Email/Web: scott@graphitech.com www.graphitech.com

Title: Quotation

Date Format: mm/dd/yyyy

% Down Payment: 50 Sales Tax %: 6

Disclaimer: This estimate includes all operations and materials to complete the work as specified above, based on our understanding of the specifications provided to our

Thank You: We appreciate the opportunity to provide this product to you.

Post Changes Exit Without Changes

Modify Bindery Files

You can create virtually any type of Bindery Item using our method of **Impact Flags**.

When setting up a Bindery Item, you may use our existing bindery items as a template for your own or you can simply **Duplicate** an existing template to a new record and make a completely new type of bindery item.

We need to review how you set up a Bindery Item and additionally describe the Impact Flags that are used with a bindery item.

Let's start with the **Bindery Name**. You can call the item anything you want as this is descriptive only.

Bindery Edit

Bindery Operations & Impact Flags

Fold, Baum

Select Bindery at Left to Edit. Click Duplicate to create a New item.

Bindery Name: Fold, Baum

Bindery Type: Folding

Cost/Hour: 35

Min Speed (uph): 12000

Max Speed (uph): 13000

Min Sheet Size:

Max Sheet Size:

Add'l Run Time %: 0

Setup Time: 20

Add'l Setup Time: 7

Spoilage Eff: 50

Spoilage K-Factor: 5

Speed Efficiency: 20

Speed K-Factor: 4

Impact Flags

☒ Stock ☐ Delivery

☐ Carbonless ☐ Linear Padding

☐ Pages ☐ Packaging

☒ Length ☐ Weight Based

☐ Square In. ☐ Foil

☐ Thickness ☒ Press Sheet

☐ Multi-Bin ☐ Die Cut

☐ No Signatures ☐ Padding

Waste/Spoilage

Sheets: 35

Max Run %: 2

Min Run %: 0.5

Select Bindery Item at Top to Edit or Duplicate.

Save Delete Duplicate Cancel Exit

The next item is a drop down list of available **Bindery Types**. For example, if we click on the drop down list and select Folding as shown to the right, that name will appear in the Bindery Type cell (See Above) and also fill out the appropriate Impact Flags associated with a Folder.

All calculations are based on the Bindery Type and not the actual name of the Bindery Item.

Cost per Hour is arrived at using our Budgeted Hourly Cost Analysis program or by using many of the standard pricing guides available on a regional basis. The BHR program is slated to become a part of this program at a later date.

Min and Max Speed.

Generally, you should follow the manufacturer's guidelines in determining the speed ranges for your equipment. The Speed that is used for the estimate is determined by using the **Speed Efficiency** and **Speed K-Factor** shown here. We will discuss these items in more detail later.

Min Sheet Size and Max Sheet Size. If you need to enforce controls on the use of the press with press sheets that are outside the range of allowable size, then enter the sizes by using a small x between two values with no spaces (as in 8x10).

Additional Run Time %. The best example of how to use this cell is to look at a cutter. If we need to trim a finished sheet using a 4 side final trim, then we need to determine what additional run time is required to perform that 2nd, third and fourth trim. The first trim is governed by set up time and speed of the equipment. If we decide that our cutter will take an additional 10% longer for each successive cut or trim, then we would need to enter a 10 in this cell.

Setup Time. This is the amount of time to set up initially. For example, in the folder shown, we state that 20 minutes is required for set up. This is what it takes to set the first fold and adjust for that fold.

Additional Setup Time. As in Additional Run Time, we need to determine how much setup time is required to program or setup for that second and subsequent trim. Note that our Bindery file also requires an additional setup time because, even though there is no additional run time shown, there is an additional setup time. Note that should you wish to add a small amount of additional run time for additional folds, that is perfectly acceptable.

The next 4 items (Efficiency and K-Factors) will be discussed later.

Waste/Spoilage. In setting up this folder, we have determined that it will require at least 25 sheets to set up the folder plus an additional 2% (down to 0.5% for longer runs) to account for run waste. The Run Waste is determined based on the quantity of the run and the speed curves (spoilage efficiency and k-factor) specified.

Impact Flags. This Folder contains three Impact Flags.

Stock, which may contain a penalty in the stock file and which will apply if this flag is checked. For example the stock chosen may indicate a 95% Efficiency which will increase the cost of the folding job.

Length. The speed of the equipment will be effected by the length of the sheet (longer dimension when entered into the worksheet). When the speed is posted in the file, it is for an 8.5x11 sheet passing through that equipment. If we are passing an 11x17 sheet through the equipment, then the speed will be decreased by the following formula. $11/\text{Length of sheet} * \text{speed}$. In other words, an 11x17 sheet will have it's speed reduced by a factor of 65%. Now if the 11x17 sheet were entered into the press sheet as 17x11 (note that the dimensions are reversed), then the speed of the equipment remains unchanged from the file because the length is always assumed to be the second dimension which results in a multiplier of 11/11.

Press Sheet. When this flag is used, the default sheet passing through the equipment is the press sheet. If we had an 8.5x11 newsletter printed on an 11x17 press sheet, then the folder will automatically use the press sheet to determine its speed without the user entering the help screen for bindery and indicating they will be folding the press sheet down to a finished size.

Now let's look at the remaining Impact Flags

Carbonless. This flag tells the equipment algorithm that if running carbonless sets, look at the quantity shown in the worksheet, not the total number of sheets (remember that the worksheet shows sets delivered to customer rather than sheets when working with carbonless forms). An example would be when creating a numbering machine on a Windmill. Each set is placed into the equipment and crash numbered, thus we are only working with the total number of sets, not the total number of sheets. The carbonless flag also produces a larger spoilage rate when the bindery item is running carbonless forms. If the normal spoilage rate was 5% running waste and the bindery item was running a 3 part carbonless form, the total waste would be 15% if this flag were set. The concept results in the fact that if a single sheet is wasted, then the entire set is wasted, thus the reason for the higher waste factor.

Pages. If you are in book mode and building a piece of equipment (such as a cutter or drill), you will need to look at the fact that a 32 page final trim will involve 16 sheets of paper for each booklet. If we normally say that the cutter height is 2.5 inches for example and our sheet of paper is 0.004 thick, then if in sheet mode, we would normally be able to cut 500-600 sheets per cut. If in book mode however and assuming a 32 page booklet, we can only cut between 30-40 booklets. Again, remember that quantities in the

Worksheet are finished pieces delivered to customer. So our quantity, in book mode, would be 1000 32 page books, not 16000 sheets of paper. If you wish to package or wrap a job that consists of 8 pages, then only one fourth of the quantity you specify will be wrapped. If you specify in the packaging file that you wish 200 sheets in each package, then the program will automatically reduce that amount by 4 resulting in 50 books per package. If you specify an exact count (say 100) in the setups portion of Order Entry, then all flags are removed from that one quote and 100 then becomes the exact quantity per package.

Length (Expanded Definition) Looking at a cutter we found in tests, approximately 1.5 minutes were required to lift a 23x35 ream of bond into a cutter and make a single cut, while only 30-45 seconds were required to place a ream of 11x17 bond into the cutter and make a single cut. If the cutter operator can produce 120 lifts of 500 sheets per lift of 8.5x11 paper (representing 60,000 sheets per hour), then a 23x35 inch sheet would be at an equivalent rate of $60,000 \times 11 / 35 = 18,860$ Sheets/Hour. Since we are talking about the same 500 sheets per lift, then the number of lifts will need to change. $\text{Lifts} = 18860 / 500 = 37$ or approximately 1 lift every 1.6 minutes (almost exactly the tested range of 1.5). Many companies have the mistaken belief that the ratio of lifting paper is actually weight based, but in our experience, it is not weight based but closer to Length based (although weight does factor into the speed, especially long duration cutting).

Square Inches. This is normally used when describing a Wide Format printer. All you need to do here is specify the number of square inches that can be processed per hour.

Thickness. A cutter for example would need to have this flag set because the thicker the stock, the fewer the number of sheets that can be placed in the cutter. This is automatically determined when this flag is set. For example, if the speed were 10000 units per hour, and the thickness flag were present along with a caliper of 0.008, then the modified speed would be equal to 10000 times 0.004 divided by 0.008 or 5000. The speed curve and subsequent modification of it is based on a standard bell shaped curve, where the divisor is always the larger number.

Note: Virtually all speeds assigned to Bindery Files are based on an 8.5x11 sheet. The cutter for example requires a speed based on sheets per lift times lifts per hour giving sheets per hour. The Length Impact Flag then adjusts the speed based on larger or smaller sheet sizes. The folder is similar in that the speed of the folder is based on an 11" sheet passing through the equipment. It also is then adjusted based on the length of the sheet passing through it.

Multi-Bin. If you are building a Multi-Bin collator, then be sure to use this impact flag. The information requested by the Bindery File is slightly different when this flag is used in that you need to enter Sheets/Bin. If you also have an additional setup time specified, the bins will be reloaded with more stock and the time to load will be applied.

No Signatures. A Bindery File that has an Impact Flag that states "No Signatures" would be anything that works on the number of books or flat sheets that are already collated. For example, a stapler is used on a book that might have 8 signatures or even 8 flat sheets. In other words, the quantity specified by the estimator is the quantity used in this type of equipment. Note that a folder would not have a flag such as this because the

sheets passing through would be the quantity specified times the number of sheets (or signatures).

Delivery File: This algorithm is an enhancement option for later release.

Linear Padding File: Use of this flag triggers the use of a linear padding machine in which the rate represents the number of linear inches per hour.

Packaging: Use of this flag allows the user to specify number of sheets per package within the file, and to further specify within the Order, the number of sheets actually desired.

Weight Based File: This flag is useful only when using the stock file or when you have specified the actual M weight of the paper. The delivered weight of the order is calculated, and then the number of pounds specified in the description is loaded to each container along with a cost per container. The desired weight is taken from the description of the file. For example, if you wish to have a 40# carton, then the description must contain the weight followed by a # sign for this file to be active. The cost per carton is placed into the minimum cost line.

Foil Stamping: Use this flag along with the Bindery Type called Foil to incorporate Foil Stamping into your calculations. Fill out the cost per square inch of the foil and place in the line that requests it. The speed represents the number of stampings per hour. When entering data into the actual estimate you will be asked for the percentage of the run. This value represents the actual percentage of the throw, or foil that is moved per impression. For example, if the full throw is 10 inches and the width of the Finished Sheet is 17 inches, then a value of 100 or 0 in the percentage line will provide for a full 10x17 or 170 sq. in. of foil per sheet. The cost of the foil is then multiplied times the quantity times the 170 sq. in. to determine material cost. If we set the percentage to 50%, then only half the sq. in. will be involved, or 85 sq. in. per sheet of paper. The throw remains the same at 10 inches but the width is reduced to 8 to 9 inches.

Press Sheet: This flag is used to provide information to the calculation module that the operation is to be performed on the Press Sheet only when operating in Book Mode. In other words, if a folder is used and we are running in Book Mode, the sheet that will be operated on will be the press sheet regardless of the size specified during input. In addition, if the book signature contains a 2 or 4 up (i.e. a 2 or 4 up signature), then the sheet will be AutoCut first to the resulting size and then be run through the folder at that size and quantity. Note: If the Length Flag is not set, then no speed changes will occur as a result of the length of the sheet.

Die Cut: This algorithm is an enhancement option for later release.

Padding. When this flag is set, you are required to enter the stabbing and chip cost in the bindery file so that they can be calculated in the cost for regular pads. Note that the way the program recognizes if you will be padding carbonless forms (in which there is no stabbing or chip cost) and regular pads, is by means of the entry. For example, if you entered 50 in the worksheet bindery area to describe setups for padding, this is then interpreted to mean that each pad will have 50 sheets, thus a stab and chip cost will be added to the cost for that 50 sheet pad. If, on the other hand, you entered a 1 for padding, this is interpreted to mean that you are padding carbonless and no chip or stab is required.

Spoilage Efficiency & K-Factor: Efficiency values of 1 to 99 may be used along with K-Factors of 1-9. These two values produce over 1000

combinations of spoilage curves that produce extremely smooth graduations of reduced spoilage.

Speed Efficiency & K-Factor: The same number of curves may be generated here and the same restrictions apply as specified above. The speed however increases as a function of quantity, rather than decreasing as in above example.

Customer File

The customer file used with the Millennium Professional Estimator and all other Millennium products is identified as shown below.

Within the Customer File, there are provisions for the basic Account Name, as well as for Multiple Contacts. (Available Versions 2.4.71 and later).

Three areas are of specific interest with regard to the Customer File. They are the Tax Code, Contacts and the Cost Penalty.



Tax Code. The code is one or two characters and depends on the codes used with QuickBooks. For simple creation of tax when creating an invoice, use a 1 for Yes and a 0 for no tax. If matching your QuickBooks data, use a two character sequence such as FL or GA, etc.

Cost Penalty. Implemented after 2.4.70. Here you may specify a positive or negative value that will be a multiplier times the total costs. It basically is placed into the MU cell of the Worksheet. If retrieving a quote, the existing retrieved MU will populate the worksheet. If you select a new customer, and the customer contains a markup penalty, the new markup will replace the retrieved one.

Contact Name & Phone: Implemented after 2.4.70, you may leave the contact name blank which will then use the Customer Phone in the Worksheet, or you may enter a Contact and Phone Number and when you post the change, it will update the customer and, if the contact doesn't exist, it will create a new contact as well. In the Worksheet, if you select the contact name, their phone number will appear rather than the customer default phone number.

Press File

As shown in Figure 31, the Press File is filled out with various press data as defaults. Presses may be added to the file by clicking on the Add button but a quicker way is to use the Duplicate button which makes a copy of the press and then allows you to make changes to the press just created, as required. The section below the press list may be displayed by clicking on the press desired. In this example, we have decided to look at the 1 color AB Dick as shown in Figure 31

Press Operations. The following operations are described below.

Cost/Hour. This value may be entered based on values obtained from use of our BHR program or from NAPL or PIA tables on Press Hourly Rates.

The screenshot shows the 'Press Edit' window with the 'Press Operations' tab selected. The window is divided into two main sections. The left section contains a 'Select Press to Edit' dropdown menu with '2C Itek' selected. Below this are input fields for 'Press Name' (2C Itek), 'Default Plate' (Fugi Itek), 'Cost/Hour' (25), 'Heads' (2), 'Min Speed (uph)' (4000), 'Max Speed (uph)' (6000), 'Min Sheet Size' (N/A), 'Max Sheet Size' (12x17.75), 'Gutter Width (in)' (0), 'Gripper Width (in)' (0.5), 'Spoil Eff/KFact' (50), and 'Speed Eff/KFact' (30). The right section contains a 'Press Type' section with radio buttons for 'Web', 'Perfecting', and 'Offset' (selected). Below this is an 'Impact Flags' section with checkboxes for 'Stock' and 'Carbonless' (checked). The 'Time (Minutes)' section includes input fields for 'Setup' (0), 'Wash-up' (15), 'Delivery' (0), 'Registration' (0), and 'Feeder' (5). The 'Waste/Spoilage' section includes input fields for 'Min Run %' (0.5), 'Ink (Fountain) Lbs' (0.25), 'Max Run %' (5), and 'Feeder Height (in)' (16). At the bottom of the window are buttons for 'Delete', 'Save', 'Duplicate', and 'Exit'.

Figure 31

Heads. This refers to the number of print heads. The program automatically assumes that you will also be performing a washup of this many heads when the press is chosen.

Min Speed & Max Speed. Look up these values in your Press Manual. There are design limitations to the equipment so these are good guidelines for this data. Of course you can always choose higher or lower values as long as you are aware that the press will start out at the minimum speed and progress to the higher speed as the quantity of the job increases (See Speed & Spoilage below). *Note that there is a limit however in that the max speed should not be more than 2.5 times the minimum speed.*

Min Sheet & Max Sheet Size: This is an optional entry that will issue a warning if you choose a size that is outside of these parameters. If nothing is entered, then the assumption is that there are no limitations..

Gutter & Gripper: These two dimensions are utilized when the job involves a bleed or multi-up bleeds. If the bleed size is specified when the job is being entered, then a gripper amount is deducted from the press sheet prior to determining the number OUT. If the job is being run multi-up, then the gutter is added to the bleed size to determine the total number of sheets which can fit on the press sheet.

Spoilage Efficiency & K-Factor: Previous versions provided this information in the Miscellaneous file and only one entry covered all press and bindery files. Now, with Millennium, you may specify this information for each press and each bindery file.

Speed Efficiency & K-Factor: The same type of data is used here as was previously used in the DOS version. See Vers 2.5.0 for graphical representation.

Speed & Spoilage Curves: A graphical display showing relative speed and spoilage activity is available to illustrate how the speed curves function as quantity increases. See Vers 2.5.0 or later for this graphical display

Press Type: This area is used to identify the type of press.

Impact Flags: You may select any, all or none of the impact flags. The meaning of each flag is as described below.

- **Stock:** When marked, this flag allows the stock to impose a % speed reduction onto the press. This reduction (or increase) is based on the value of the press efficiency factor in the stock file. If there is no entry in the stock file, then the value is not modified. A value of 85 in the press Efficiency line of the stock file would result in the speed of the press being reduced by a factor of 0.85, or 85% of the value it had previously.
- **Carbonless:** The carbonless flag produces a larger spoilage rate when the press is running carbonless forms. If the normal spoilage rate was 5% running waste and the press was running a 3 part carbonless form, the total waste would be 15% if this flag were set. The concept results in the fact that if a single sheet is wasted, then the entire set is wasted, thus the reason for the higher waste factor.

Time Impact: The press contains numerous time factors as shown below.

- **Setup:** This represents just the normal press setup. Do not include times that are also described separately here.
- **Registration:** This covers the time required to make register each plate. If you have 4 plates to register, the time will be 4 times that found in the file.
- **Washup:** This represents the amount of time required to washup each head. The multiplier here is indicated in the worksheet when requested to enter number of washups.
- **Feeder:** Enter the time required to load paper based on the Feeder Height used in Waste/Spoilage. If you need to load paper again, then this time will once again be prorated based on the number of sheets loaded. Caliper also plays a part in this value as well.
- **Delivery:** Specify time to set up the Delivery. This is a one time charge.

Waste & Spoilage: Here is where we determine the amount of waste that occurs within a job as well as the Feeder Height.

- **Min Run % & Max Run %:** The Minimum and Maximum running waste is in addition to the fixed waste mentioned earlier and the values entered are in percentages
- **Feeder Height:** This is entered in inches and is used to determine the amount of stock that can be loaded based also on caliper of stock. The Feeder time is calculated based on the number of times the feeder is loaded. Obviously, 25000 sheets of Index will take longer than the same amount of bond simply because you are loading the feeder twice as many times.
- **Ink Waste in Fountain:** At the end of the press run, a cleanup of the press generally requires removing any ink that cannot be safely placed back into production containers. This amount of ink is then wasted and is accounted for here. In general this is fairly insignificant so if you leave this blank there will not be an appreciable change in the cost of the job (unless you waste several pounds in the procedure).

Plate File. If you look at Figure 31 next to the Default Plate, you will see a drop down arrow that allows you to see all the plates available for this press. If you select one of the plates and then click on Edit, the Plate File (Figure 32) will appear.

Plate Name. Select an abbreviated name for the plate, similar to that shown in Figure 31. It will be easier to read when showing up in the Worksheet.

Figure 32

Description. Enter a description of the plate in order to identify when it is used, etc.

Waste (Sheets/Plate). The fixed waste for the plate is identified so that this amount will be added to the job when using this plate and this press.

Cost/Plate. Simply enter the cost for this type of plate.

Impressions/Plate. This value is used to determine when a plate needs to be remade due to wear. If we were running 51,000 press sheets through the press, the program will immediately add a new plate, new wasted sheets, add remount time to the total and continue with the calculations.

Mounting Time. This time is added for each plate during initial setup.

Remount Time: As shown under Impressions/Plate, the remount time is added to the job whenever the plate wears out.

Work & Turn Time. This is added initially to account for re-aligning a W&T plate once the sheet has been turned or flipped.

Edit or New: Either of those two commands will allow you to perform editing or new plates.

Delete: If you select Delete, you will be warned that you are about to delete a plate.

Save: When ready to save either a new or edited plate, click save to post to the database.

Change Access Code

Simply enter the new access code desired. Since you arrived here by entering the Password, you are not asked again for the original password.

You will be allowed to remain in Maintenance until you restart the program at which time the new password will take effect.

If you do not wish to change the password, hit the X at top of screen or the Cancel button.

Others who access the program on other computers, will require the new password immediately.

Accessing Ink File

The Ink File shown is similar to the older version of Order Entry.

You simply enter the Ink Color along with the Cost/Pound and the mileage. If this is a PMS color, be sure to specify that when in the Worksheet. You can actually specify a different PMS number when in the Worksheet, if needed. In fact, some companies only indicate that the color is PMS Blue for example and then specify the PMS Number once they start the estimate.

Ink Mileage & Cost

Ink Files

To Edit an Ink you need to highlight the item in the list below and then click on Edit. To Delete, Highlight the item and click Red button.

Ink Color	Cost/Lb	Mileage (sq in/lb)
Black	7	335000
Cyan	10	300000
Magenta	10	300000
Yellow	12	310000

Color:

Cost/Lb:

Mileage (sq in/lb):

Highlight & Delete **Edit** **Save** **New** **Exit**

Vendor File

Vendors and Services

Vendors & Services

To Edit a Vendor you need to highlight the item in the list below and then click on Edit. To Delete, Highlight the item and click Red button.

Vendor Name	Vendor Service
Imagineering Service Bureau	Imaging

Vendor Name: Code:

Vendor Service: Code:

Highlight & Delete **Edit** **Save** **New** **Exit**

The Vendor File works in a similar manner to the Ink File. Simply select the Vendor you wish to edit and make the necessary changes after clicking on Edit. A New Vendor can be added by clicking on New. In each case you need to save either the New or Edited file.

If you highlight an item in the list and click Delete, this will remove it from the database.

Default Worksheet

If you look at Figure 7a, you'll find out how to create a Default that will be loaded when you

access the Default Worksheet from the Maintenance Menu.

Icon Selection

As discussed previously under the section entitled Fundamentals, each icon performs a specific task.

However, each icon also may be a completely separate program in it's own right.

This section will now discuss these additional programs.



On-Screen Layouts and Printed Layouts



When you click this icon, you are presented with both a layout for number of Finished Sheets on a given Press Sheet but the number of Press Sheets that can be cut from the Parent (or Stock) Inventory.

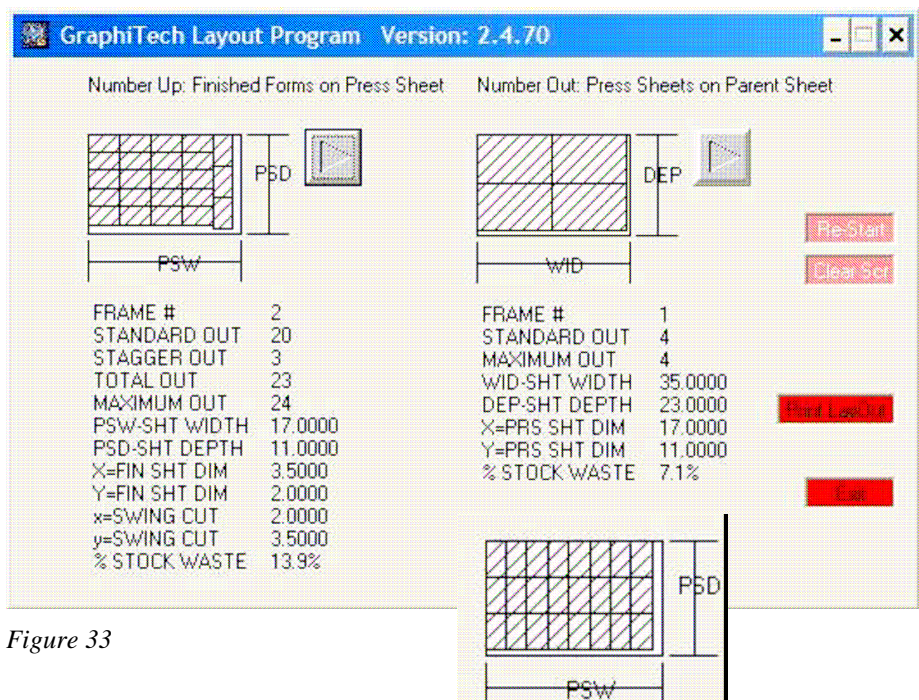
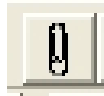


Figure 33

In this example, we are running business cards (2x3.5) on an 11x17 press sheet and that press sheet is cut out of a 23x35 parent sheet. The number we can cut from the press sheet as shown in Figure 33 is 23 even though we can see that the Maximum Out could be 24. Note that if we cycle through one more time (large arrow), we will get the 24 finished business cards from the press sheet as shown in the insert to the right.

Once you have the correct layout, you can print it so that production personnel know how it is to be cut. It also provides the estimator with a visual of how to estimate the number of cuts.

Additional Input & Outside Services



Outside Services refers to those items which are either purchased outside of your own plant, or which contain prices that are not easily obtainable through other portions of the estimating program.

These costs are added to the total cost of the job but are examined as to their linearity with regards to Additional Thousand pricing contributions. For example, a cost that is essentially the same for 4 different quantities will contribute no added costs to the additional thousand price of the job.

Additional Services

Service or Operation		Vendor Name		Service Description	
Imaging		Imagineering Service Burea		Rip Final	
Qty 1	Qty 2	Qty 3	Qty 4	% Markup	
1000	2000	3000	4000	30	
Cost 1	Cost 2	Cost 3	Cost 4	Outside Services Total	
75	75	75	75	75	

Add to List
Finished
Delete from List

Selected Services

Service Type	Vendor	Description	Cost	% M
Imaging	Imagineering ...	Rip Final	75	

General Comments

Our customer is sending file to Imagineering. They will bill us and we will bill our customer.

Figure 34

After selecting a Service, a Vendor will appear followed by adding a description to your selection.

Various quantities are shown (that correspond to the actual quote) where you are to enter the costs for each quantity. If it is a pre-press action, simply enter the same cost in all areas required, or enter the new costs associated with the quantity desired.

When ready, click on "Add To List" and click "Finished" when complete. A red light will appear in the Worksheet next to "OP" indicating that there is a value entered in this section.

If you wish to delete a line, simply highlight with your cursor and click on "Delete from List".

Set Due Date



Here you may set the current date & due date for the job. The days between operations impact all estimators so be certain you do not change them without a conference with everyone involved.

Due Date will only affect your quote and no one else's.

Electronic Job Ticket



If you have laptops (or desk tops) located around the plant, you may allow your production personnel to view the specifics of a job including all the notes and comments from each department.

In general, the computers used may be part of GraphiTech's Shop Floor Data Collection System as well.

Currently (with Versions 2.4.70 and earlier), we recommend that you do not allow anyone other than the estimator or a designated person, to make changes to the comments of a particular job. This is because at present, adding notes to the Job Ticket will not lock the file which means that some over writing may occur between one individual and the estimator.

Later Versions will set a lock on the table dealing with this information so that if the Electronic Job Ticket is activated, it will lock out others until the original poster is finished.

The primary benefit of this program is to provide production personnel with information that goes beyond what may be found in the printed Work Order or Job Ticket.

Invoice Jobs & Post to Historical Ledger



Once a quotation has either been converted to a job or created as a job, you may wish to create an invoice that accompanies the job as it goes through the plant.

In fact, many companies will use the Invoice as a reminder to accounting to actually use the information to produce an invoice for their proprietary accounting system.

If you also have GraphiTech's Integrated Quick Books Invoicing system, you could use that Invoice to post to Quick Books, thus populating your Accounts Receivable, Sales Tax Payable, Freight and Sales (Revenue) accounts.

The Invoice shown above is capable of populating up to nine (9) parts for a single invoice. If you need to add additional items that were not part of the estimate, you can do that manually. Once the invoice is prepared, a printed copy is made (See Screen Shot at Left), that will automatically populate the Historical Ledger as well as identifying other

programs such as Job Costing that this job has been invoiced.

There are currently two types of Invoices that may be printed. The one shown above is called the "Formatted" version and the other actually prints on a pre-printed form. That form is available from GraphiTech in order for you to create your own artwork and provide a custom invoice for your customers.

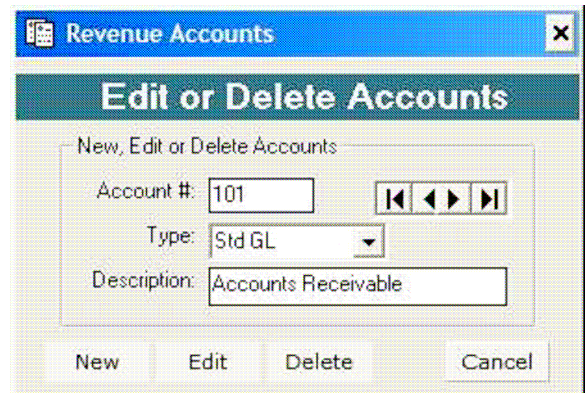
The Files required to actually utilize this portion of the program are fairly extensive since much of the data required by the invoice is the same as you will need for the QuickBooks Interface.

Revenue Accounts

If you plan to use the Quick Books Interface, you must enter your own Revenue Accounts exactly as they appear in QuickBooks.

The most important part of entering this information is to get the Description exactly the same as listed in your Accounting. This is because importing to

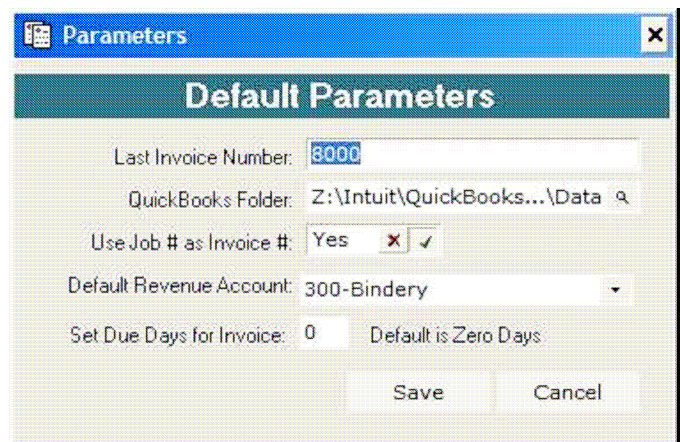
QuickBooks actually only uses the description to identify the account. The number shown here is for convenience in entering these accounts on each line item and does not need to match any account numbers you may have in QuickBooks.



Default Parameters

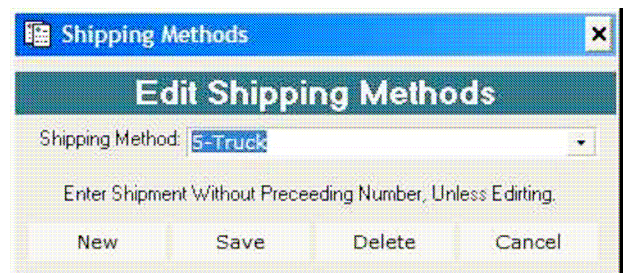
This is simply those items that are required to have the program function properly. The Default Parameters shown to the right actually have more information than is required. The latest version does not have the QuickBooks folder identified here

because there is no need to have a QuickBooks path specified for this version. If you also have the actual QB Interface, then you will be required to enter the correct path.



Shipping Methods

You may feel that you don't need to enter any additional information than what is shown in the defaults and if so, you can just use the defaults shown.



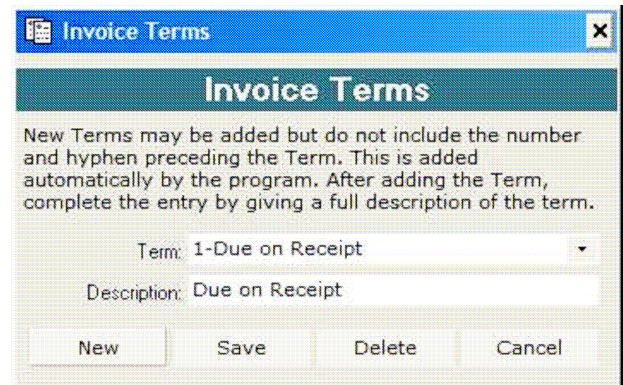
Invoice Terms

Here you may enter all the terms for payment that you allow.

The description line tells others just exactly what you mean by the abbreviated entry in the word Term.

Of course, this item is self explanatory but others such as 2% 10, net 30

may be less so. In this case a description would be helpful to others and could read something like, "A discount of 2% is given if paid within 10 days however, if not paid within 10, then the entire bill is due and payable within 30 days".



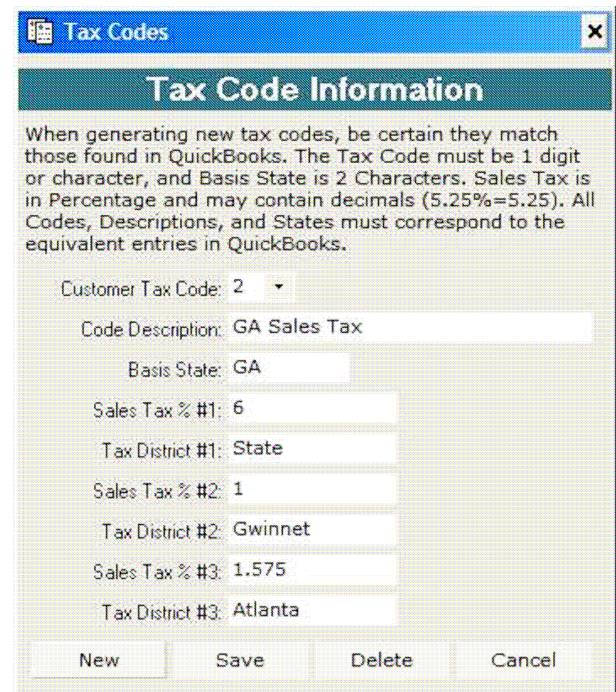
The screenshot shows a window titled "Invoice Terms" with a close button (X) in the top right corner. Below the title bar is a header "Invoice Terms". A text box contains the instruction: "New Terms may be added but do not include the number and hyphen preceding the Term. This is added automatically by the program. After adding the Term, complete the entry by giving a full description of the term." Below this, there is a "Term:" dropdown menu showing "1-Due on Receipt" and a "Description:" text box containing "Due on Receipt". At the bottom are four buttons: "New", "Save", "Delete", and "Cancel".

Tax Codes

The Tax Codes consist of a 2 character identifier that allows Quick Books to determine the tax to be applied when the invoice is imported.

In the case shown, a single digit appears which is also OK however a preferred method would be to use 2 characters such as GA for Georgia or FL for Florida, etc. The 2 that is shown will work but you must be certain that QuickBooks also shows just a 2 in their tax tables.

If not interfacing to Quick Books, then simply use a 1 to indicate that the item is taxable and identify the amount of the tax.

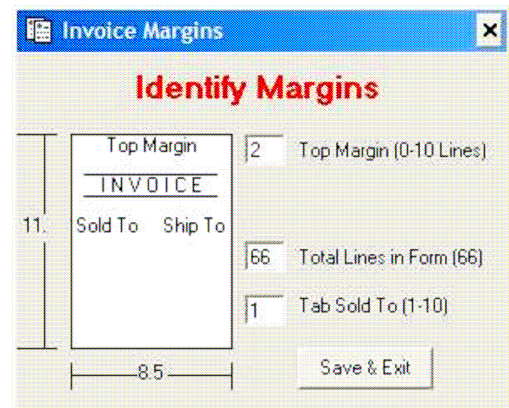


The screenshot shows a window titled "Tax Codes" with a close button (X) in the top right corner. Below the title bar is a header "Tax Code Information". A text box contains the instruction: "When generating new tax codes, be certain they match those found in QuickBooks. The Tax Code must be 1 digit or character, and Basis State is 2 Characters. Sales Tax is in Percentage and may contain decimals (5.25%=5.25). All Codes, Descriptions, and States must correspond to the equivalent entries in QuickBooks." Below this, there are several fields: "Customer Tax Code:" with a dropdown showing "2", "Code Description:" with a text box containing "GA Sales Tax", "Basis State:" with a text box containing "GA", "Sales Tax % #1:" with a text box containing "6", "Tax District #1:" with a text box containing "State", "Sales Tax % #2:" with a text box containing "1", "Tax District #2:" with a text box containing "Gwinnet", "Sales Tax % #3:" with a text box containing "1.575", and "Tax District #3:" with a text box containing "Atlanta". At the bottom are four buttons: "New", "Save", "Delete", and "Cancel".

Invoice Margins

This information is used to properly locate the data. It is more important for the pre-printed invoice than it is for the formatted one but both can be helped slightly if needed.

On the actual QB Invoice, the preprinted form will also have ship to labels print at bottom of form if the total lines in form are 55 or less. This is available only on the preprinted form and only when using the QB Interface.

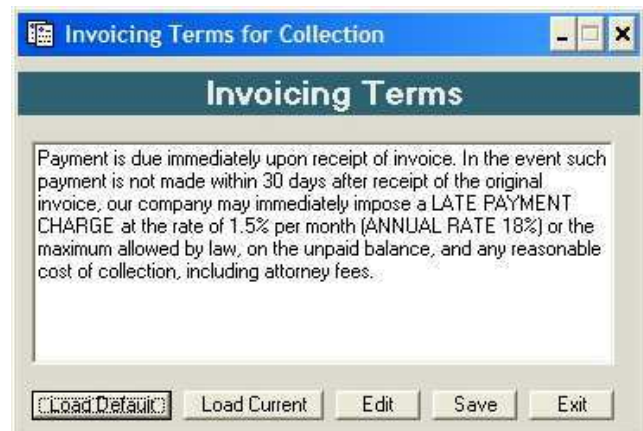


Invoice Collection Terms

This file is already part of the default data. You may however require additional copy or with to change Late Payment charges, etc.

The Default data will not change but you can alter that data and then save it.

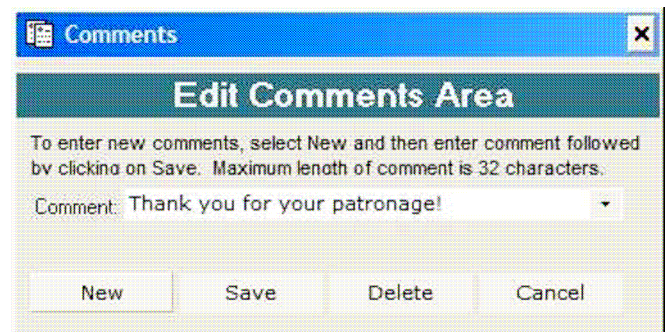
The program uses the saved data, not the default data.



Comments

The Comments are just acknowledgments of your pleasure with your customer.

Click New to add additional comments, or, if you have a comment displayed that you want to delete, hit the delete key.



Once you have entered a new comment, be sure to save it. To Exit, hit Cancel or the X at top right.

Multi-Part Pricing Grid



The pricing grid is available to allow you to see the pricing of all parts to a job or quote. Often when you get to the third or fourth item within a given quote or job, it's handy to be able to review the pricing for those previous parts.

Multi-Part Price Listing					
P/N	Description	Qty 1	Qty 2	Qty 3	Qty 4
1	32 page catalog 2/2 stitch and trim to fi...	5000			
		\$6,701.45	\$0.00	\$0.00	\$0.00
2	Part 2 Cover 4 pages 4/0	5000			
		\$646.23	\$0.00	\$0.00	\$0.00

Price List Generator



The Price List Generator is extremely valuable for those companies that require a price book on the front counter for walk-in traffic that need a price for standard items.

The book consists of any number of quantities and may also be rounded up or down to the nearest currency amount desired.

In this example, we are looking at a job that was quoted for a customer and are simply using it as the basis for our price list.

Note that we make the price higher than the actual quoted value by rounding up to the nearest dollar.

If you click on the box that says, "Show Calculated Prices...", a small window will appear as shown below

Calculated Prices	
Quantity	Price
800	\$43.00
900	\$44.25
1000	\$45.00

GraphiTech's

MILLENNIUM

Global Management System

PRICE LIST GENERATOR

Identify Quote or Job Selection

00000004Q - Business Cards, 2/0 6 up ABDick 2 color, Coated

Selection Description

Stock: 80# Coated Cover Finished Size: 2x3.5

Description: Business Cards, 2/0 6 up ABDick 2 color, Coated Cover

Quote Job Both

Binderies: Wrapping, Cutting, Cutting

Categories: Business Cards Quote or Job: Quote

Catalog Pricing Parameters

Start Quantity: 100 Jump by: 25

2nd Quantity: 500 Jump by: 100

3rd Quantity: 2000 Jump by: 500

Final Quantity: 5000

Round Price: Up Down None 0.25 1.00

Print Report in: Courier Times Roman Sans Serif

Show Calculated Prices Before Printing Save Specs

Calculate Price Sheet Exit

that allows you to see what the prices will be before you actually print out the price list.

On the next page, an actual printed price list is shown that may be 3-hole drilled and included in a binder for the front counter.

Counter Price Book			
Category:	Business Cards	Ref #:	Q-00000004
Size:	2x3.5	Date:	01/16/18
Stock:	80# Coated Cover	Time:	09:06:14 AM
Description			
Business Cards, 2/0 6 up ABDick 2 color, Coated Cover, Camera Ready			
Bindery			
Cutting, Wrapping, Press Cut			
Pricing is Not Rounded			
Quantity	Price	Quantity	Price
100	\$43.93	800	\$50.70
125	\$44.11	900	\$51.38
150	\$44.28	1,000	\$52.07
175	\$44.45	1,100	\$53.40
200	\$44.62	1,200	\$54.09
225	\$44.80	1,300	\$55.42
250	\$44.97	1,400	\$56.11
275	\$45.14	1,500	\$56.79
300	\$45.96	1,600	\$58.12
325	\$46.13	1,700	\$58.80
350	\$46.31	1,800	\$60.13
375	\$46.48	1,900	\$60.81
400	\$46.65	2,000	\$61.49
425	\$46.82	2,500	\$66.19
450	\$46.99	3,000	\$70.87
475	\$47.17	3,500	\$75.53
500	\$47.34	4,000	\$80.19
600	\$48.68	4,500	\$84.83
700	\$49.36	5,000	\$89.46

Figure 35

Some of the items you can include would be 4 color brochures, posters, flyers, envelopes, letterheads, etc. These books make it so much easier to give a quick and accurate quote to a customer or department within your organization.

Price Out Quote or Price Out Job



This button has two functions. The obvious one is that it will cause the program to calculate all the costs and arrive at an answer which it displays in the Viewing Window at the bottom left of the Worksheet.

The second function is that it drops the pricing from the window and replaces it with Cell Descriptions. This can also occur whenever you select a cell after your prices were displayed.

Front Desk Estimator

Create Categories.



The Front Desk Estimator is quite possibly one of the most powerful tools available to the estimator, especially one who is over worked. Although it may look like a lot of work to create, there are several enhancements available in Versions 2.4.71 that should make the process less involved.

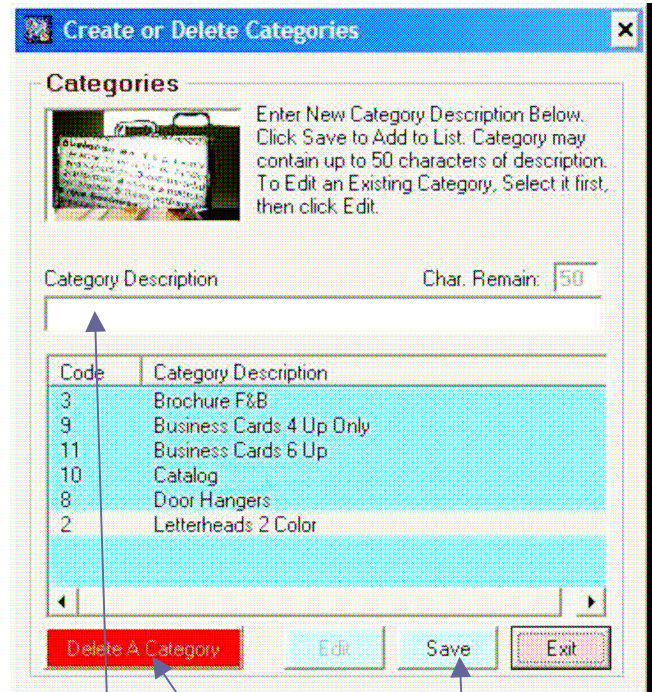
The concept of the Front Desk Estimator evolved from a desire by several companies to provide a means for their front counter people to provide quotes on both standard and complex jobs, without the need to contact the estimator.

To accomplish this goal, we decided it was necessary that the estimator first create a quote or job and then use that quote to form a template for the front counter personnel.

First, we need to assign Categories. In the screen shot above, any time you want to create a category, just type in the **Category Description** as to what you want to use for identification (keep it short as you are allowed only 50 characters here). The short description is to allow for more detailed description when selecting a product and to keep confusion to a minimum.

Once you have finished with the Category Description, hit the **Save** button to have it included in the listing shown

If you need to Delete a Category, select it from the list and hit the **red Delete** button.



Front Desk Products

The next item you will want to address is called Products. Each category contains any number of products, some general and some very specific.

For example, if we have a category called **"Business Cards, 4 Up"**, then we are getting more specific in the Category than if we just said **"Business Cards."** The difference may seem insignificant but by using the first description, we can narrow down the number of products that will display under that category. In the first description, we can have a product called 4/0, 2/0 and even 1/0 because every one of them will be printed 4 up.

However, if we wanted to use the second description, we would need to specify in the product how many up we were printing, such as 4/0, 4 up, 4/0, 2 up, 4/0, 1 up, etc. The product page could get fairly long but it is acceptable.

Front Desk Product Selection

Products

1. Select Category Desired Below.
2. Select Desired Quote or Job from the list below.
3. If you wish to display only specific listings, use the Search Box to identify only Specific Items below.
4. Create New Product Description and Click "Create Product".
5. Modify or Delete an Existing Product.

Category

1. Select Desired Category Below, followed by selection of Desired Quote or Job at Bottom.
5. Modify or Delete an Existing Product.

Category Description

Brochure F&B
Business Cards 4 Up Only
Business Cards 6 Up
Catalog
Door Hangers
Letterheads 2 Color

Delete Existing Product Edit Existing Product

Desired Quote or Jobs Used for Product Selection

2. The Contents of your current Quote/Job file are shown below.
3. Search Parameters:

Search

OrdNum	PartNo	QorJ	Description
00000002	1	Q	4 color brochure
00000003	1	Q	32 page booklet, fold, stitch and trim, Add 3 hole standard
00000004	1	Q	Business Cards, 2/0 6 up ABDick 2 color, Coated Cover
00000005	1	Q	Business Cards, 2/0 4 up ABDick 2 color, Index
00000006	1	Q	8.5x11 Letterhead printed 4/0 on Classic Laid
00000007	1	Q	3 different 8.5x11 sheets, 2 are printed 4/0 and 1 is printed 4/4. Run on 11x17 White
00000008	1	Q	test of ink coverage using 335000, 20% and 37 per pound,
00000009	1	Q	test of bindery spoilage. Note that if no press is used, bindery spoilage is not calculat
00000010	1	Q	test setup times

4. Product Description: Create Product Exit

Figure 36

Note in the Product Selection of Figure 36, all of the Categories that we created previously are shown. To create a product, we first must select a **Category**.

Once that is done, we can **Search** in the list of **jobs and quotes** for an item that fulfills exactly what we want for a product. What happens here is that once that quote or job is selected, that will become the template for the Front Desk Product.

Now select the line in the quote/job list that you want as the template.

By typing in the name of the **Product** and clicking the **Create Product** button, we will populate the Existing Product list.

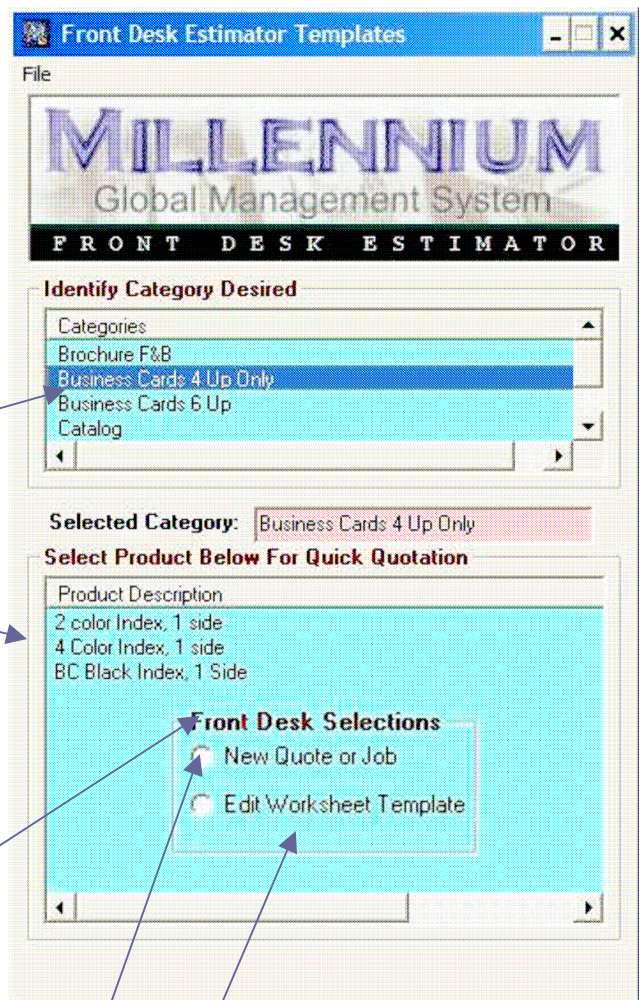
Also, as soon as you select a Category, a list of all Products that have been previously created under that Category will be shown above as **Existing Products** as well.

Front Desk Input

Now that you have entered a few Categories and Products, we can look at how the Front Desk actually works.

Note that the first list of items describe the Categories that were created earlier. By **selecting one of them**, a complete list of all Products that affil within that Category are shown in the bottom list.

If you **click on one of the products** desired for the quote, the program retrieves the actual quote that was used for the template, removes the customer, phone and contact along with **assigning a new quote or job to the selected Product**, depending on the next selection.



The Selection of either a **new quote or job** will bring you to a Worksheet that has no quote or job # and leaves it up to you to decide on the Quote or Job # required.

If you select the **Edit Worksheet Template**, you will not have a clean template to work with but rather the existing template, including the same record number, job or quote number and customer that was originally part of that template.

In Version 2.5.0, a selection of the Front Desk Estimator while you have an existing quote or job displayed in the worksheet will result in the following.

- If you select Category from the File Menu of Front Desk, you will be allowed to enter a new Category
- If you select Products, (See Figure 36) there will only be one quote showing in the list of quotes from which you may choose a product. This basically eliminates a somewhat tedious amount of searching, especially if you already know what you wanted for the template.
- 3. However, if you do wish to proceed with a different quote or job selection, you can click on the Search button (as long as you change the number showing in the Search field) and display either the entire quote and job field or narrow it by entering a short description.

Historical Ledger & Top Customer Report



The Historical Ledger

captures every invoice created and stores that information in a flat file for easy retrieval.

If you prefer to see a sorted, alphabetical list of your customers, then click the "Company Name" title block and the list will be sorted as is shown here. Note the Ledger Numbers are not in sequential order this way.

In addition, should you have a need to obtain a report that identifies your top customer in terms of revenue, this can be accomplished fast and accurately by clicking on File Menu and selecting **Top Customers**.

In order to have information saved, you will need to specify exactly where the Ledger is located. This is done by clicking on the File Menu and selecting "Path".

The best place for the path would be on the Server, either in the Program Files(86)\Millennium Professional Estimator or some other common location.

Color Legend



The Color Legend provides you with a way of reviewing the colors that may appear on your Worksheet from time to time as well as those that are constant and unchanging.

Printed Reports

Quotation (Showing Multiple Parts)

Alpha Engineering
Suite 212
4174 Larch Ave
West Palm Beach, FL 33401
Phone: 561-622.4327
Email: scoott@graphitech.com Web: www.graphitech.com

Date: 05/11/2016

Quotation No: 00000004

Quotation

GraphiTech Computer Systems
Suite 212
4174 Larch Ave
West Palm Beach, FL 33401

Phone No: 624-2215

Job Description - Section No: 1	100	200	300
14 Signatures and partial full color w some B&W. 3-hole drill, stitch and collate plus cut inventory sheet to size. Customer requests one blank sheet collated at back of booklet.	\$1081.32	\$2103.27	\$3112.16
Job Description - Section No: 2	1000	1500	2000
4/0 #9 Envelope w/ Corporate Logo.	\$698.26	\$1037.63	\$1377.01

This estimate includes all operations and materials to complete the work as specified above, based on our understanding of the specifications provided to our estimating department. Please note that all sales are subject to the "Standard Terms of Sale" set forth on the reverse side of this form.

All orders require a minimum 50% down payment, with the remaining balance due upon partial or full delivery of the product unless credit arrangements have previously been agreed upon.

We appreciate the opportunity to provide this product to you.

Accepted by GraphiTech Computer Systems: _____

Date: _____

Figure 37

Delivery Ticket (Showing Multiple Parts)

Alpha Engineering
Suite 212
4174 Larch Ave
West Palm Beach, FL 33401
Phone: 561-622.4327
Email: scott@graphitech.com Web: www.graphitech.com

Date: 05/11/2016

Job No: 00001008

GraphiTech Computer Systems
Suite 212
4174 Larch Ave
West Palm Beach, FL 33401

Phone No: 624-2215

Quantity	Job Description
300	14 Signatures and partial full color w some B&W. 3-hole drill, stitch and collate plus cut inventory sheet to size. Customer requests one blank sheet collated at back of booklet.
1500	4/0 #9 Envelope w/ Corporate Logo.

We appreciate the opportunity to provide this product to you.

Accepted by GraphiTech Computer Systems: _____

Date: _____

Figure 38

Work Order / Pick Slip







Short Form Work Order / Pick Slip			
 00001004		Thursday, January 18, 2018	
Job No: 00001004 Acct Name: GraphiTech Computer Systems Phone: 800-634-8324 Stock: 0001-20# white bond, Caliper = 0.004 Layout: Portrait	Sect No: 1 Colors: B&W and Color Pages: 32	Date: 11/02/15 Due: 11/16/15 Job Type: Booklet	Press: sdt Production: Sheetwise Finish Size: 8.5x11 Bleed Size: 23x35 Press Size: 23x35
Job Description: 32 page booklet plus Cover, 4/4. fold, stitch and trim. Add 3 hole standard. Add 4 page blank sheet collated at back of book		Press Production Notes: Customer changed Order slightly. See notes for outside services. Contact Bill and let them know when they can come by and sign off on booklet. Give them an hour of lead time... John Don't forget that blank sheet at back of booklet	
Production Quantities			
Item:	Quantity:	Description:	Sheet Size:
Order:	4000	Sets, Finished and Trimmed; Delivered to Customer	8.5x11
Sheets:	8000	Total Sheet Count; Finished and Trimmed	8.5x11
Run:	9076	Press Sheets, cut 1 Out of Parent, 32 Pages Total, 16 Pages/Sig	23x35
Pull	9076	0001-20# white bond, Parent Sheets	23x35
 0001 Inventory Number		 9076 Pull Qty	
*** FOLD OR CUT HERE AND ATTACH TO SKID TO RESERVE FOR THIS JOB ***			
 0001 Inventory	 00001004 Job Number	 9076 Pull Qty	
00001004			

Figure 39

Job Ticket (Both Production and Non-Production)




PRODUCTION JOB TICKET													
 0001 Inventory		 00001004 Job Number				 3076 Pull Qty							
Job No: 00001004 Acct Name: GraphiTech Computer Systems Phone: 800-634-8324 Stock: 0001-20# white bond, Caliper = 0.004 Layout: Portrait		Sect No: 1 Colors: B&W and Color Pages: 32		Date: 11/02/15 Due: 11/16/15 Job Type: Booklet		Press: sdt Production: Sheetwise Finish Size: 8.5x11 Bleed Size: 23x35 Press Size: 23x35							
Job Description: 32 page booklet plus Cover, 4/4, fold, stitch and trim. Add 3 hole standard. Add 4 page blank sheet collated at back of book						Press Production Notes: Customer changed Order slightly. See notes for outside services. Contact Bill and let them know when they can come by and sign off on booklet. Give them an hour of lead time... John Don't forget that blank sheet at back of booklet							
Production Quantities													
Item:	Quantity:	Description:								Sheet Size:			
Order:	4000	Sets, Finished and Trimmed; Delivered to Customer								8.5x11			
Sheets:	8000	Total Sheet Count; Finished and Trimmed								8.5x11			
Run:	9076	Press Sheets, out 1 Out of Parent, 32 Pages Total, 16 Pages/Sig								23x35			
Pull	9076	0001-20# white bond, Parent Sheets								23x35			
Pre-Press													
Pre-Flight:		Ripping:		Imaging:		Design:		Add'l Cost:					
Stock Required													
Stock #:	Description:				Stock Size:	Weight/M:	Caliper:	Parts:	Color:				
0001	20# white bond				23x35	60	0.004	1	WHITE				
Press Information													
Press:	Plates:	Runs:	Sigs:	1/0:	1/1:	4/0:	4/4:	4/1:	0/0:	Up:	On:	Out:	Pages:
5C Heidelberg	16	4	2	---	---	---	2	---	---	1	1	1	32
Bindery Operations													
Bindery Name:	Percent:	Quantity:	Setups:	Passes:	Rate:	Size:							
Fold, Baum-1	100	8000	1	1	13000	23x35							
Drilling-4	100	8000	3	1	18000	8.5x11							
Cutting, Parent-61	100	8000	4	1	60000	23x35							
Stapler-36	100	8000	2	1	1400	8.5x11							
Trim-62	100	8000	3	1	60000	8.5x11							
00001004													

Figure 40

Note that a non-production Job Ticket does not contain Bar Codes or large Job Number on the ticket. Some companies prefer to have a Job Ticket that can be used prior to actually getting the job and one that may even be delivered to the customer with the quotation.

Time/Cost Summary

Print Operations Time/Cost Summary

Quote No:	00000007	Sect No:	1	Date:	11/02/15	Estimator:	sdh
Acct Name:	GraphTech Computer Systems			Due:	11/16/15	Production:	Sheetwise
Phone:	800-634-8324	Colors:	B&W and Color			Finish Size:	8.5x11
Stock:	0001-20# white bond, Caliper = 0.004					Bleed Size:	
Desc:	32 page booklet plus Cover, 4/4. fold, stitch and trim. Add 3 hole sta					Press Size:	23x35

Pre-Press Summary

Item:	Cost
Pre-Flight Cost:	\$0.00
Ripping Cost:	\$0.00
Imaging Cost:	\$0.00
Design Cost:	\$0.00
Add'l Dollar Cost:	\$0.00

Bindery Summary (Qty=4000)

Item:	SU	Time	Cost
Fold, Baum	1		\$81.40
Perf, Press	0		\$0.00
Padding	0		\$0.00
Drilling	3		\$133.63
Cutting	0		\$0.00

Item:	SU	Time	Cost
Gathering	0		\$0.00
Trim	3		\$60.21
Stapler	2		\$85.48
Numbering	0		\$0.00
Cutting, Parent	4		\$12.72

Press Summary

Item:	4000	6000	8000	10000
Modified Selling Price of Job:	\$5827.34	\$6588.11	\$7507.11	\$8421.78
Selling Price of Job:	\$5827.34	\$6588.11	\$7507.11	\$8421.78
Additional Price/1000:	\$663.87	\$598.34	\$564.76	\$544.06
Price/1000:	\$1456.84	\$1098.02	\$938.39	\$842.18
Overall % Markup:	0.00	0.00	0.00	0.00
Overall % Gross Margin:	0.00	0.00	0.00	0.00
Effective Impressions/Hr:	3393	3321	4268	4514
Modified Impressions/Hr:	5107	5288	5411	5496
Modified Press Run Waste:	1.99	1.69	1.48	1.34
Add'l Run Waste Bindery:	1.66	1.40	1.23	1.12
Total Run + Mkrdy Waste:	13.46	10.02	8.14	6.96
Press Time (less waste):	003:08	004:32	005:55	007:17
Press Time (waste):	000:17	000:19	000:20	000:22
Total Setup Time:	011:20	011:20	011:20	011:20
Pre-Press Time:	000:00	000:00	000:00	000:00
Wash-up Time:	000:46	000:46	000:46	000:46
Bindery Time:	013:10	019:01	025:03	031:05
Press Cost (less waste):	\$563.90	\$816.87	\$1,064.50	\$1,309.34
Press Cost (waste):	\$51.14	\$56.46	\$60.72	\$64.63
Total Setup Cost:	\$2,040.00	\$2,040.00	\$2,040.00	\$2,040.00
Pre-Press Cost:	\$0.00	\$0.00	\$0.00	\$0.00
Vendor Services:	\$125.00	\$0.00	\$0.00	\$0.00
Stock Cost (less waste):	\$440.00	\$660.00	\$880.00	\$1,100.00
Stock Cost (waste):	\$59.21	\$66.11	\$71.64	\$76.57
Washup Cost:	\$138.00	\$138.00	\$138.00	\$138.00
Plate Cost:	\$560.00	\$560.00	\$560.00	\$560.00
Total Bindery Cost:	\$373.44	\$538.49	\$708.42	\$878.32
Cost of Black Ink:	\$30.53	\$44.41	\$58.21	\$71.97
Cost of Color Ink:	\$101.35	\$147.42	\$193.20	\$238.87
Total Plates Required:	16	16	16	16
Stock Waste:	1076	1202	1303	1392
Press Sheets to Order:	9076	13202	17303	21392
Parent Sheets to Order:	9076	13202	17303	21392
Lbs. of Stock to Order:	545	792	1038	1284
Delivered Weight of Order:	480	720	960	1200
Press Count:	16000	24000	32000	40000
Lbs. of Black Ink Used:	4.36	6.34	8.32	10.28
Lbs. of Color Ink Used:	9.66	14.06	18.42	22.78
Total Time Required:	028:41	035:58	043:24	050:45
Total Cost for Job:	\$4,482.57	\$5,067.78	\$5,774.70	\$6,478.29
Additional Cost/1000:	\$510.67	\$460.26	\$434.43	\$418.51

Figure 41

Glossary of Terms

Caliper

The thickness of stock expressed in inches. Used in many Bindery operations such as cutting, drilling, etc to determine operating speed.

Up

Up refers to the number of Finished Sheets that can be cut from the Press Sheet.

Signatures

Signatures are basically an original that is to be printed. It can be 1 or 2-sided, W&T or Sheetwise. It is not a quantity but represents the item that is to be printed.

Out

Out refers to the number of Press Sheets that can be cut from the Parent or Inventory Sheet.

On

On represents the number of items on a press sheet that are different from each other.

Mark-Up

A Mark-Up Percent is applied to the final cost by multiplying the final cost times One plus the Mark-Up percent divided by 100 (to obtain a fraction).

Margin

A Margin is applied to the final price (note the subtle difference). It is determined by taking the Mark-Up dollars and Dividing it by the Total Selling Price.

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