GETTING STARTED GUIDE

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Intention:
This document was created so that a new user could walk through the core modules of MAX, following a sequence outlined by a Standard MAX Implementation plan. This differs from other documents, such as the MAX Orange Book, which is presented in sequence governed by the ERP Systems Overview Model. Both documents may be used to learn about features and functionality and the implementation sequence.

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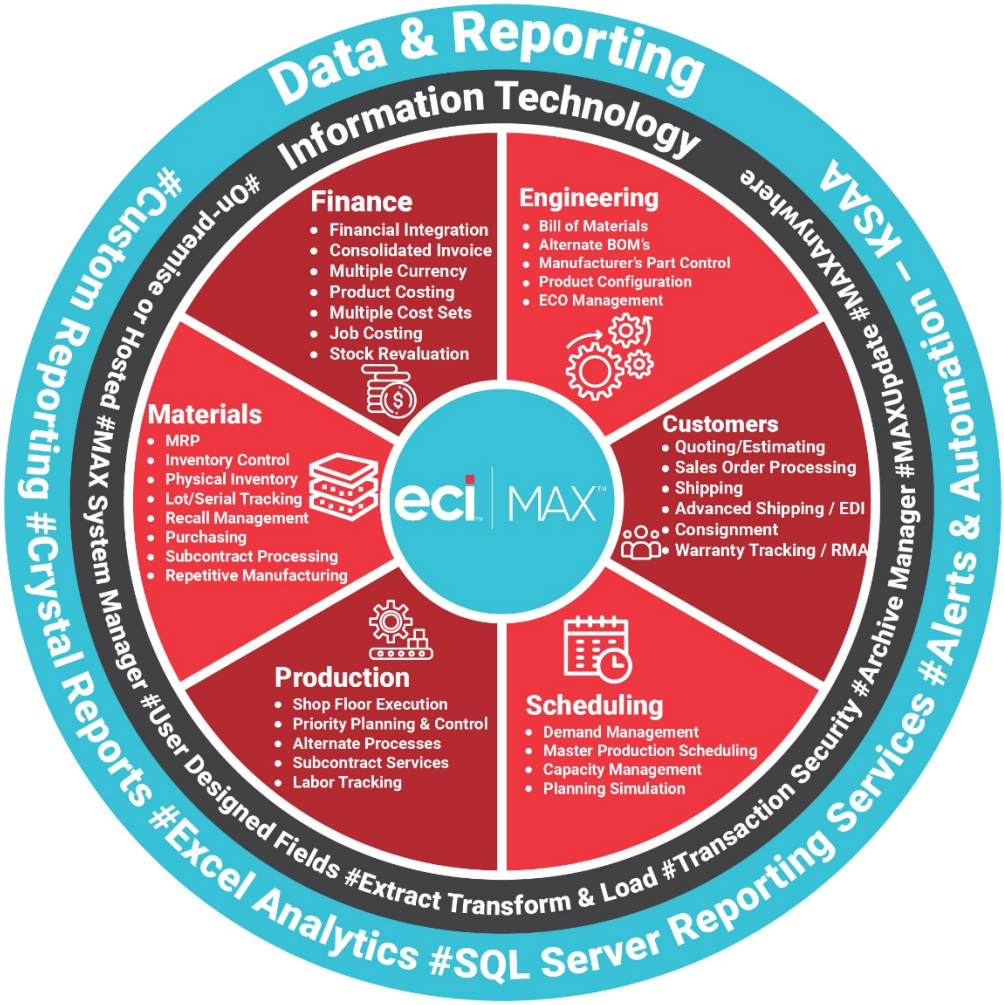
Welcome to the MAX Enterprise Resource Planning (ERP) System

This guide was produced to help you understand the flow of information through your MAX ERP system. It is designed to walk you through the individual modules in the sequence outlined by the Standard MAX Implementation Plan. It may be your first exposure to how data is entered and flows through the system. Certain data in some modules depends on steps you have taken in previous modules. To avoid any inconsistencies, please proceed through this guide in the sequence presented.

It should take about 2 to 3 hours to complete this introduction to MAX ERP using this guide. To make the steps easy to follow, when a windows command or button is referenced it is written in the same form as it appears on the screen. To make certain diagrams clearer, parts of a screen may be cut out. Specific questions on screens may be answered in the corresponding Users Guide.

MAX ERP uses standard Windows navigation and mouse commands. This guide assumes that the user has a basic understanding of Standard Windows and mouse commands.

For more practice, and a more in-depth look, you can create your own data and walk through each Chapter. Please contact your Account Manager, or me directly, if you would like a database that contains all the static data (i.e., parts, structures, customers, etc.) but no dynamic data (i.e., open orders).



Contents

This guide is organized in the following sections and chapters.

Miscellaneous

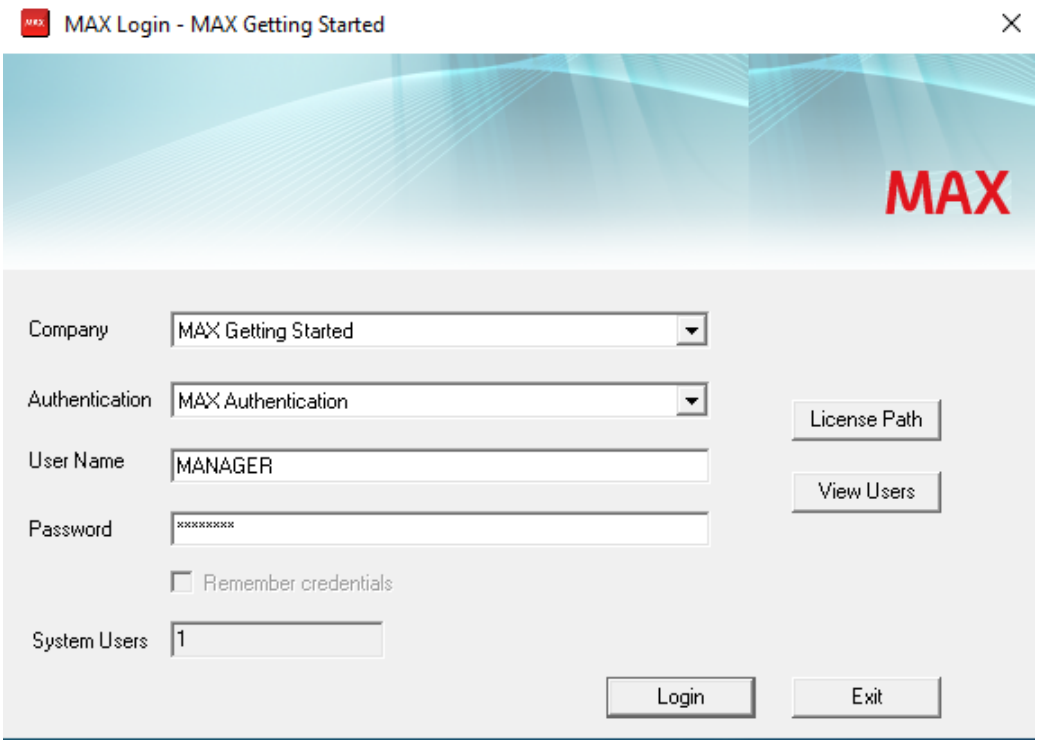
Where Do I Start

Installation

The first step is to have your MAX software installed. Your Project Manager will help you coordinate that effort.

Starting MAX

Double clicking the MAX icon will prompt you for the Company you which to log into and ask you for your user credentials for that company.



MAX supports two types of authentication: MAX and Windows Authentication. Out of the box, security defaults to using **MAX Authentication** and ships with the following Username and Password:

Company: MAX Getting Started
Username: MANAGER
Password: PASSWORD

Recommendations:

- Never delete the MANAGER account.
- Change the password for MANAGER in your live database.

The MAX System Manager is organized into "tabs" representing different areas of your internal supply chain. Under each tab contains a hyperlink to the actual module. A hyperlink to the corresponding Users Guide also exists. Click a module icon (once) to open the selected module.

Part I: Security & Access Rights

Chapter 1

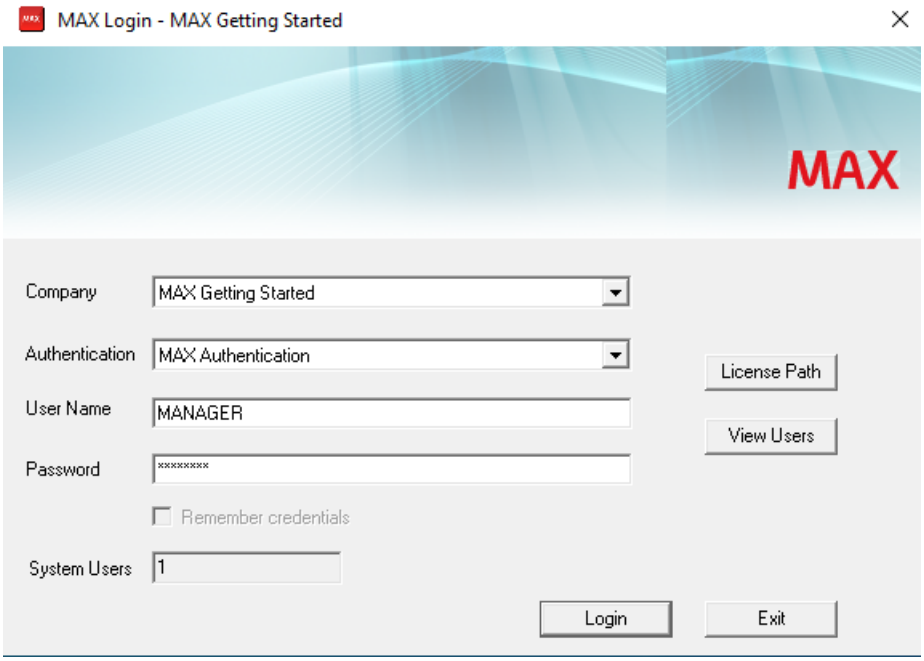
Security Systems Overview

MAX employs a powerful security and access control system. This security is designed to allow everyone within the organization to use MAX, regardless of the access needs of the users. By using this security system, system administrators can permit a wide range of activities within MAX, without risking accidental or intentional contamination of data.

MAX ERP's security is designed around a two-tier system that works together to allow or inhibit access to data: System Level and Function Access.

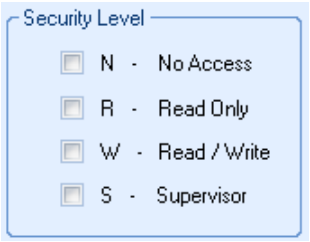
System Login

To access any module, a user needs to be setup with a unique user name and password. The system administrator can assign each user the least amount of access necessary without restricting the functionality of the tasks being performed in MAX.



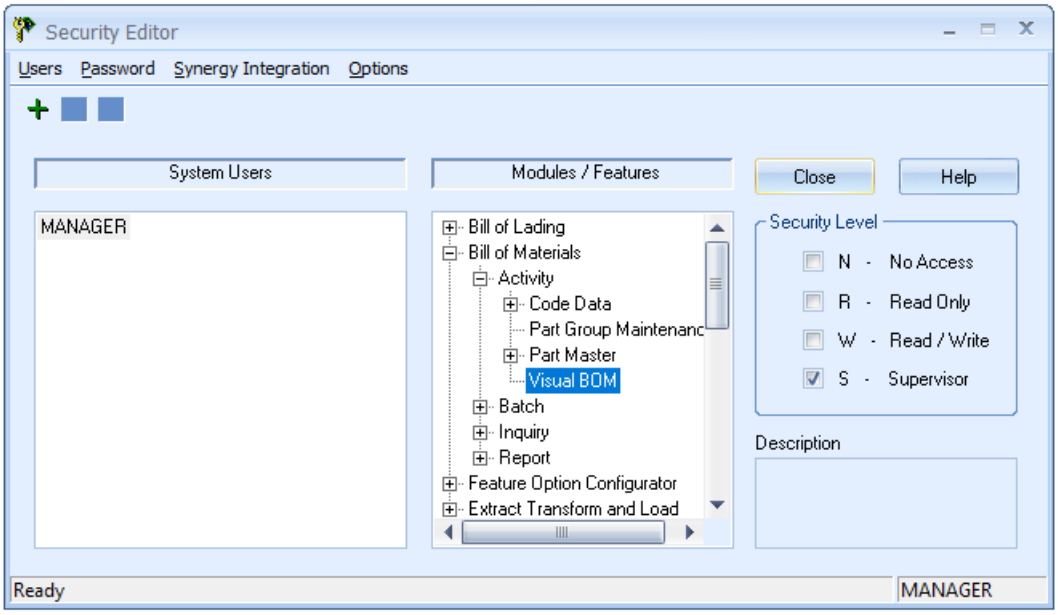
Function Access

The systems administrator can control the access the user has to a variety of specific MAX functions. For instance, the system administrator can selectively control the type of access users have to the Customer Master records. Four levels of security are possible:



Supervisor rights are elevated Read / Write Access rights and have additional privileges in some programs.

Each Windows module contains its own **User Security** dialogue to maintain users, passwords, and access rights. The sections under each module correspond to the various menu item functions that appear for the module. Only a user with Supervisor rights to **User Security** can modify the access rights for other users.



Clicking on the module level and then setting the security will set that level for all functions beneath. You may also open each part of the module (i.e., Activity, Batch, Inquiry, etc.) and set specific portions of those areas.

Once you have the first user set-up, you may clone the rights for that user to another.

Chapter 2

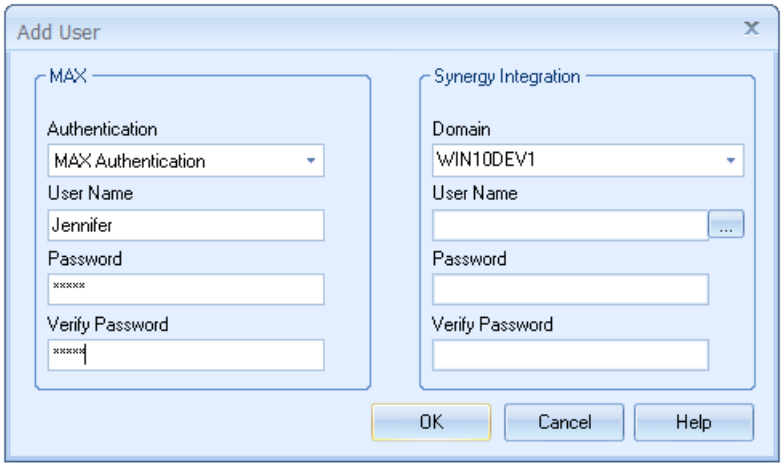
Setting up MAX Users

Setting up users begins with creating a user account for each individual who will access MAX. It is important for every user to have their own user's name and password. Only a user with Supervisor rights for Security can add or change users.

MAX supports both MAX and Windows Authentication. To add a user using MAX Authentication, perform the following:

Step 1

In the Activity menu choose User Security and in the User Security dialogue under Users, choose Add.



If the MAX software is integrated with Synergy software, the MAX user name must be paired with a Synergy user name. To establish such a pairing, type a Synergy user name and password when an MAX user name and password display.

Step 2

Type the name of the user, the user's password, and type the password again to verify it was entered correctly. Note that you can change and delete passwords of a user from the User Security dialog. Under Password, choose Change.

Enter the old password, the new password, then enter the same, new password in the Verify Password box, and click OK.

Stage I – Structures and Scheduling

Parts II through IV (Chapters 3 through 11) are part of the Structures and Scheduling portion of the Standard MAX Implementation Plan. Here, parts, bills of materials, work centers and part routings are entered. These static data items form the component part strategy for each item. A cost roll-up aides in checking data accuracy.

Parts V through VI (Chapters 12 through 19) discuss the dynamic side of Structures and Scheduling, beginning with scheduling. We also review the execution of this strategy for manufactured parts.

Part II: Bills of Material

Chapter 3

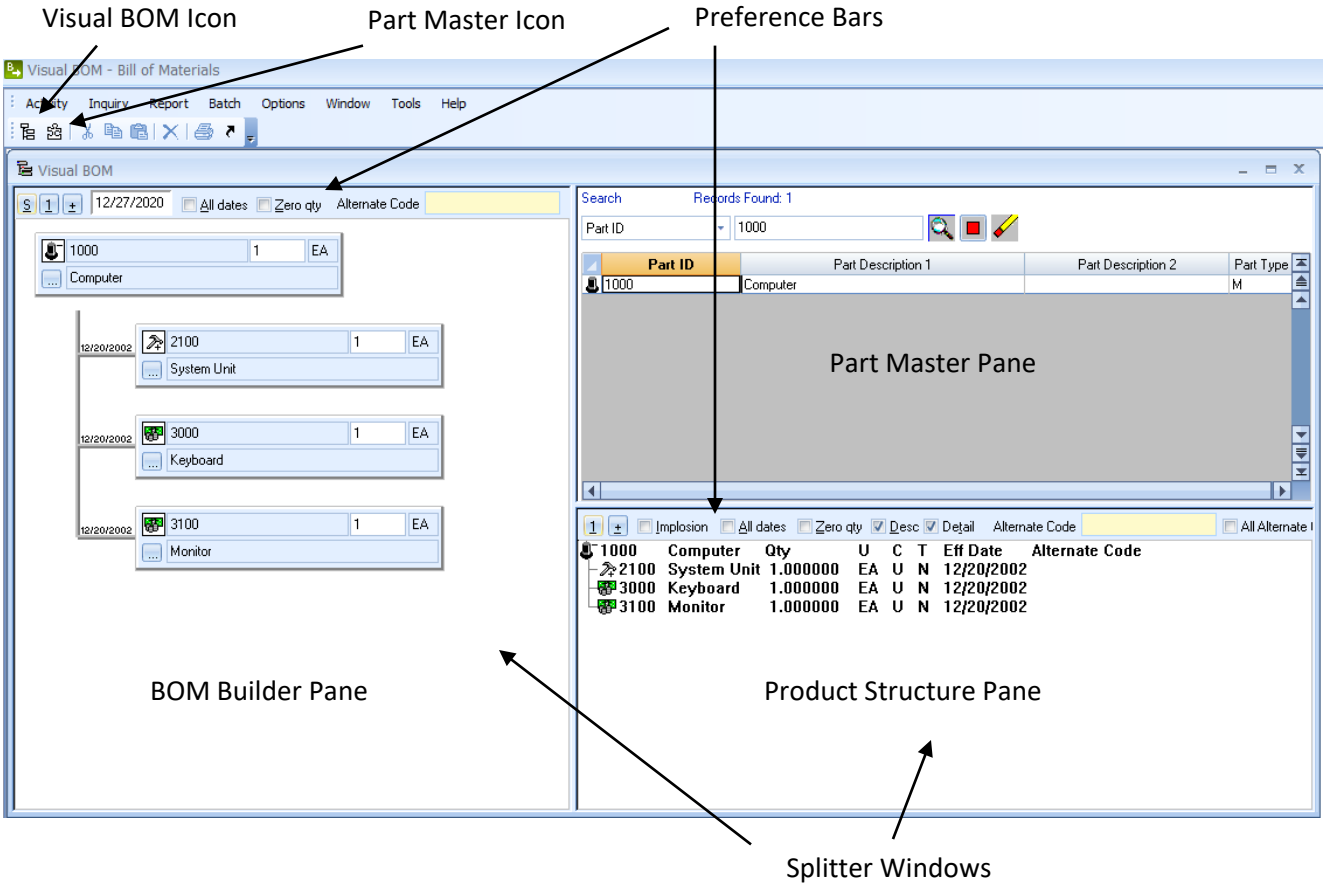
Introduction

The Bills of Material (BOM) module is one of the cornerstones upon which the MAX system is built. The screens and reports offered in this module enable you to build and maintain BOMs in one visual workspace, with all relevant information at your fingertips. This module also maintains important part information and enables you to review product structure data from the top down (i.e., explode) or from the bottom up (i.e., implode).

Visual BOM

The design objective for the Bill of Materials was to create a graphical workspace where a BOM could be created and maintained. This workspace allows an engineer to maintain Part Master data and build a BOM.

The Visual BOM screen can be accessed either through Activity – Visual BOM or by clicking the Visual BOM icon on the toolbar. IT is the button with the family tree on it.



Splitter Windows

Visual BOM has been designed to maximize the workspace to have all the relevant data available on one desktop. We accomplish this by using splitter windows to designate three separate "panes" on the Visual BOM workspace. You can size any of the panes in the splitter window can by simply dragging the line between the panes.

Part Master Pane

The upper right-hand pane provides access to the Part Master table. Data can be accessed through various fields in the Part Master Browser. The icon to the left of the Part ID is a visual representation of the item's Part Type Code.

Product Structure Pane

By double-clicking on a Part ID in the Part Master pane, the single-level BOM for the item selected will appear in the lower right pane. It the selected parts have component parts; it will display a "+" sign next to the icon designating the part type code. Each successive level of the BOM can be exploded by double-clicking on the item that displays the + sign, or to explode all levels at once (multi-level), click on the + button on the preference bar of the pane. Click on the 1 button to collapse the structure back to one level (single level). On the preference bar of this pane are two "radio buttons" to display the parts description and all relevant details. Detail information includes the quantity per assembly and effectivity date as well as other additional data. Although the default is to display the Explosion of the selected product structure, by clicking on Implosion, that part's parent parts can be viewed (where used inquiry) in the Product Structure pane.

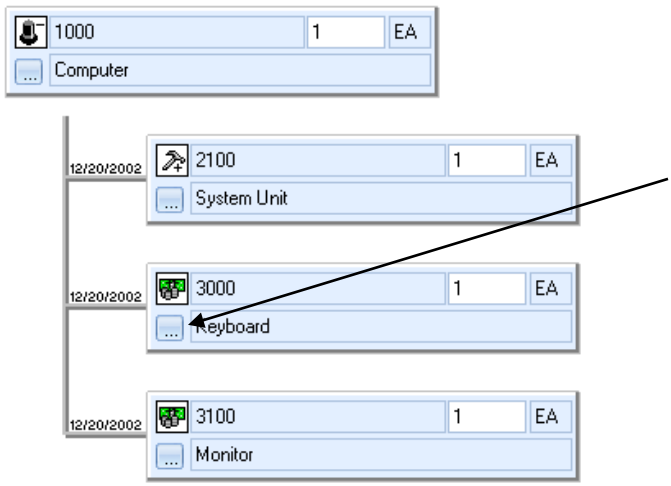
BOM Builder Pane

To activate the BOM Builder, place the cursor on a Part ID in the Part Master and double-right-click. This will explode a single level BOM in the BOM Builder pane on the left. From a part in the Product Structure pane, you may either double-right-click or hold the shift and double-left-click. The BOM Builder displays a single level product structure in directory tree format and displays the Part ID, Description 1, Quantity Per assembly and Unit of Measure.

New product structures can be generated by dragging and dropping parts from the right-hand panes onto the parts in the BOM Builder. A single-part addition is accomplished by moving the part to the Product Structure pane and then right-clicking on that part and moving the cursor into the BOM Builder *without releasing the mouse button*. This will create an icon which represents a single document in the same way as copying and moving files using the *Windows File Manager*. When the icon is over a part that will accept the new structure, the cursor will change from the international no symbol to a single document icon.

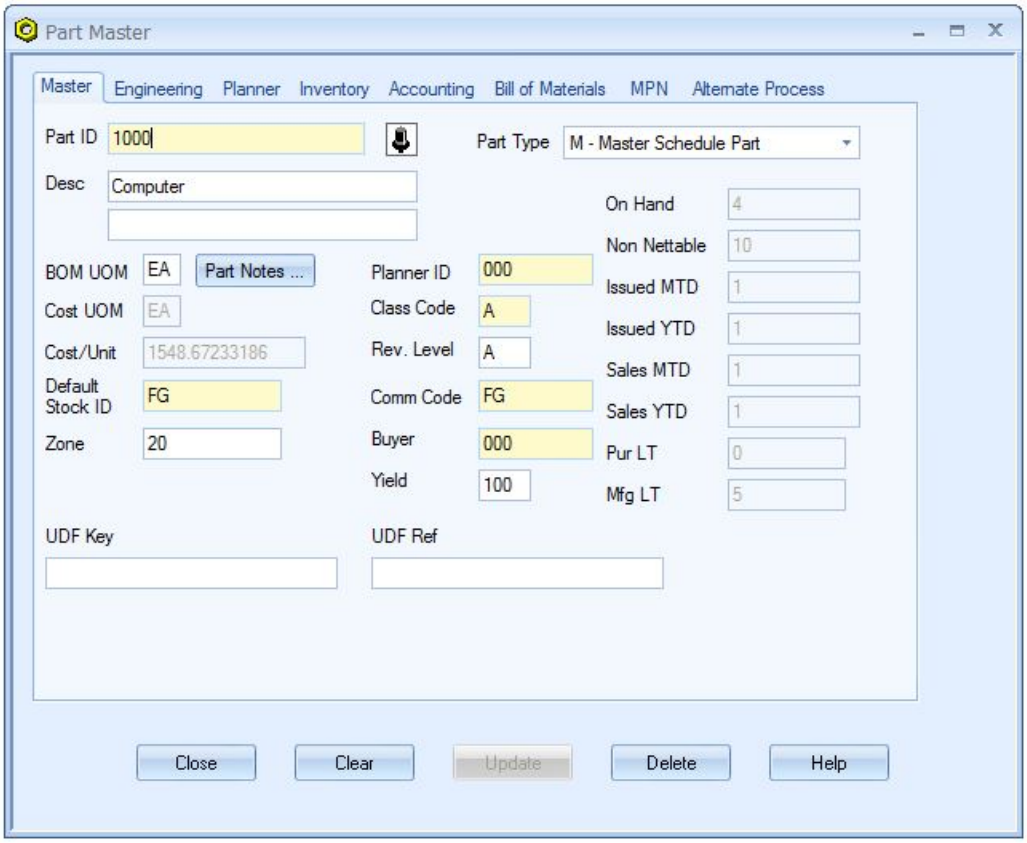
Part Master

Since all product structure information cannot be easily displayed while keeping the BOM Builder's visual capabilities, the user can drill down to the detailed BOM data either by clicking on the button with the ellipsis (…) below the components part's icon in the BOM Builder or by clicking the Part Master icon on the tool bar. This will display the tab dialogue that is used to maintain all Part Master data.



Even though the **BOM** tab exists in Activity – Part Master, it changes the Bills of Material (Product Structure table). From there, you may modify the component part strategy of either part.

There are eight individual dialogues (i.e., Master, Engineering, Planner, Inventory, Accounting, Bill of Material, MPN and Alternate Processes) which have been departmentalized by business function (i.e., all accounting data on one dialogue and all planning on another).



Most of these tabs will be revisited as we progress through this document.

Chapter 4

Entering New Parts

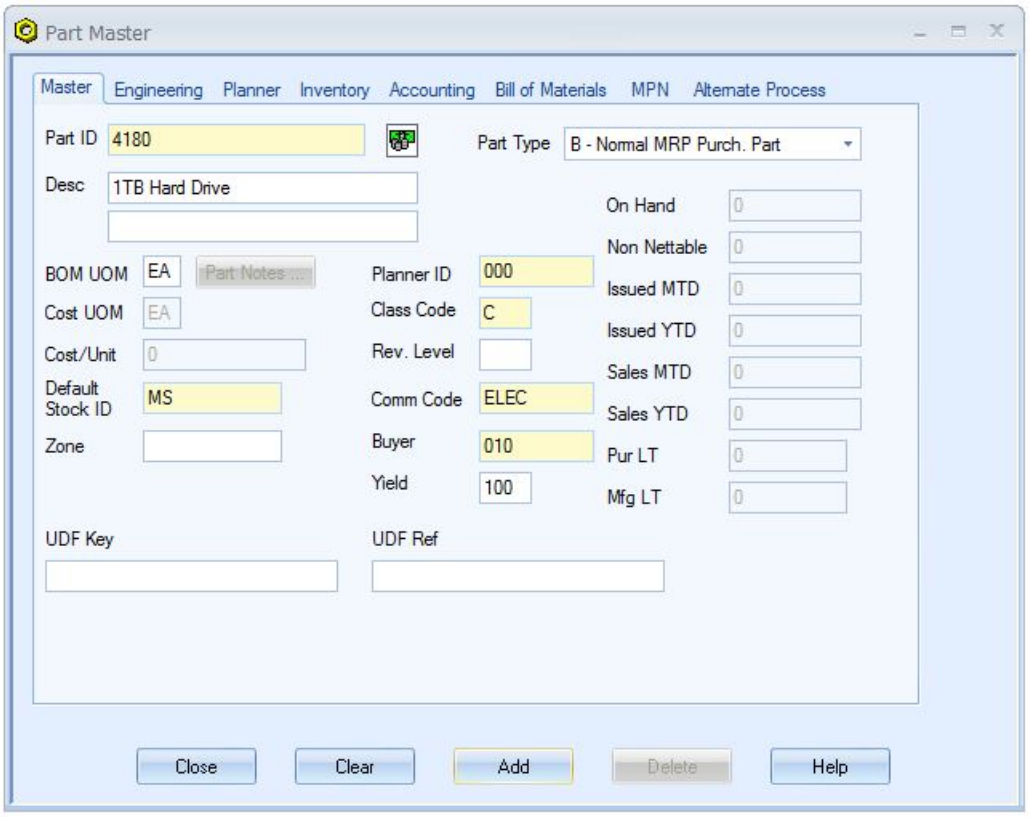
In this section, you will walk through some of the steps needed to enter Part Master information for a new part. The MAX Getting Started database lends itself to entering parts related to computers but feel free to substitute your own internal part information if desired. Your database can always be refreshed. You may also try these steps using your own data in a Pilot database once you complete this introduction.

Step 1

Click on the Part Master icon or choose Part Master from the **Activity** menu.

The Part Master data entry window will appear. It includes eight different tabs to choose your preferred data entry screen. You can use the Tab key on your keyboard to move from one field to the next or click on the field you want to edit.

Enter the following new part data in the Master tab.



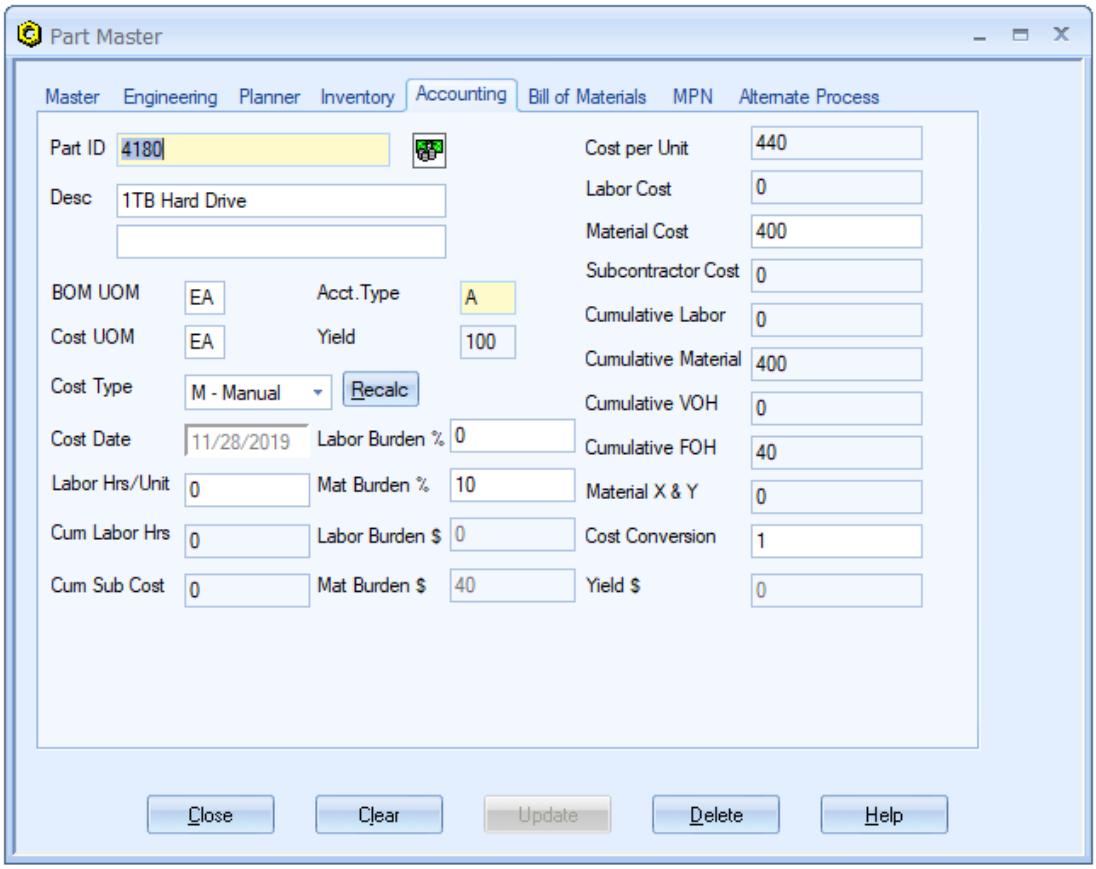
Fields with the down arrow button can be browsed by clicking the button. Fields that have yellow backgrounds contain browsers to look up data in another table. For example, Part ID, Default Stock ID, Planner ID, Commodity Code and Buyer are all lookup fields on the Master tab. If the Part ID is not found in the table, an **Add** button will appear. If it is found, then that button says **Update**.

Information in fields that have white backgrounds (i.e., are not grayed out) may also be changed.
Note: Certain fields are for display only and cannot be changed on this dialogue or require certain security rights to be updated. These fields are grayed out.

After entering data, check the **Add** button.

Step 2

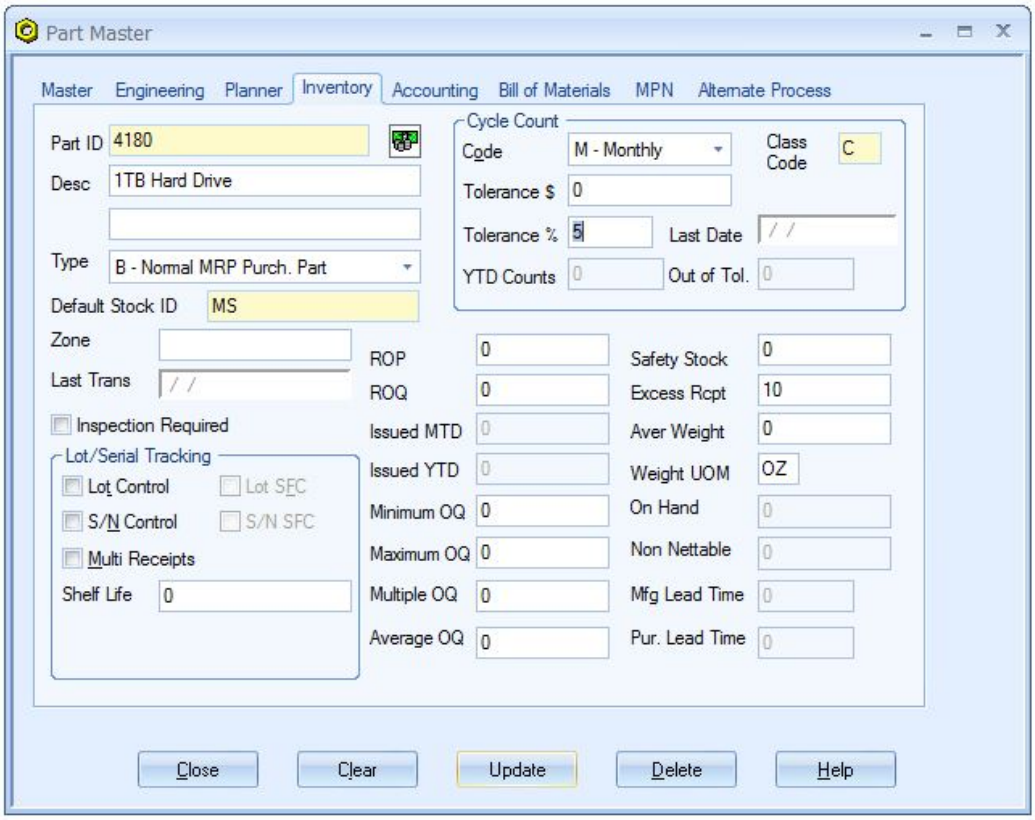
This is a purchased part, so you need to enter cost information. Go to the **Accounting** tab and enter the cost in the Material Cost field. Note: Part information you entered in the **Master** tab does not need to be re-entered, saving valuable data entry time.



Click the **Recalc** button to recalculate the total costs form this part. Click **Update** to save changes.

Step 3

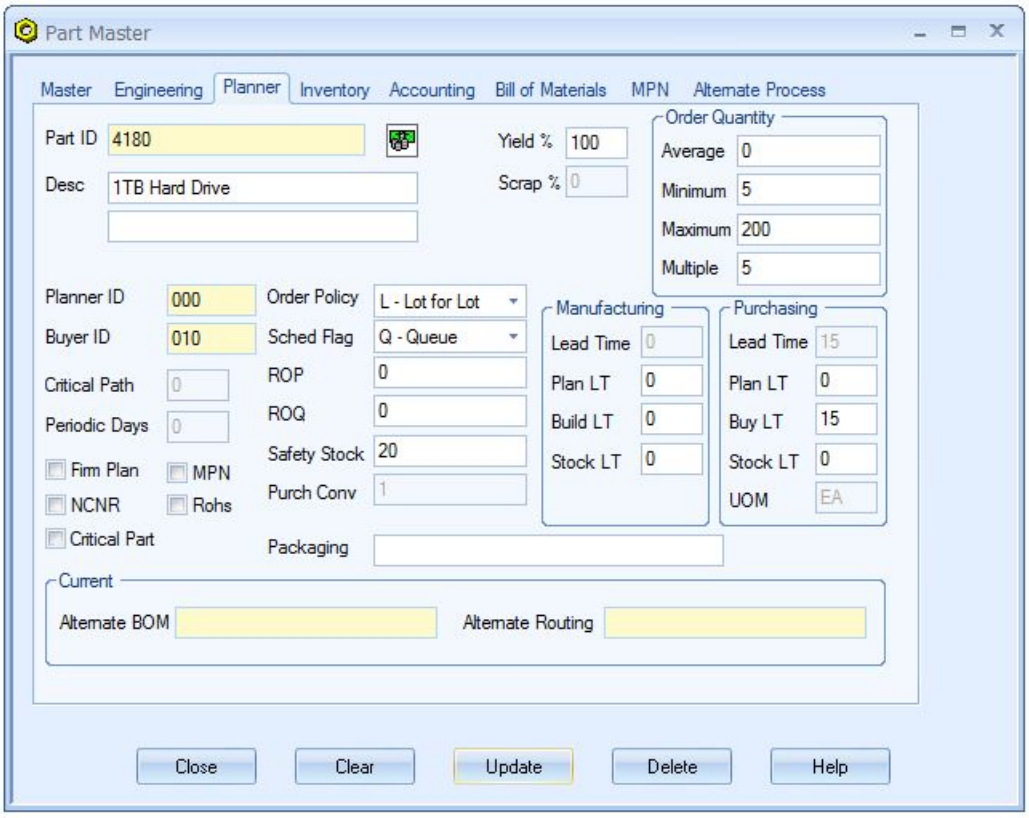
Click to the **Inventory** tab and enter cycle count information for the same part. MAX will automatically track parts that are cycle counted and offers reports and worksheets to assist in this periodic audit.



Click **Update** to save changes.

Step 4

The Planner is now ready to enter planning information for this part. Go to the **Planner** tab and enter safety stock, order quantities, and lead time information.

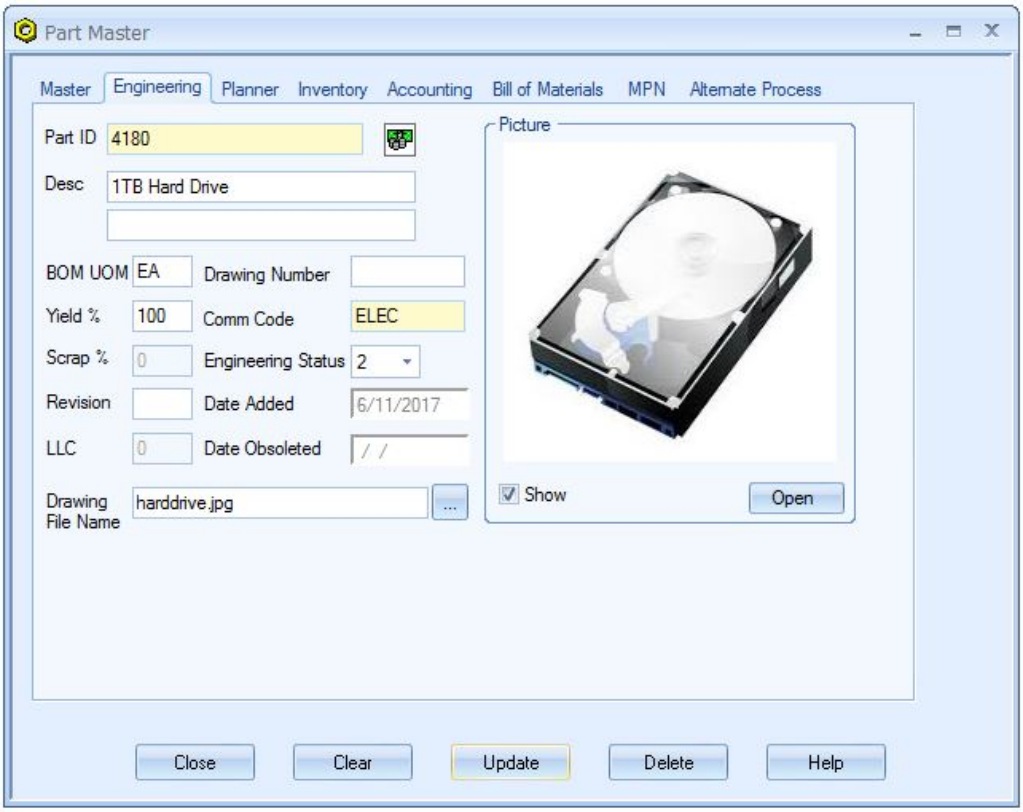


Click **Update** to save changes.

Step 5

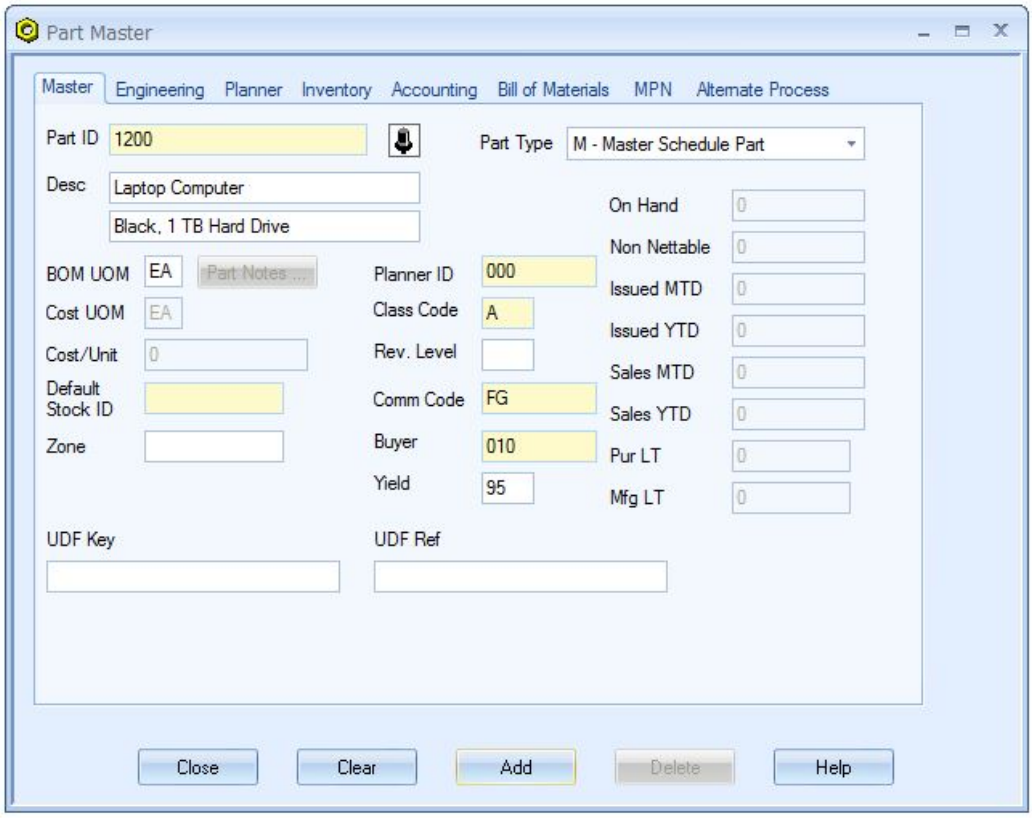
A tab is provided for Engineering which includes the ability to view any BMP, PCX, TIFF, GIF, DCX or JPG graphics file. You can also play any voice, music or movie file associated with a part by opening the related application using the **Open** button. To illustrate this feature, please perform the following:

- Press the ellipses button […] to the right of the **Drawing File Name** field.
- Browse to the C:\Exact\RMClient\EFW folder.
- Change the file type to *.bmp.
- Choose a bitmap image from the folder.
- Click the show checkbox in the Picture frame. The image you selected will appear.
- Click **Update** to save the data.



Step 6

Now let us enter a new top-level Part 1200 with the following information in the **Master** tab. This will be the top-level part you use to create a bill of material in the next Chapter.



Click **Add** to save changes.

Congratulations

You have completed entering Part Master information for a component and parent part, including engineering, accounting, inventory, and planning data. You are now ready to create bill of material part relationships using the Visual BOM.

Chapter 5

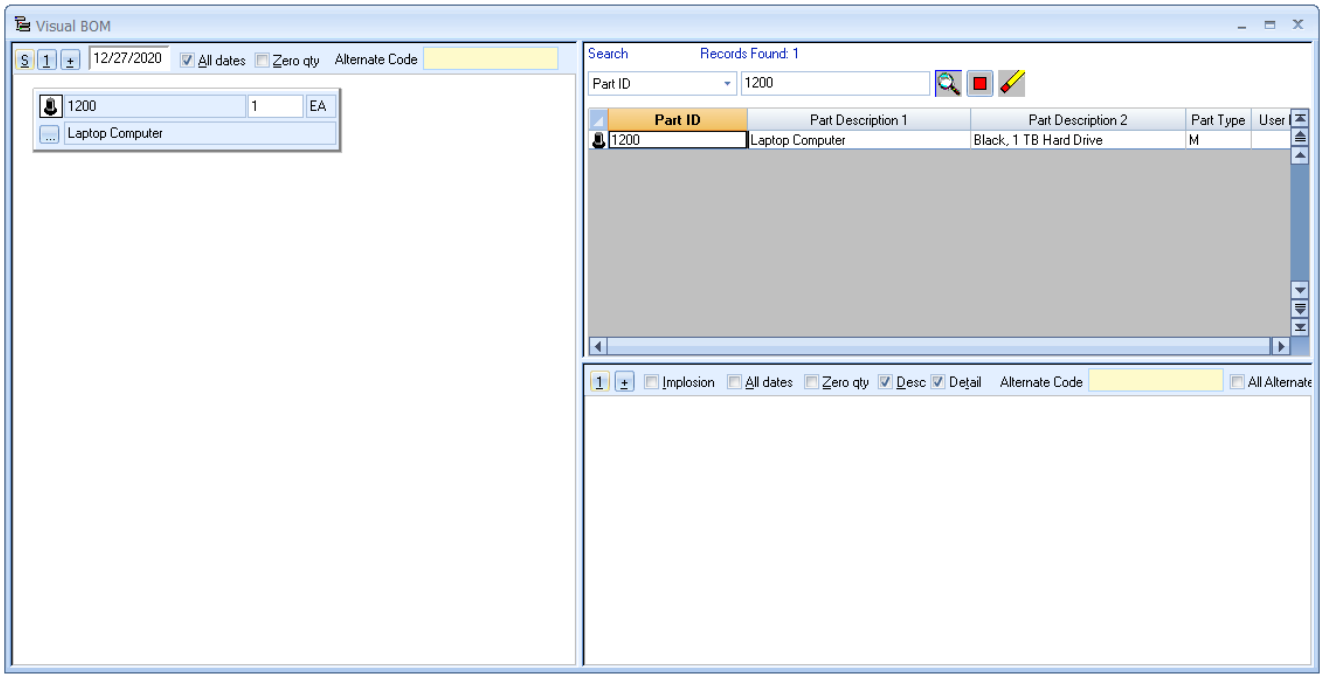
Creating BOM's

In this section, we will walk through the steps needed to create a bill of material in the **Visual BOM** using the parts you added to the Part Master in the previous section.

Step 1

Click the BOM icon or select **Visual BOM** from the **Activity** menu. This will launch the Visual BOM dialogue. Maximize the window to have the largest workspace possible. Refer to Chapter 3 for more information on the Visual BOM screen.

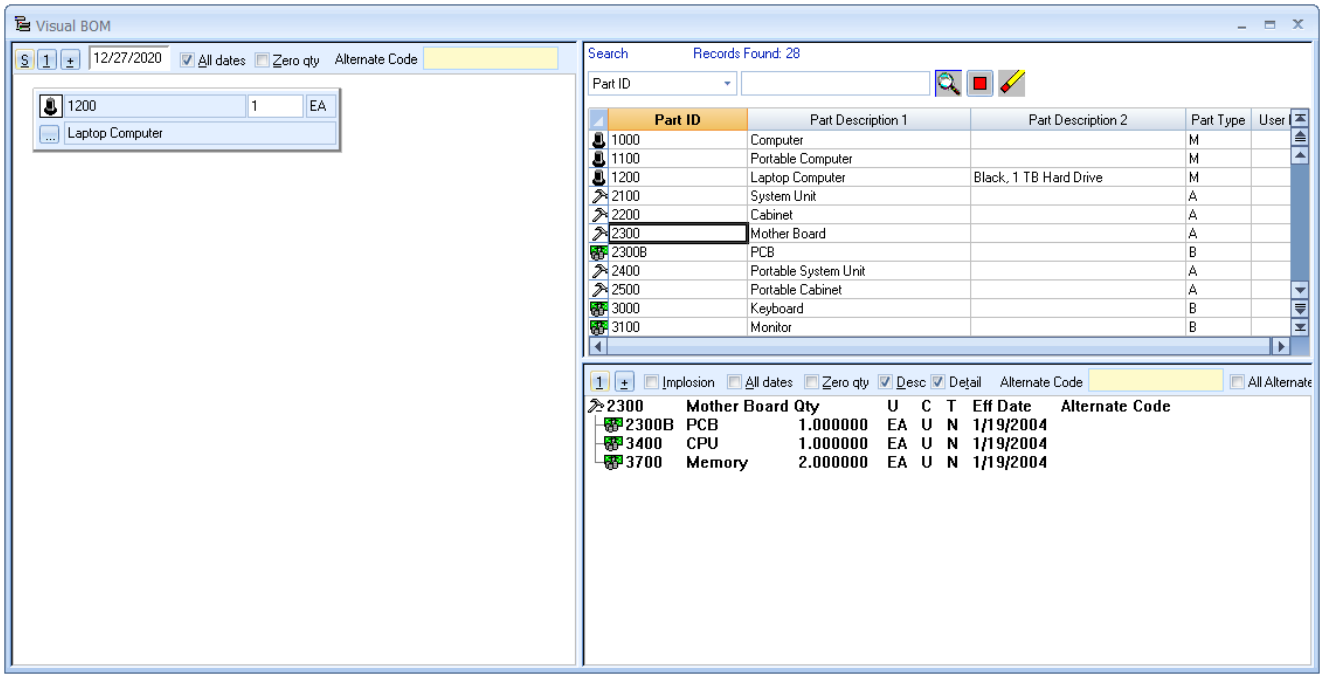
To display Part 1200 in the BOM Builder pane to the left, double right-click on Part 1200 from the Part Master pane.



*Notice that Part 1200 moves to the left, **BOM Builder** pane.*

Step 2

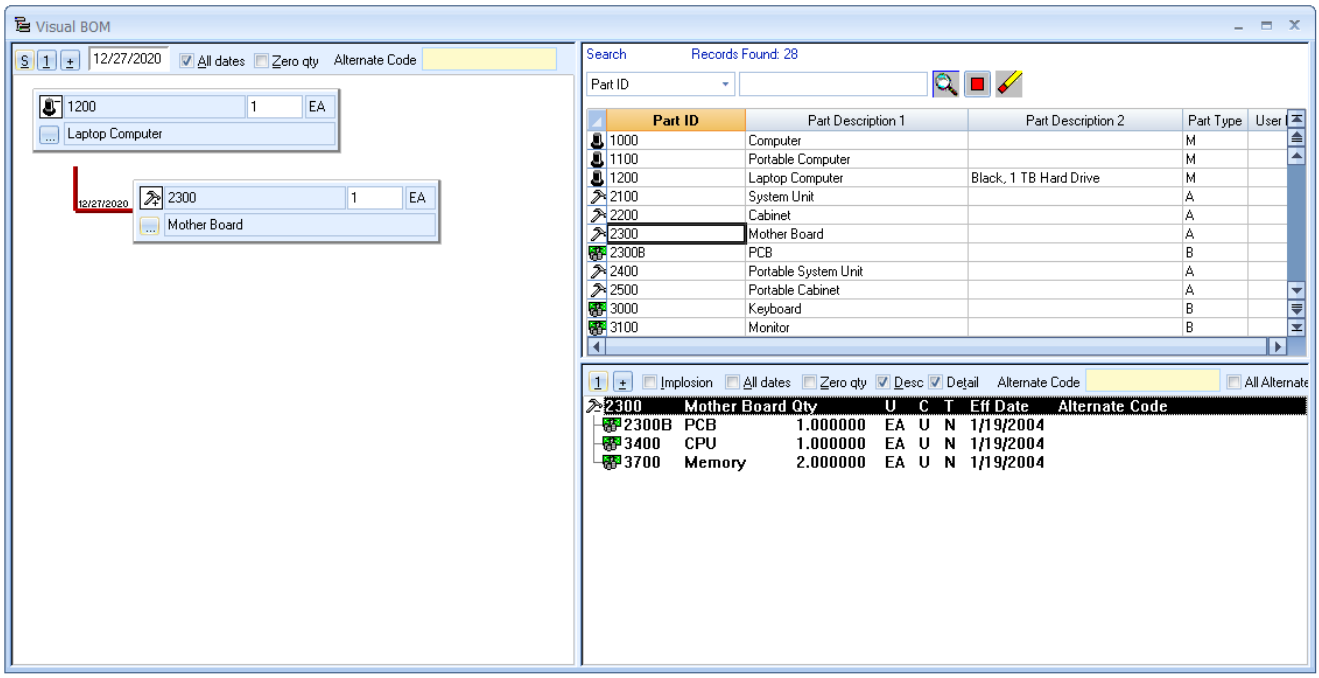
Also, from with the Part Master pane double-click on Part 2300 to display the structure in the Product Structure pane.



Step 3

The new Part 1200 should contain the complete structure for Part 2300. We will be adding this structure to Part 1200 using today's effectivity date. Make certain **Add with Date** is checked in your Options – Preferences for the **Visual BOM**.

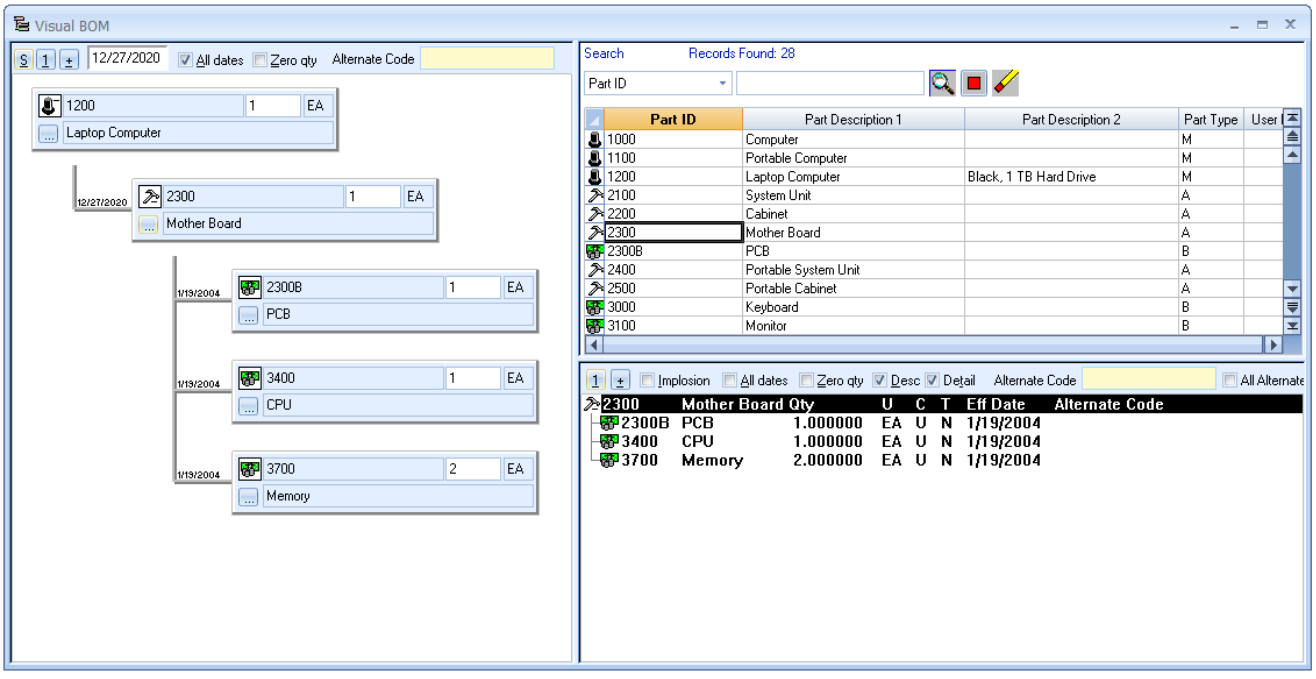
To add the structure for Part 2300 to Part 1200, place your cursor on Part 2300 in the Product Structure pane, click the part with the right mouse button and hold it, then drag and drop the subassembly on top Part 1200 in the BOM Builder pane (cursor needs to be in the grey area of the part box). Your screen should look like the picture below.



You have just copied an existing bill or material and added it to a new bill of material. The red line indicates that the record has not been saved. Press the "S" button above the **BOM Builder** pane to save the structure.

Step 4

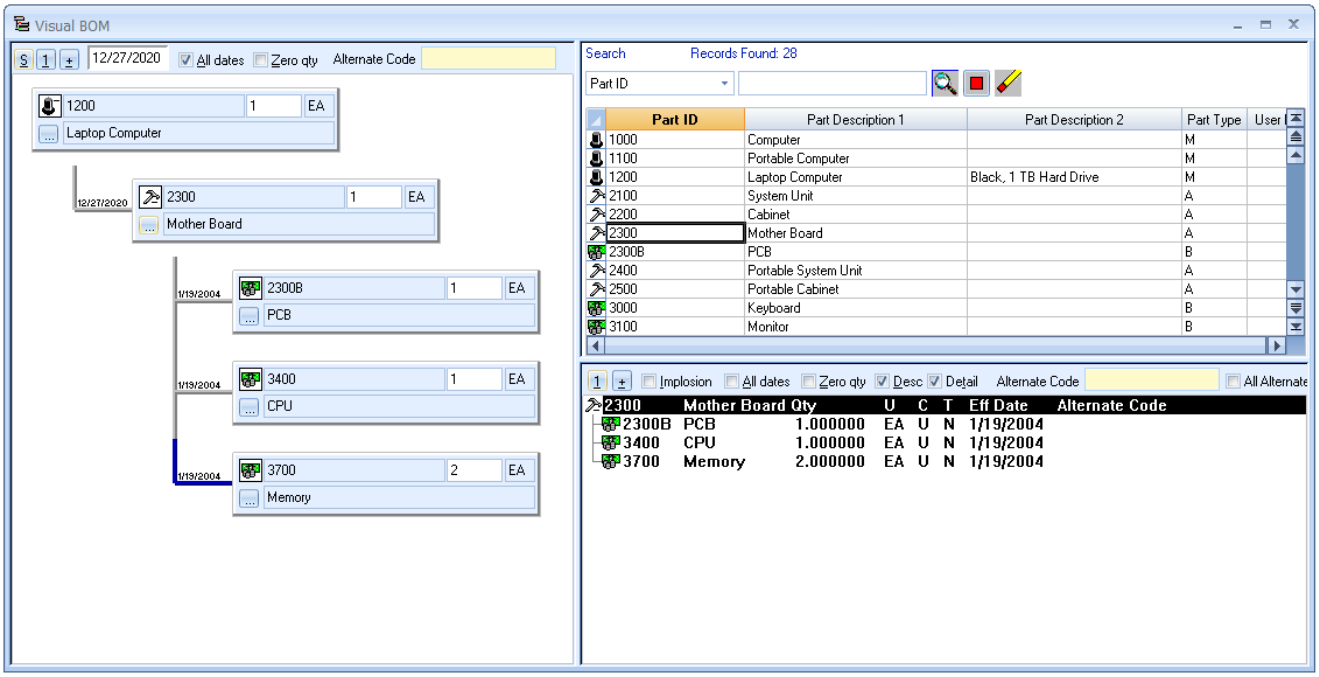
The hammer icon for Part 2300 shows a plus sign "+" next to it, indicating that another level in the BOM can be displayed. Double-click on the hammer icon to view the rest of the product structure.



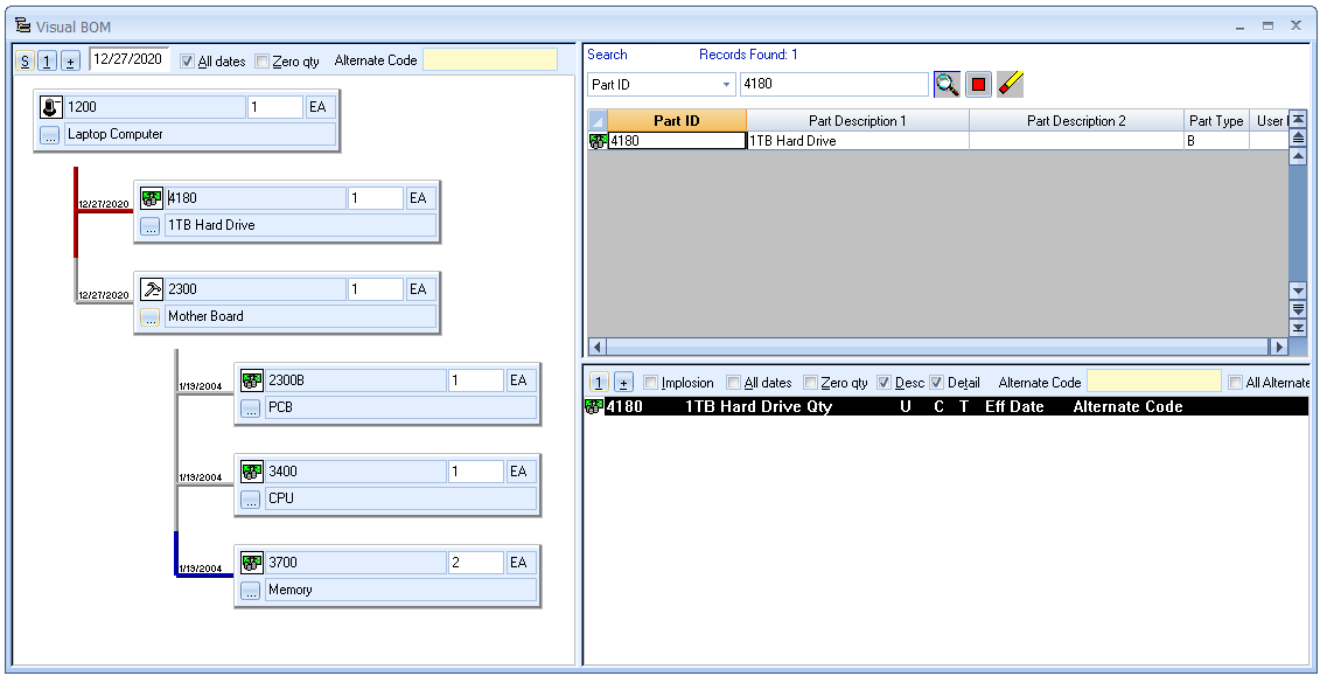
Note: You can drag the splitter windows between the panes to resize them for a better view.

Step 5

Change the quantity per to 2 for Part 3700 by clicking on the number 1 in the part box from within the BOM Builder. Notice the structure link between the part boxes turns blue to indicate a change in the structure.



The newly added Part 4180 should also be in the structure for Part 1200, Laptop Computer. Find Part 4180 in the Part Master pane and drag it to Pat 1200 to add it to the structure. Notice the part is added with a red structure link to show an addition to the product structure.



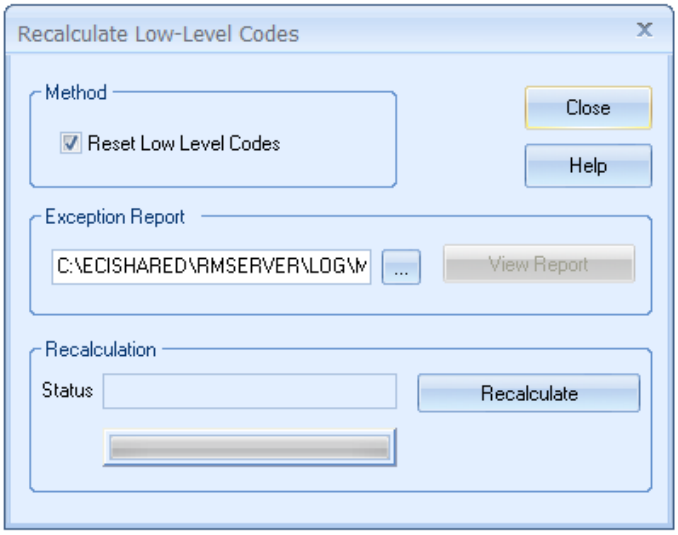
Important Learning: In Step 3, when we dragged and dropped Part 2300 on Part 1200, all three component parts were copied. This was because that structure was already in use. Changing the quantity per for the

2300 – 3400 relationship in Step 5 will therefore change the quantity *everywhere* the 2300 is used and not just for the 1200 assembly.

Step 6

After you are finished performing BOM maintenance activities you need to run a batch process that assigns a low-level code to each part. A low-level code is the deepest level a part exists in the BOM. This code is used by the **Costing Module – Batch – Cost Roll-up** to accurate create a standard cost and by the **MRP Module – Batch – MRP Explosion** process to accurately plan the part.

To run the process, go to **Batch** and select **Recalculate Low Level Code**. Run the process using the default settings (good for almost every situation).



As the process runs, a status indicator will be shown. Note that on small databases this process is extremely quick.

Congratulations

You have learned how to create a bill of material using the **Visual BOM** drag and drop to copy an existing assembly as well as a new part. Next, you will learn how to use the Inquiries and Reports offered.

Chapter 6

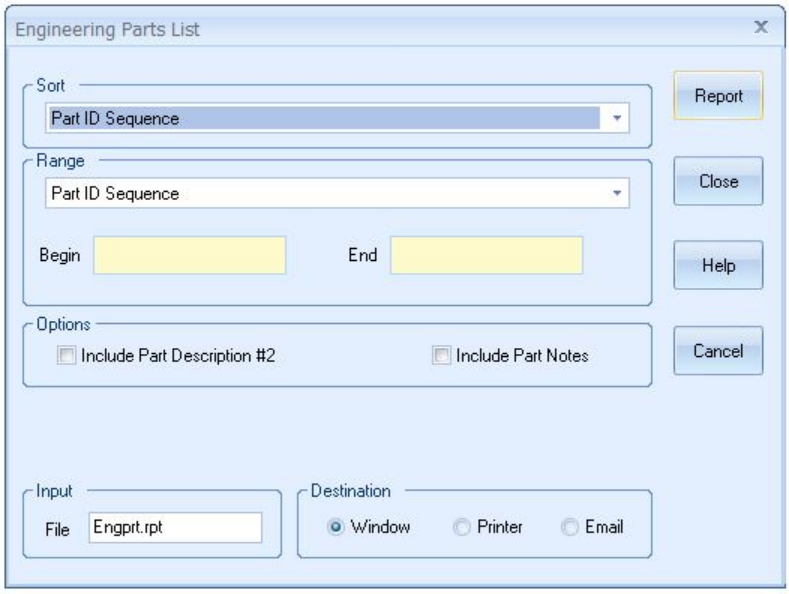
Presenting Your Data

The Bill of Materials module offers several ways for you to get to your information. The **Product Structure** pane in the **Visual BOM** allows you to view BOMs and related part information in either single or multi-level implosion or explosion. This module also offers several reports that can be displayed before they are printed, exported to most popular applications, and sent via electronic mail.

The **Parts List** report shows all the important Part Master data related to engineering. The **Bill of Materials** report show parent-component relationships in any combination of single or multiple level implosion or explosion (where used).

Step 1

Select **Parts List** from the **Report** menu.



Click Ok and all part will be listed in a report to your screen.

Note: All reports are customizable, using Crystal Reports for MAX, and have extensive sort and filtering capabilities.

Engineering Parts List by Part Identifier Page 1

Part Identifier Range From Begin to End

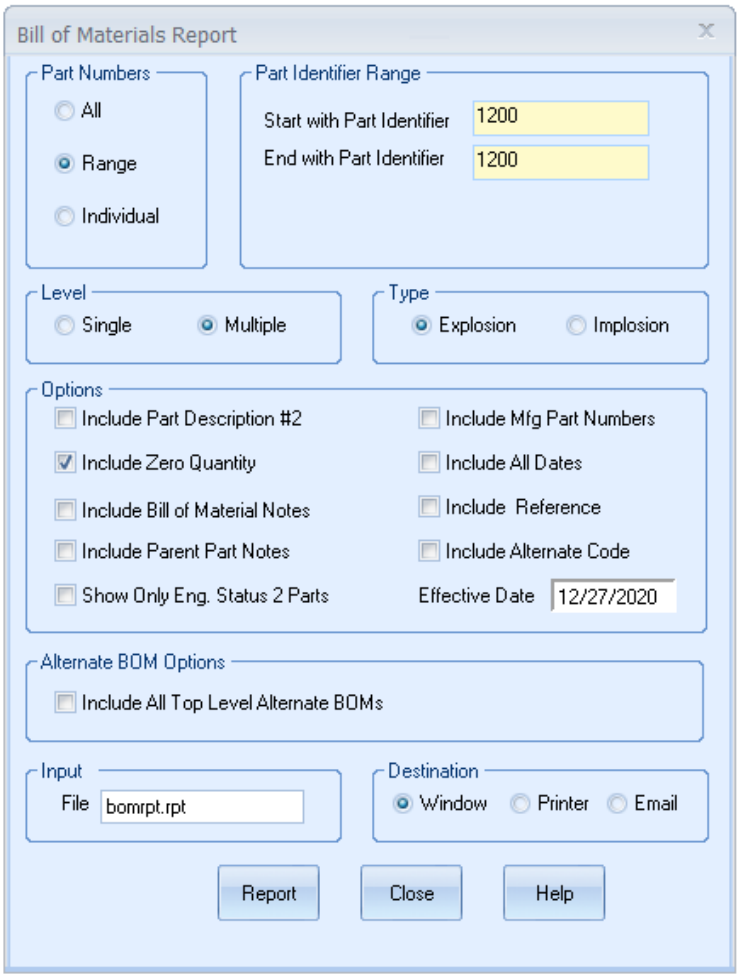
Part ID	Description	PLN	TC	LLC	UM	ES	Prod	Obsol	Commodity	CC	Trans	Unit Cost
1000	Computer	000	M	0	EA	2	12/20/2002		FG	A	12/18/2019	1,548.6723
1100	Portable Computer	000	M	0	EA	2	12/20/2002		FG	A	6/19/1982	1,493.4848
1200	Laptop Computer	000	M	0	EA	2	11/28/2019		FG	A		0.0000
2100	System Unit	000	A	1	EA	2	12/20/2002		Assy	B	11/16/2019	855.6723
2200	Cabinet	000	A	2	EA	2	12/20/2002		Mech	C	11/16/2019	76.9063
2300	Mother Board	000	A	2	EA	2	12/20/2002		Assy	C	11/16/2019	409.7661
2300B	PCB	000	B	3	EA	2	12/20/2002		Elec	B	11/16/2019	110.0000
2400	Portable System Unit	000	A	1	EA	2	12/20/2002		Assy	C	6/19/1982	1,379.9848
2500	Portable Cabinet	000	A	2	EA	2	12/20/2002		Mech	C	6/19/1982	76.2188
3000	Keyboard	000	B	1	EA	2	12/20/2002		Elec	C	11/16/2019	110.0000
3100	Monitor	000	B	1	EA	2	12/20/2002		Elec	C	11/16/2019	550.0000
3200	Floppy Disk	000	O	2	EA	2	12/20/2002		Elec	C	11/16/2019	80.0000
3250	1.44 M Floppy	000	B	3	EA	2	12/20/2002		Elec	C	6/19/1982	55.0000
3275	Custom Software	000	T	3	EA	2	12/20/2002		Elec	C	6/19/1982	50.0000
3400	CPU	000	B	3	EA	2	12/20/2002		Elec	C	11/16/2019	110.0000
3450	CPU - FAST	000	B	3	EA	2	12/20/2002		Elec	C	6/19/1982	220.0000
3500	Metal	000	D	3	SF	2	12/20/2002		Mech	C	11/28/2019	0.6875
3600	24V Power Supply	000	B	2	EA	2	12/20/2002		Elec	C	11/16/2019	165.0000
3625	48V Power Supply	000	B	1	EA	2	12/20/2002		Elec	C	6/19/1982	192.5000
3650	Hardware Kit	000	Y	2	EA	2	12/20/2002		Elec	C	11/16/2019	11.0000
3700	Memory	000	B	3	EA	2	12/20/2002		Elec	C	11/16/2019	110.0000
3800												

Bill of Materials - Engineering Parts List, ENGPRT.RPT CLONE Worldwide MANAGER 12/27/2020 9:07:06 AM

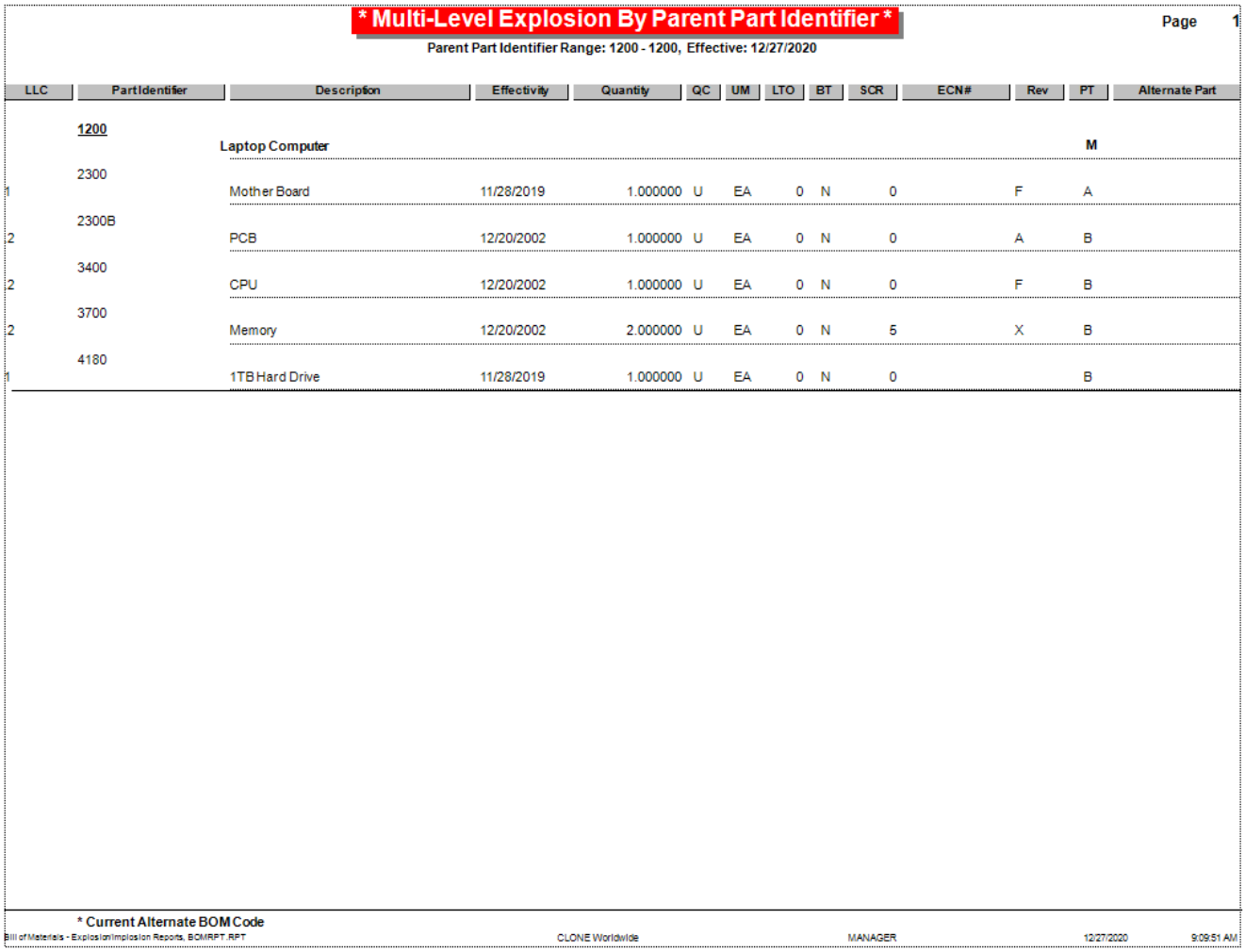
Click on zoom icon to choose another level of magnification.

Step 2

You can also see the product structure for the new part you entered, Part 1200. From the **Reports** menu, choose **Bill of Materials** and select multi-level for Part 1200.



Like most MAX reports, this report can also be viewed in a window, printed, or sent via electronic mail. The following image is the view in a window.



*** Multi-Level Explosion By Parent Part Identifier ***

Page 1

Parent Part Identifier Range: 1200 - 1200, Effective: 12/27/2020

LLC	Part Identifier	Description	Effectivity	Quantity	QC	UM	LTO	BT	SCR	ECN#	Rev	PT	Alternate Part
	1200	Laptop Computer										M	
	2300												
1		Mother Board	11/28/2019	1.000000	U	EA	0	N	0		F	A	
	2300B												
2		PCB	12/20/2002	1.000000	U	EA	0	N	0		A	B	
	3400												
2		CPU	12/20/2002	1.000000	U	EA	0	N	0		F	B	
	3700												
2		Memory	12/20/2002	2.000000	U	EA	0	N	5		X	B	
	4180												
1		1TB Hard Drive	11/28/2019	1.000000	U	EA	0	N	0			B	

* Current Alternate BOM Code

Bill of Materials - Explosion\Implosion Reports, BOMRPT.RPT CLONE Worldwide MANAGER 12/27/2020 9:09:51 AM

Notice the report information is presented in a clear and easy to understand indented bill of material format. In this format, parts at level 1 report to level 0. Parts at level 2 report to level 1.

Congratulations

You have learned how to display and print Bill of Materials and Part Master information. Now let us add some process steps for this new part.

Part III: Shop Floor Execution

Chapter 7

Introduction

The Bill of Materials describes all the materials required to produce goods but does not include the process required to build the product. Process information therefore must be entered for each parent in the Bills of Materials (BOM). While process data is entered in the Shop Floor Execution module, it is typically under control of the same engineer as whom built the BOM.

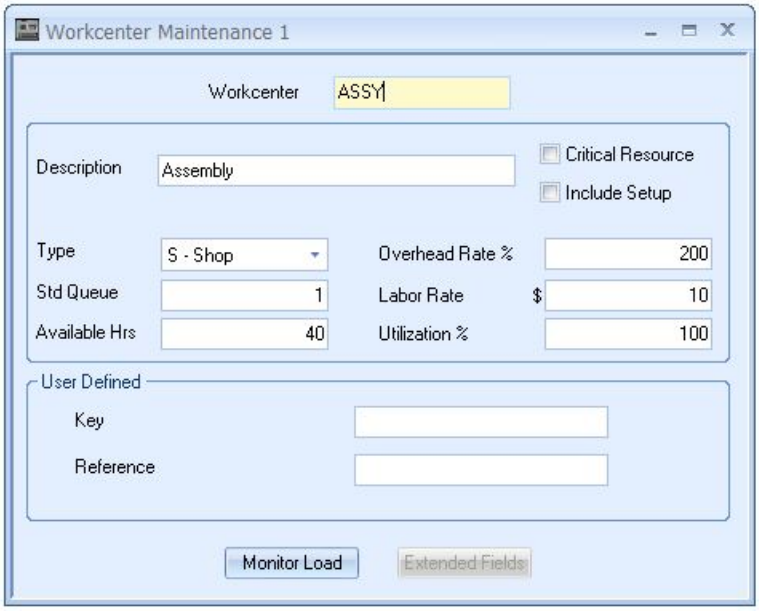
This section will describe how to enter work centers and part routings (processes) for your manufactured parts.

Chapter 8

Entering Work Centers

Work centers are physical areas on your production floor where production takes place. Specifying these areas is important for tracking "where" in process jobs are and for determining when they will be complete. Work centers also hold labor and labor overhead rates that are used in product costing; thus, they have an accounting importance as well.

Enter and maintain your work centers in **Shop Floor Execution – Activity – Work Centers**.



Note that the Available Hours is 40 indicating that 5 people work in this area each day.

Chapter 9

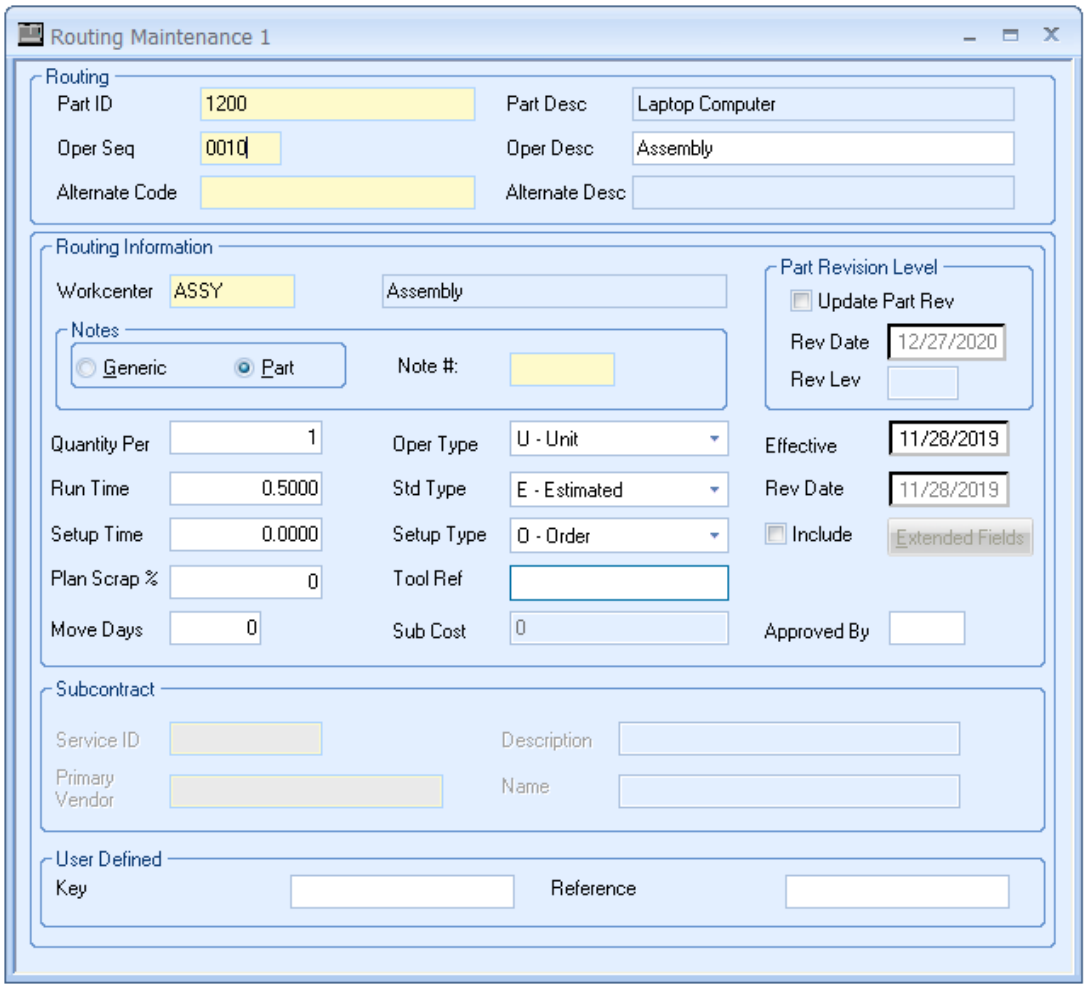
Creating Part Routings (Processes)

The part routing specifies the work centers used to produce a manufactured part, in the sequence of the flow. Within each step of the routing the setup and run times, as well as move days between work centers, are provided. This allows for queue, backlog, and load rates to be calculated.

MAX allows for time to be entered in a variety of ways, depending on the type of process. For example, some parts may be entered as times per piece, were other are entered as pieces per hour. In either case, the system does the mathematics for us and calculates the appropriate rate.

Step 1

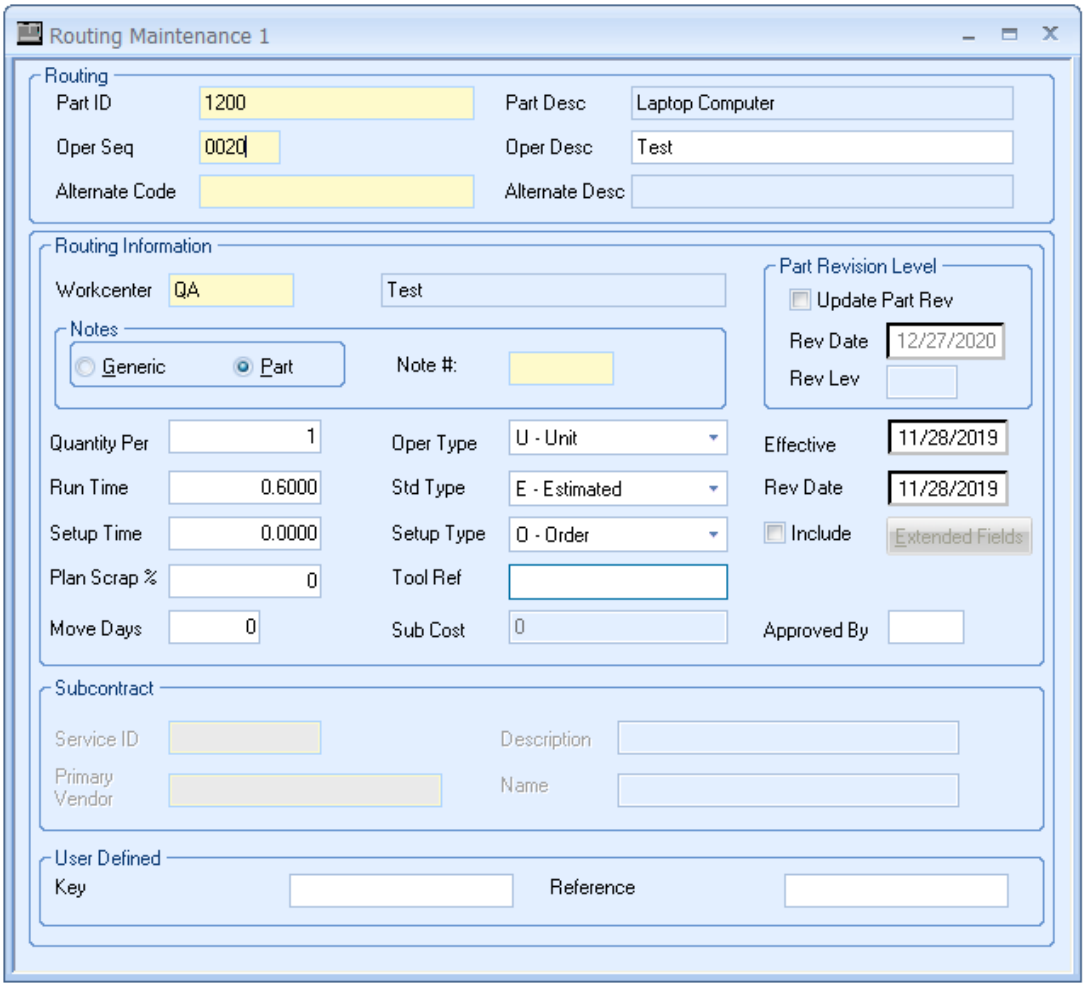
For Part 1200, enter the following routing step for assembly:



This routing indicates that it takes 30 minutes per unit to assemble this part and that there is no setup time for this work center.

Step 2

For Part 1200, enter the following routing step for inspection:



It takes slightly longer to inspect the laptop after it is assembled (e.g., .6 hours) than the assembly process itself.

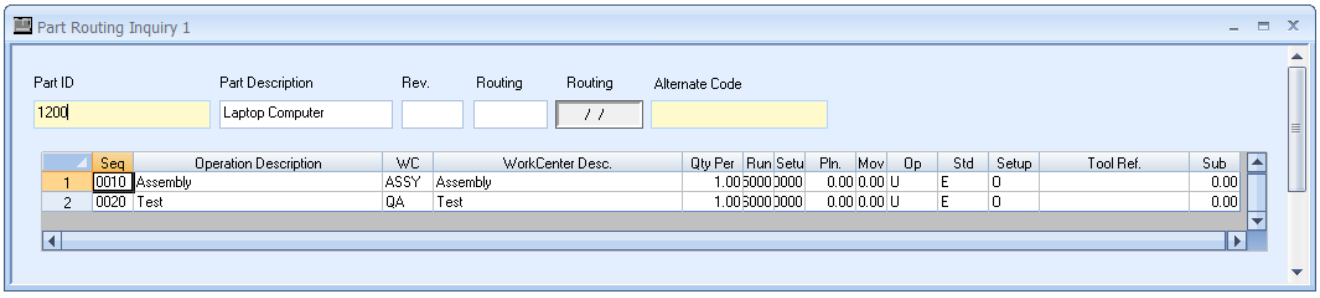
Chapter 10

Presenting Your Data

The Shop Floor Execution module is organized with **Inquiries** and **Reports** so that you can effectively use your data. Inquiries may be used whenever a quick, on screen view of your data is required. Reports may be used when a more permanent record of the information is required or when than information needs to be shared.

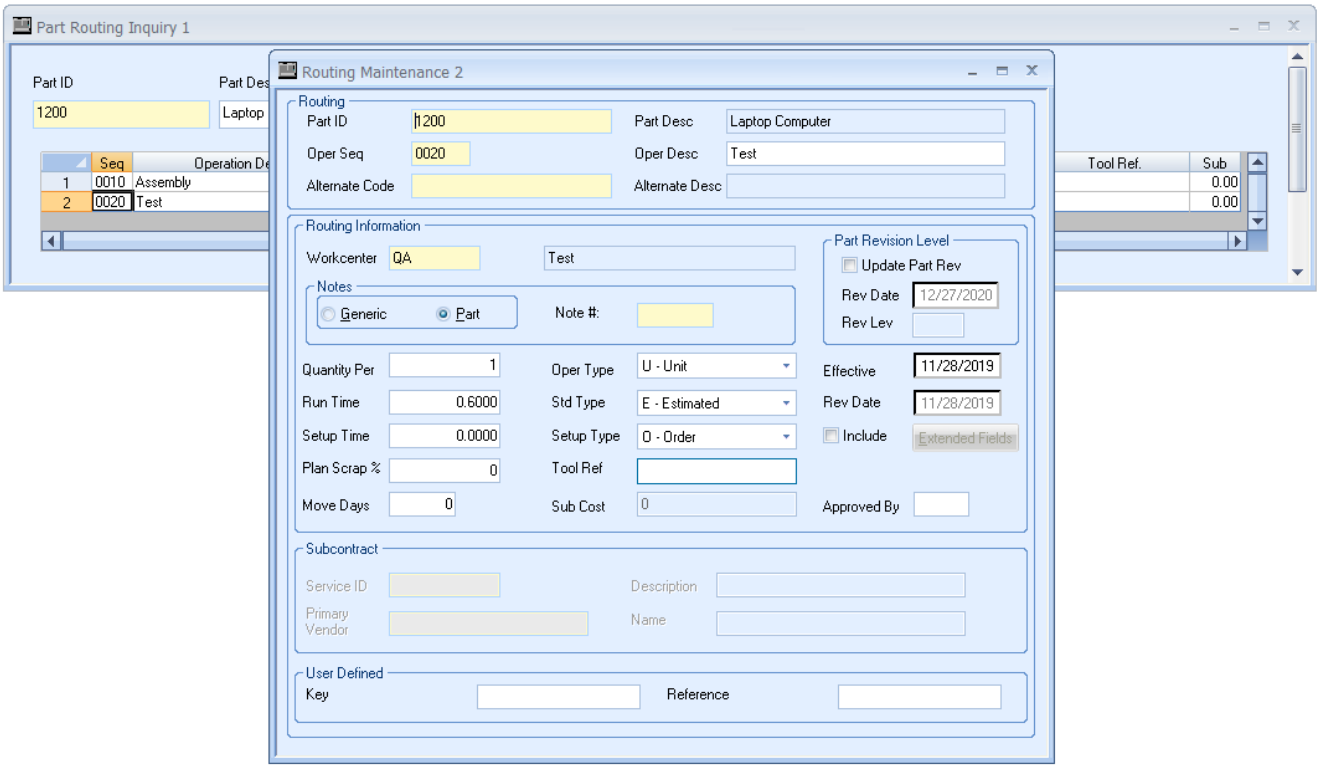
Step 1

Select **Part Routing** from the **Inquiry** menu item. Enter Part 1200.



This screen is the recommended beginning point anytime a multiple sequence routing is being reviewed. Once the routing is displayed in the grid, double-clicking on the sequence number will open the Routing screen, where data may be changed.

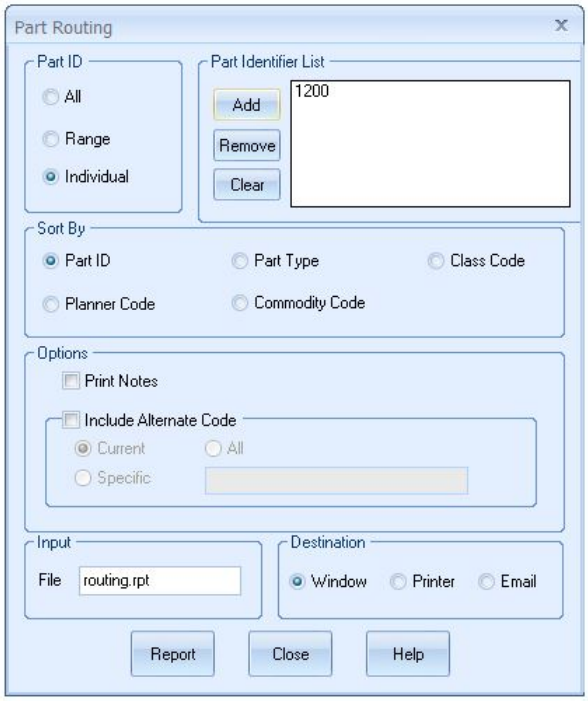
Double-click on Sequence Number 0010 to jump to the routing maintenance screen. The screen opens with the current information for the sequence selected.



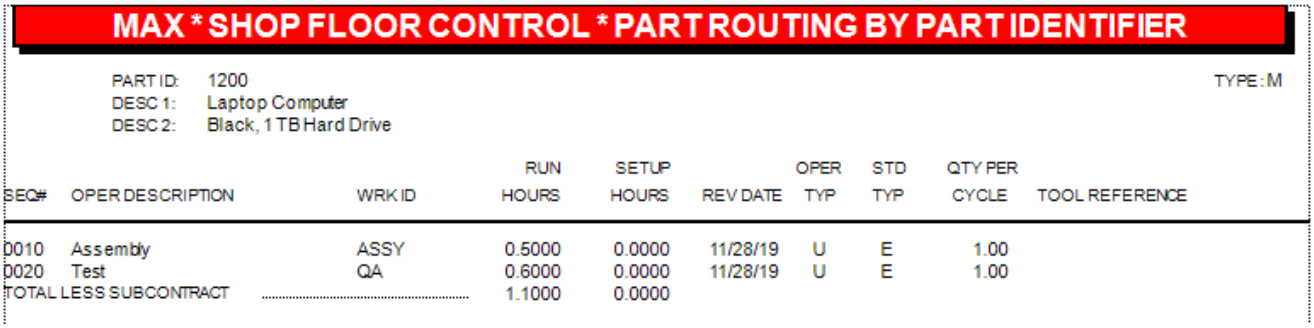
Here, you can make the required change and then close the window to return to the original inquiry.

Step 2

You can also display, print or electronic mail the part routing for the new part you entered, Part 1200. From the **Reports** menu, choose **Part Routing** and select multi-level for Part 1200.



This report can also be printed to a window on your screen.



MAX * SHOP FLOOR CONTROL * PART ROUTING BY PART IDENTIFIER

PART ID: 1200 TYPE: M
DESC 1: Laptop Computer
DESC 2: Black, 1 TB Hard Drive

SEQ#	OPER DESCRIPTION	WRK ID	RUN HOURS	SETUP HOURS	REV DATE	OPER TYP	STD TYP	QTY PER CYCLE	TOOL REFERENCE
0010	Assembly	ASSY	0.5000	0.0000	11/28/19	U	E	1.00	
0020	Test	QA	0.6000	0.0000	11/28/19	U	E	1.00	
TOTAL LESS SUBCONTRACT			1.1000	0.0000					

Notice the report information is presented in a clear and easy to understand indented bill of material format. The Crystal Reports runtime engine can export to a variety of different formats, including Microsoft Excel.

Congratulations

You have learned how to display and print Part Routing information. Once these two steps have been completed, the cost roll-up may be run so that manufactured parts obtain the correct standard costs from all lower-level assemblies and from the routing process. The standard costs are used to value the inventories, orders, and transactions.

Once the strategy for the part has been completed, a production schedule may be produced.

Part IV: Product Costing

Chapter 11

Introduction

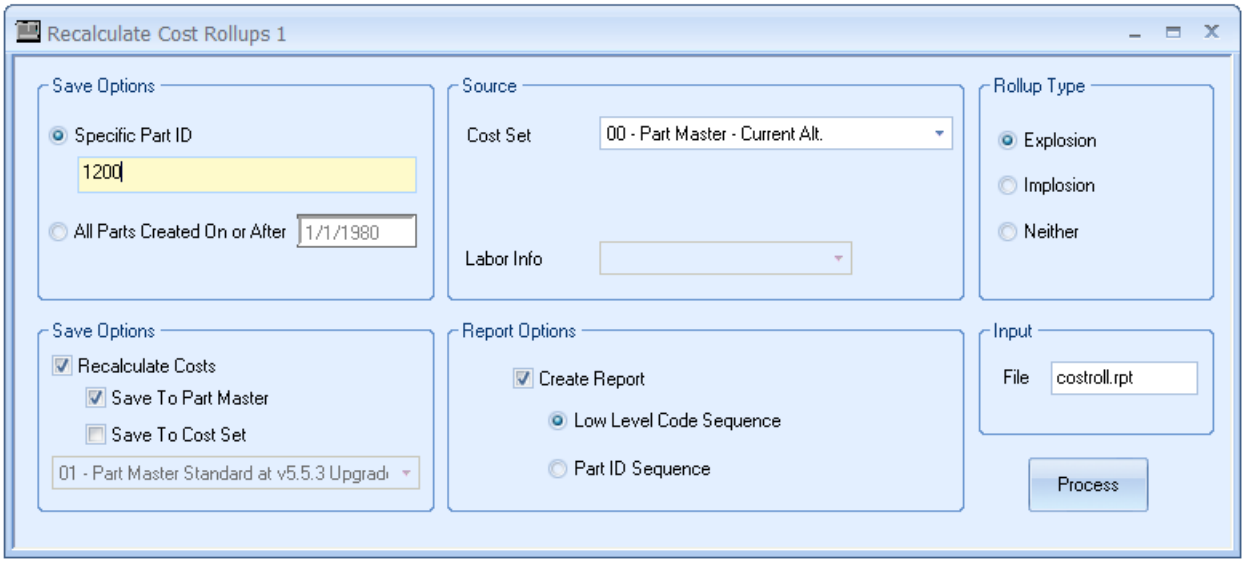
MAX is designed to automatically calculate the cost of manufactured material, by "rolling up" the costs of parent parts from all the lower-level components and their associated data. Chapters three through six above, provide most of the data to accomplish that. As product structures are completed, it is highly recommended to use this data as a validity check to assure that data has been entered correctly and that the associated costs make sense.

Rolling Up and Verifying Costs

In this section, we will run a Cost Roll-up for all parts. It is recommended that no one else is in the system while you perform these actions. The Cost Roll-up process requires that the Low-Level Codes be accurate. For that reason, the Low-Level Code process is typically run as part of the costing process. Please refer to Chapter 5 – Step 6 for this step.[1]

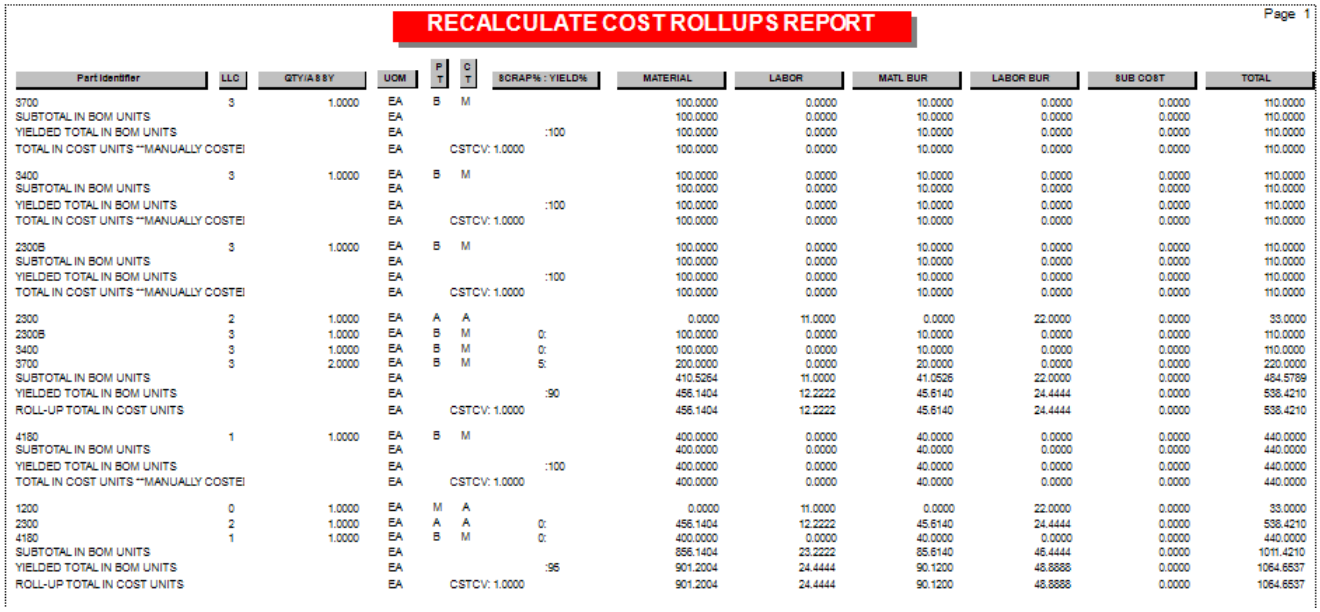
Step 1

The cost roll-up is run from **Costing – Batch – Recalculate Cost Roll-ups.** You have the option to roll just one part, or the entire database. After a single engineering change as we just had on the 1200, you may want to roll just the one part. At the end of a period, you may wish to roll all parts.



The selection above will roll Part ID 1200, save the new costs to the Part Master table, and print a report showing the details.

[1]The cost roll-up process may be run from a command line batch file and scheduled via the Windows Scheduler. Ask your Project Manager for how to accomplish that.



RECALCULATE COST ROLLUPS REPORT

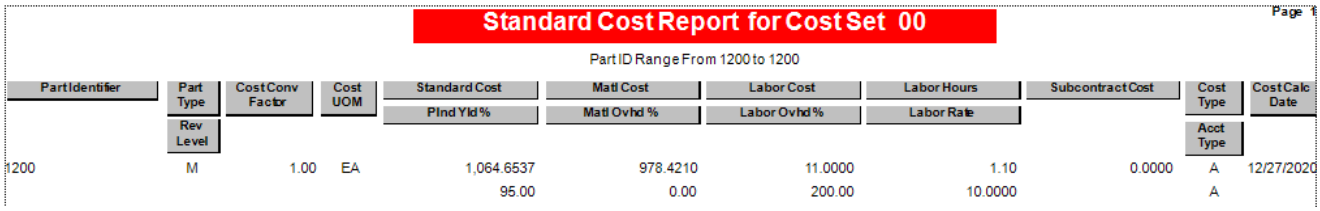
Page 1

Part Identifier	LLC	QTY/ASSY	UOM	PT	CT	SCRAP% : YIELD%	MATERIAL	LABOR	MATL BUR	LABOR BUR	SUB COST	TOTAL
3700	3	1.0000	EA	B	M		100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
SUBTOTAL IN BOM UNITS			EA				100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
YIELDED TOTAL IN BOM UNITS			EA			:100	100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
TOTAL IN COST UNITS **MANUALLY COSTEI			EA		CSTCV: 1.0000		100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
3400	3	1.0000	EA	B	M		100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
SUBTOTAL IN BOM UNITS			EA				100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
YIELDED TOTAL IN BOM UNITS			EA			:100	100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
TOTAL IN COST UNITS **MANUALLY COSTEI			EA		CSTCV: 1.0000		100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
2300B	3	1.0000	EA	B	M		100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
SUBTOTAL IN BOM UNITS			EA				100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
YIELDED TOTAL IN BOM UNITS			EA			:100	100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
TOTAL IN COST UNITS **MANUALLY COSTEI			EA		CSTCV: 1.0000		100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
2300	2	1.0000	EA	A	A		0.0000	11.0000	0.0000	22.0000	0.0000	33.0000
2300B	3	1.0000	EA	B	M	0:	100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
3400	3	1.0000	EA	B	M	0:	100.0000	0.0000	10.0000	0.0000	0.0000	110.0000
3700	3	2.0000	EA	B	M	5:	200.0000	0.0000	20.0000	0.0000	0.0000	220.0000
SUBTOTAL IN BOM UNITS			EA				410.5264	11.0000	41.0526	22.0000	0.0000	484.5789
YIELDED TOTAL IN BOM UNITS			EA			:90	456.1404	12.2222	45.6140	24.4444	0.0000	538.4210
ROLL-UP TOTAL IN COST UNITS			EA		CSTCV: 1.0000		456.1404	12.2222	45.6140	24.4444	0.0000	538.4210
4180	1	1.0000	EA	B	M		400.0000	0.0000	40.0000	0.0000	0.0000	440.0000
SUBTOTAL IN BOM UNITS			EA				400.0000	0.0000	40.0000	0.0000	0.0000	440.0000
YIELDED TOTAL IN BOM UNITS			EA			:100	400.0000	0.0000	40.0000	0.0000	0.0000	440.0000
TOTAL IN COST UNITS **MANUALLY COSTEI			EA		CSTCV: 1.0000		400.0000	0.0000	40.0000	0.0000	0.0000	440.0000
1200	0	1.0000	EA	M	A		0.0000	11.0000	0.0000	22.0000	0.0000	33.0000
2300	2	1.0000	EA	A	A	0:	456.1404	12.2222	45.6140	24.4444	0.0000	538.4210
4180	1	1.0000	EA	B	M	0:	400.0000	0.0000	40.0000	0.0000	0.0000	440.0000
SUBTOTAL IN BOM UNITS			EA				856.1404	23.2222	85.6140	46.4444	0.0000	1011.4210
YIELDED TOTAL IN BOM UNITS			EA			:95	901.2004	24.4444	90.1200	48.8888	0.0000	1064.6537
ROLL-UP TOTAL IN COST UNITS			EA		CSTCV: 1.0000		901.2004	24.4444	90.1200	48.8888	0.0000	1064.6537

This process uses costing data from the part, the BOM and the part routing to establish the cost of each parent. It is critical that you understand how this data is used. The same data will be used later for planning.

Step 2

Verifying costs is done using in several reports. The Costing – Reports - Standard Cost report shows a summary of the material, labor, labor overhead and subcontract cost for the parts.



Standard Cost Report for Cost Set 00

Page 1

Part ID Range From 1200 to 1200

Part Identifier	Part Type / Rev Level	Cost Conv Factor	Cost UOM	Standard Cost / Plnd Yld %	Matl Cost / Matl Ovhd %	Labor Cost / Labor Ovhd %	Labor Hours / Labor Rate	Subcontract Cost	Cost Type / Acct Type	Cost Calc Date
1200	M	1.00	EA	1,064.6537	978.4210	11.0000	1.10	0.0000	A	12/27/2020
				95.00	0.00	200.00	10.0000		A	

Congratulations

You have learned how to establish standard costs for your products. These costs will be used in all transactions that drive accounting information from MAX. It is important that these costs be maintained so that they remain accurate.

Part V – Scheduling & Materials Requirements Planning (MRP)

This section is still included in the Stage I – Structures and Scheduling part of the Standard MAX Implementation Plan as the schedules drive the requirements through the Bills of Materials. The schedule can also be used to drive capacity plans. It is Dynamic data as it changes more frequently than component part strategy.

Chapter 12

Introduction

Types of Scheduling

The goal of scheduling is to balance supply and demand. MAX offers many different types of scheduling. The four most common include:

1. Master Production Scheduling (MPS) – An independent demand strategy where a human scheduler creates the production plan by analyzing demand (forecast and customer orders) and supply (inventory and open order information) for a specific set of parts. Forecasts are entered and managed in the MPS module.
2. Materials Requirements Planning (MRP) – A dependent demand strategy that will explode top level plans into detailed requirements.
3. Reorder Point Planning (ROP) – An independent demand strategy that will recommend an order based upon the on-hand quantity and a theoretical reorder point. When on hand falls below the reorder point, an order is launched. MAX allows this to be performed at the part level or at the part/stock level such as a spare parts inventory.
4. Periodic Review – A manual system where a planner visits the stockroom and prepares an "order up to" list.

These types of planning are not mutually exclusive, but often found coexisting in many MAX organizations.

The MRP module balances the supply and demand for all MRP planned component parts needed to satisfy your master schedule. The MRP process performs the following essential tasks:

- Reschedules existing orders to meet changes in the current demand.
- Explodes through the Bills of Materials to create dependent demand for component parts.
- Initiates new orders (order signal or planned orders) if required, to balance supply and demand.

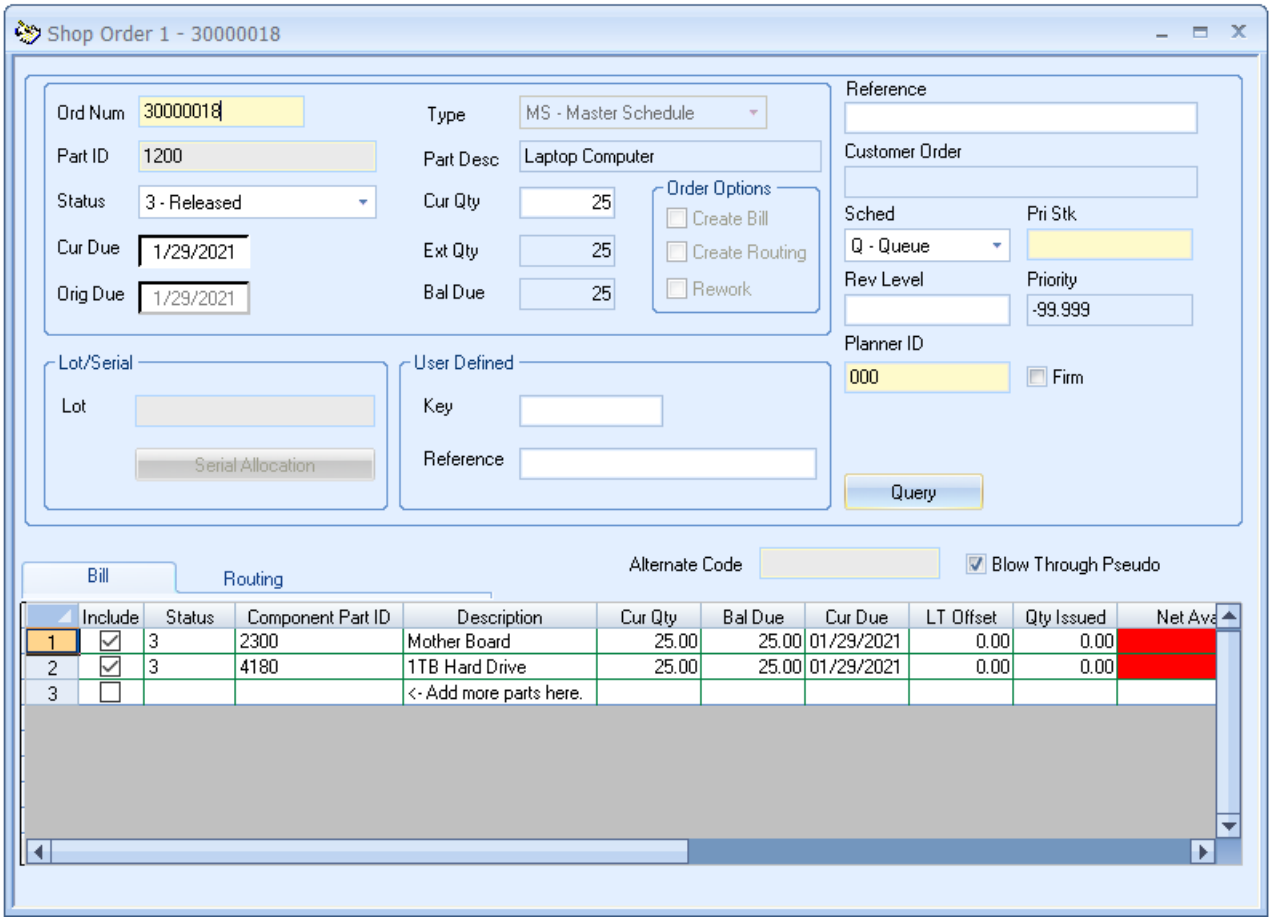
The planning tools available to the planner provide for a paperless planning environment, maximizing efficiency and minimizing confusion.

Enter a Master Production Schedule

In this model, all top-level finished goods parts are Master Scheduled thus, we must enter a schedule to drive Materials Requirements Planning (MRP). This schedule forms our production plan for the next period. Fundamentally, this time MUST cover our cumulative manufacturing lead-time.

Step 1

Open the **Master Scheduling** module and then **Activity – Shop Order**. Enter the following order for Part 1200. After entering the Part ID and current quantity, press the Query button. This will copy the standard bill of material to the **Bill** tab and the standard routing to the **Routing** tab. Set the current due date to four weeks from today (due to lead-times).



Note that the most important information is the Part ID, Current Quantity and Current Due Date (i.e., what, how many and when, respectively). It is this information that drives the schedule.

Running MRP

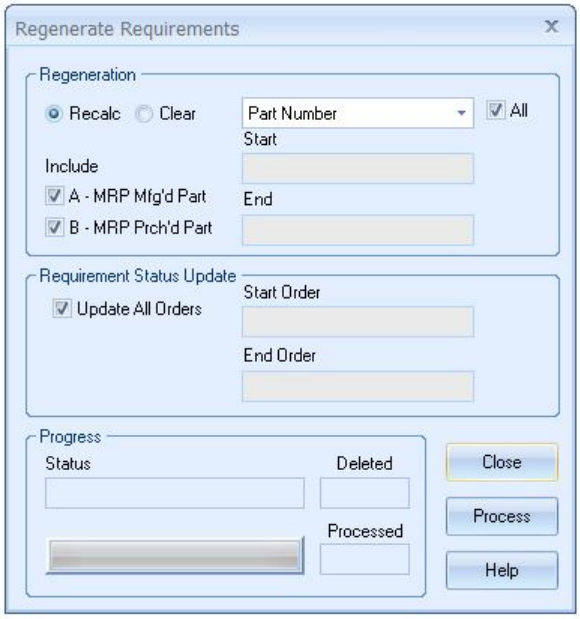
In this section, we will run an MRP explosion. It is recommended that no one else is in the system while you perform these actions. The MRP Explosion process requires that the Low-Level Codes be accurate. For that reason, the Low-Level Code process is typically run as part of the MRP process. Please refer to Chapter 5 – Step 6 for this step.[2]

Step 1

Normally, a Regen is done to clear out old unapproved planned orders (Status 1) which may no longer reflect the current status of your business. For example, if you have changed your product structures or ordering parameters (such as an Order Policy Code), existing planned orders are not updated. The Regen will remove these programs and the MRP Explosion will add back what is needed.

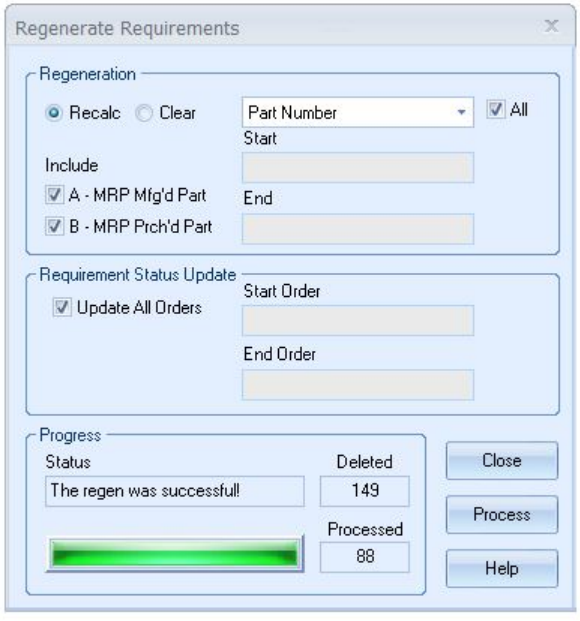
From the **Batch** menu, choose **Regen Requirements**.

[2]The MRP process may be run from a command line batch file and scheduled via the Windows Scheduler. Ask your Project Manager for how to accomplish that.



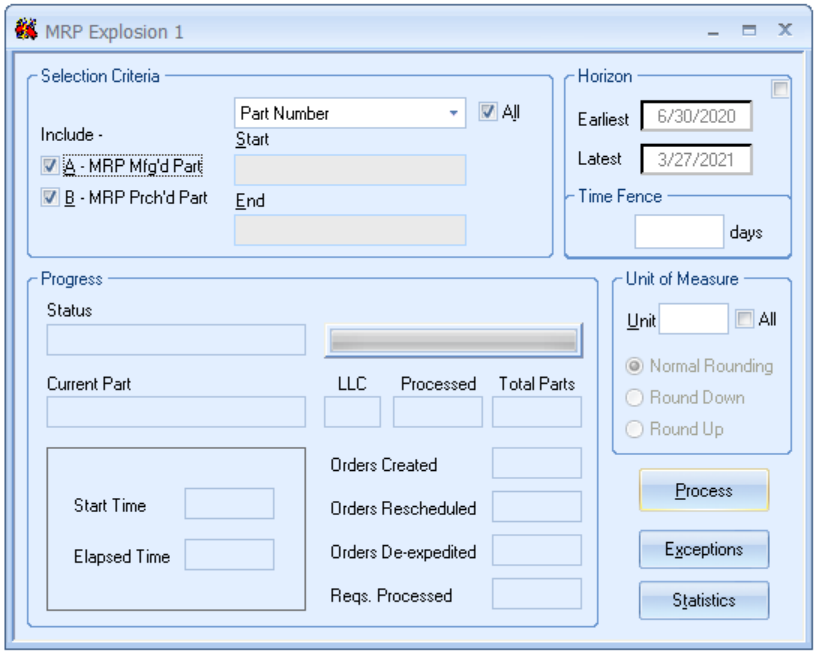
Choose the **Recalc** option to clear away firm planned orders and delete any dependent demand created by master scheduled orders that are not yet released to production. The **Clear** option would only clear planned orders that are not firm planned. Choose **All** parts and be sure both **A** and **B** part types are checked. Click **Process** to run the Regen. Typically, we also recommend checking **Update All Orders** in the Requirement Status Update frame, but that may vary with your implementation.

The status will be displayed as the program runs.



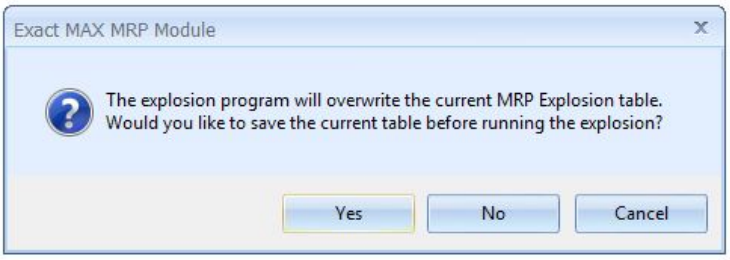
Step 2

You are now ready to run the MRP explosion. From the **Batch** menu choose **MRP Explosion**.



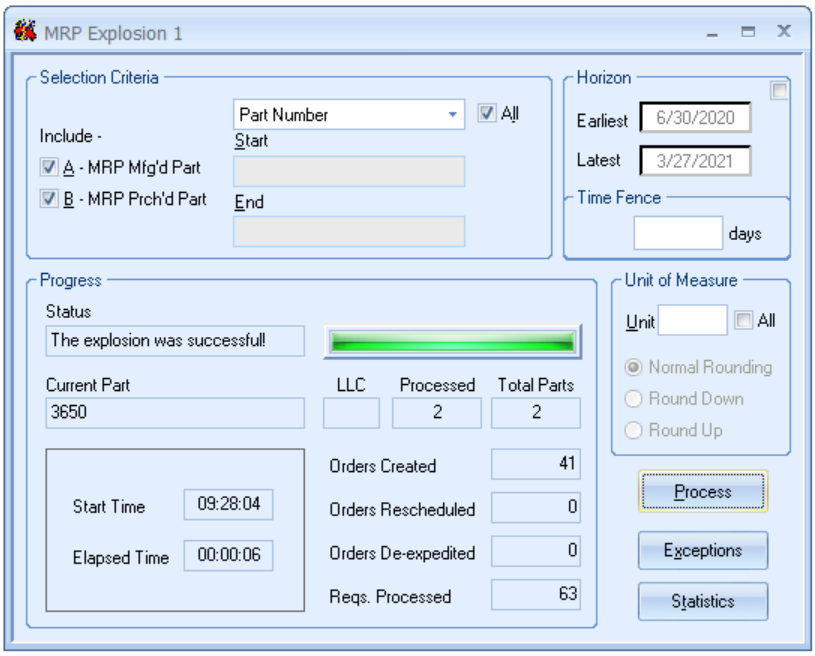
Choose **All** parts and be sure both **A** and **B** part types are checked. Most organizations simply use the defaults on this screen. You can, however, review the other options available on this screen by clicking the F1 key to bring up the help for this program.

Click **Process** to start the explosion. Answer **No** to this message.



If you answer **Yes** to the above message, it will store the last exception report as a table in your MAX SQL database. Over time, these tables will need to be deleted by your system administrator.

The status will be displayed as the program is running,



When the MRP Explosion is complete, click the **Exceptions** button to continue.

Congratulations

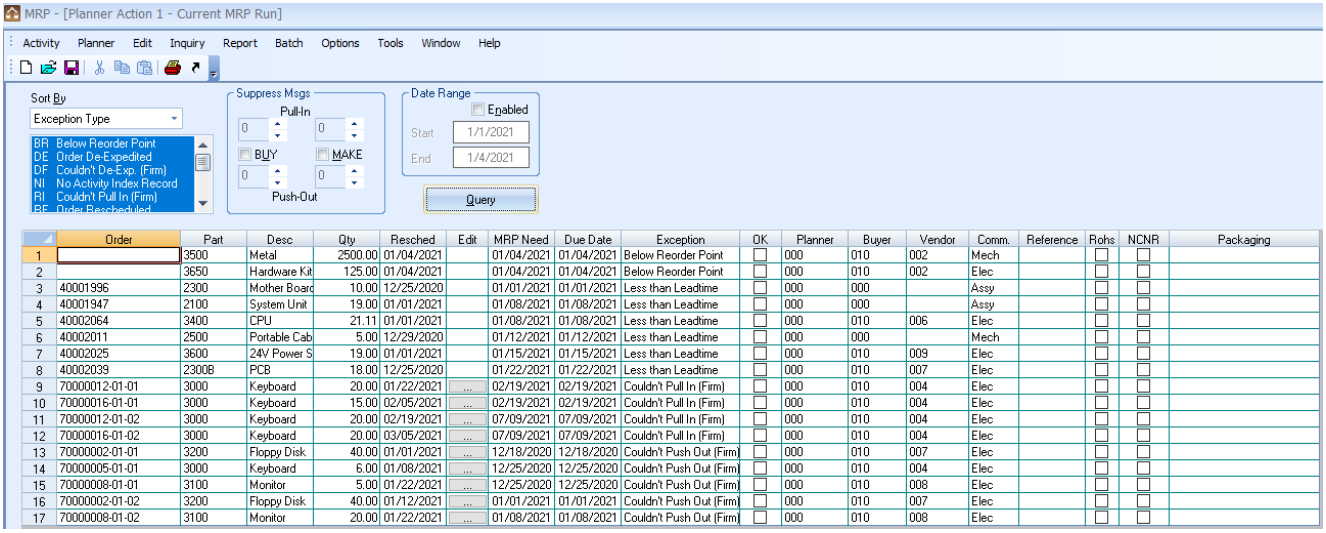
You have successfully performed an MRP Explosion. The next section reviews the exception messages (problems with the plan) generated from the MRP run.

Chapter 13

Once the MRP Explosion has completed, we need to review the output so verify that the planning process matches what we expect. Three activities in the MRP – Activity menu system help us determine that.

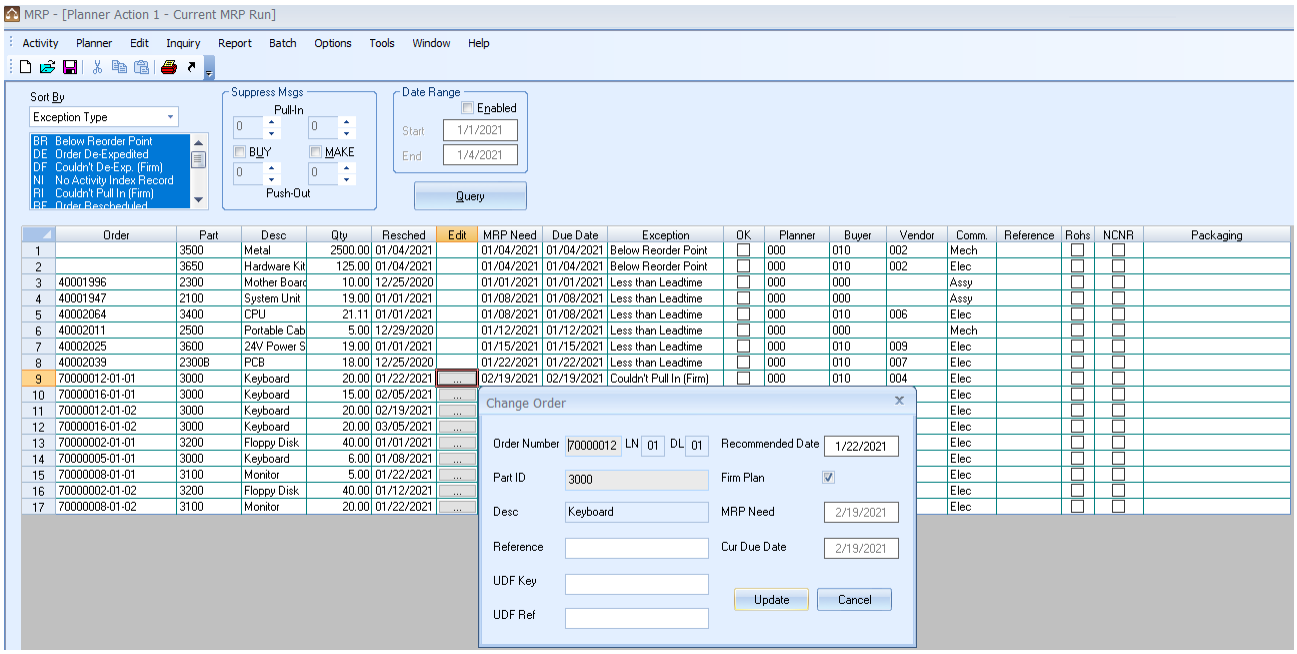
Planner Action

The **Planner Action** dialogue displays items that require attention (exception messages) after an MRP run in an easy-to-use grid. You can quickly identify problems with the plan and make changes to balance supply and demand. Selection criteria can include a date range as well as a range based on a field such as Part ID or Exception Type.



	Order	Part	Desc	Qty	Resched	Edit	MRP Need	Due Date	Exception	OK	Planner	Buyer	Vendor	Comm.	Reference	Rohs	NCNR	Packaging
1		3500	Metal	2500.00	01/04/2021		01/04/2021	01/04/2021	Below Reorder Point		000	010	002	Mech				
2		3650	Hardware Kit	125.00	01/04/2021		01/04/2021	01/04/2021	Below Reorder Point		000	010	002	Elec				
3	40001996	2300	Mother Board	10.00	12/25/2020		01/01/2021	01/01/2021	Less than Leadtime		000	000		Assy				
4	40001947	2100	System Unit	19.00	01/01/2021		01/08/2021	01/08/2021	Less than Leadtime		000	000		Assy				
5	40002064	3400	CPU	21.11	01/01/2021		01/08/2021	01/08/2021	Less than Leadtime		000	010	006	Elec				
6	40002011	2500	Portable Cab	5.00	12/29/2020		01/12/2021	01/12/2021	Less than Leadtime		000	000		Mech				
7	40002025	3600	24V Power S	19.00	01/01/2021		01/15/2021	01/15/2021	Less than Leadtime		000	010	009	Elec				
8	40002039	2300B	PCB	18.00	12/25/2020		01/22/2021	01/22/2021	Less than Leadtime		000	010	007	Elec				
9	70000012-01-01	3000	Keyboard	20.00	01/22/2021	...	02/19/2021	02/19/2021	Couldn't Pull In (Firm)		000	010	004	Elec				
10	70000016-01-01	3000	Keyboard	15.00	02/05/2021	...	02/19/2021	02/19/2021	Couldn't Pull In (Firm)		000	010	004	Elec				
11	70000012-01-02	3000	Keyboard	20.00	02/19/2021	...	07/09/2021	07/09/2021	Couldn't Pull In (Firm)		000	010	004	Elec				
12	70000016-01-02	3000	Keyboard	20.00	03/05/2021	...	07/09/2021	07/09/2021	Couldn't Pull In (Firm)		000	010	004	Elec				
13	70000002-01-01	3200	Floppy Disk	40.00	01/01/2021	...	12/18/2020	12/18/2020	Couldn't Push Out (Firm)		000	010	007	Elec				
14	70000005-01-01	3000	Keyboard	6.00	01/08/2021	...	12/25/2020	12/25/2020	Couldn't Push Out (Firm)		000	010	004	Elec				
15	70000008-01-01	3100	Monitor	5.00	01/22/2021	...	12/25/2020	12/25/2020	Couldn't Push Out (Firm)		000	010	008	Elec				
16	70000002-01-02	3200	Floppy Disk	40.00	01/12/2021	...	01/01/2021	01/01/2021	Couldn't Push Out (Firm)		000	010	007	Elec				
17	70000008-01-02	3100	Monitor	20.00	01/22/2021	...	01/08/2021	01/08/2021	Couldn't Push Out (Firm)		000	010	008	Elec				

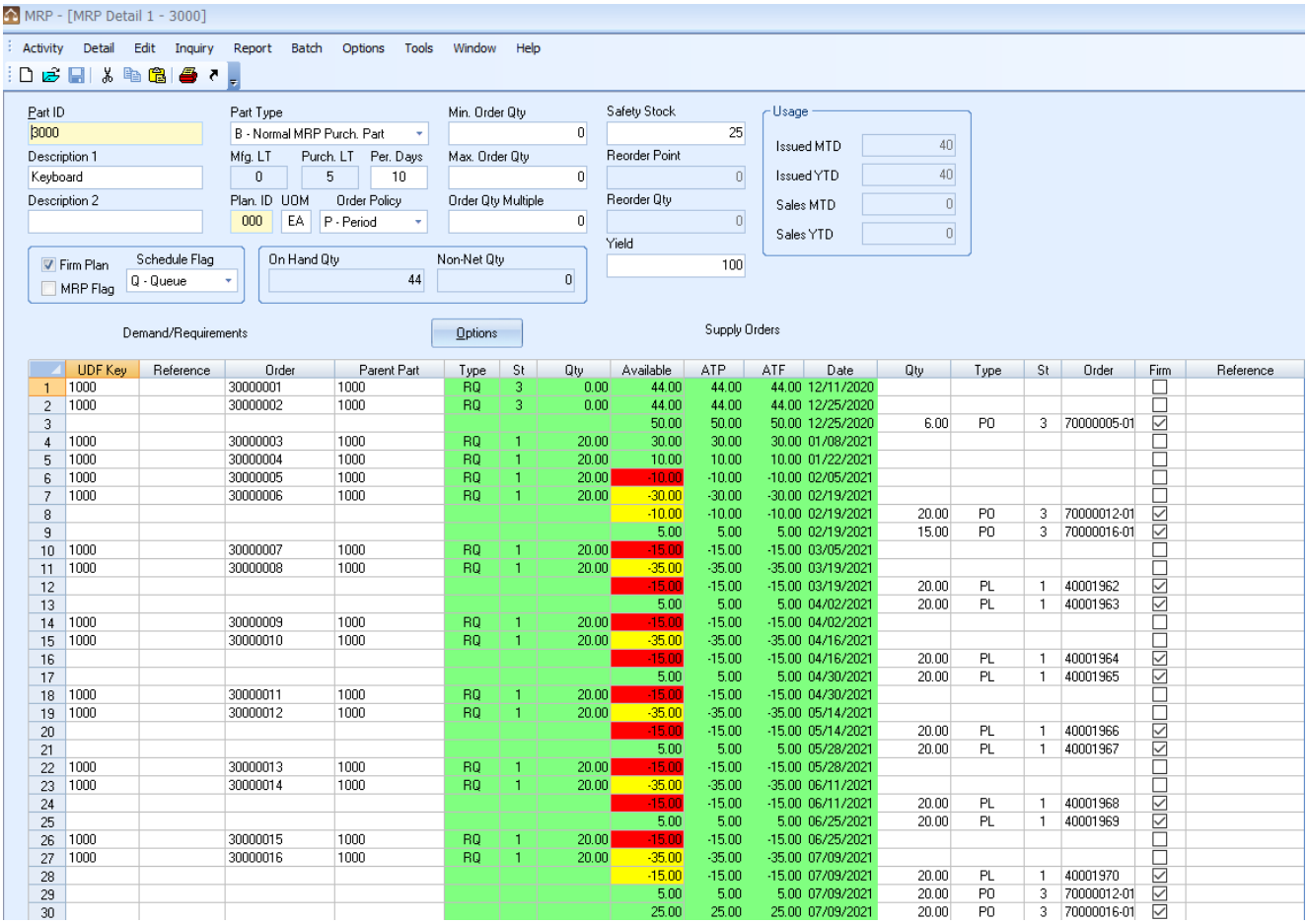
On some exceptions, you may change the due dates on orders directly from this screen by pressing the ellipse button […].



Exception messages can be marked as being resolved so they do not have to be viewed again, until the next MRP run. Double-click the Part ID to view MRP Detail.

MRP Detail

MRP – Activity – MRP Detail dialogue is the very central part of the planning system. It allows you to view the entire time-phased supply and demand picture for a part. An intuitive display format is designed around the planner's job, simplifying MRP use and training. It should be the very first place you go to investigate the existing plan for any part in the system.

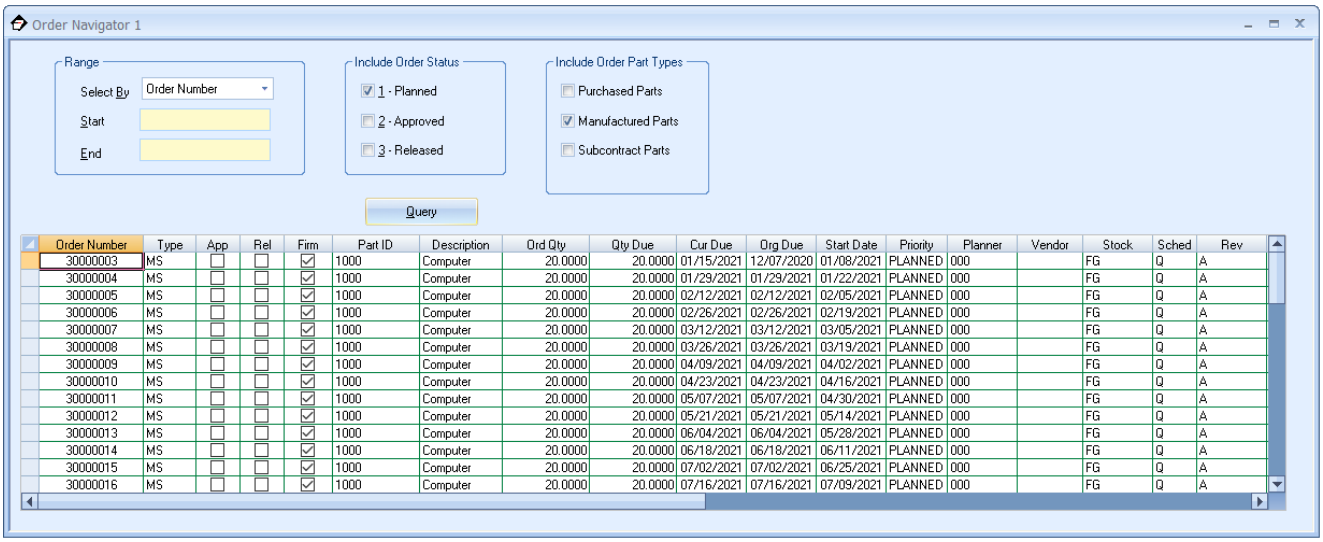


	UDF Key	Reference	Order	Parent Part	Type	St	Qty	Available	ATP	ATF	Date	Qty	Type	St	Order	Firm	Reference
1	1000		30000001	1000	RQ	3	0.00	44.00	44.00	44.00	12/11/2020					☐	
2	1000		30000002	1000	RQ	3	0.00	44.00	44.00	44.00	12/25/2020					☐	
3								50.00	50.00	50.00	12/25/2020	6.00	PO	3	70000005-01	☑	
4	1000		30000003	1000	RQ	1	20.00	30.00	30.00	30.00	01/08/2021					☐	
5	1000		30000004	1000	RQ	1	20.00	10.00	10.00	10.00	01/22/2021					☐	
6	1000		30000005	1000	RQ	1	20.00	-10.00	-10.00	-10.00	02/05/2021					☐	
7	1000		30000006	1000	RQ	1	20.00	-30.00	-30.00	-30.00	02/19/2021					☐	
8								-10.00	-10.00	-10.00	02/19/2021	20.00	PO	3	70000012-01	☑	
9								5.00	5.00	5.00	02/19/2021	15.00	PO	3	70000016-01	☑	
10	1000		30000007	1000	RQ	1	20.00	-15.00	-15.00	-15.00	03/05/2021					☐	
11	1000		30000008	1000	RQ	1	20.00	-35.00	-35.00	-35.00	03/19/2021					☐	
12								-15.00	-15.00	-15.00	03/19/2021	20.00	PL	1	40001962	☑	
13								5.00	5.00	5.00	04/02/2021	20.00	PL	1	40001963	☑	
14	1000		30000009	1000	RQ	1	20.00	-15.00	-15.00	-15.00	04/02/2021					☐	
15	1000		30000010	1000	RQ	1	20.00	-35.00	-35.00	-35.00	04/16/2021					☐	
16								-15.00	-15.00	-15.00	04/16/2021	20.00	PL	1	40001964	☑	
17								5.00	5.00	5.00	04/30/2021	20.00	PL	1	40001965	☑	
18	1000		30000011	1000	RQ	1	20.00	-15.00	-15.00	-15.00	04/30/2021					☐	
19	1000		30000012	1000	RQ	1	20.00	-35.00	-35.00	-35.00	05/14/2021					☐	
20								-15.00	-15.00	-15.00	05/14/2021	20.00	PL	1	40001966	☑	
21								5.00	5.00	5.00	05/28/2021	20.00	PL	1	40001967	☑	
22	1000		30000013	1000	RQ	1	20.00	-15.00	-15.00	-15.00	05/28/2021					☐	
23	1000		30000014	1000	RQ	1	20.00	-35.00	-35.00	-35.00	06/11/2021					☐	
24								-15.00	-15.00	-15.00	06/11/2021	20.00	PL	1	40001968	☑	
25								5.00	5.00	5.00	06/25/2021	20.00	PL	1	40001969	☑	
26	1000		30000015	1000	RQ	1	20.00	-15.00	-15.00	-15.00	06/25/2021					☐	
27	1000		30000016	1000	RQ	1	20.00	-35.00	-35.00	-35.00	07/09/2021					☐	
28								-15.00	-15.00	-15.00	07/09/2021	20.00	PL	1	40001970	☑	
29								5.00	5.00	5.00	07/09/2021	20.00	PO	3	70000012-01	☑	
30								25.00	25.00	25.00	07/09/2021	20.00	PO	3	70000016-01	☑	

A double-click on an order number on the Demand side will allow you to validate demand through single or multiple level pegging to the parent order, at least up to you reach the customer order (if any). If you double-click a Supply Order, the Order Navigator screen will activate to maintain shop and planned purchase orders.

Order Navigator

MRP – Activity – Order Navigator will display a specified range of orders which you can edit and approve on-line, immediately seeing the effect of the changes.



Order Number	Type	App	Rel	Firm	Part ID	Description	Ord Qty	Qty Due	Cur Due	Org Due	Start Date	Priority	Planner	Vendor	Stock	Sched	Rev
30000003	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	01/15/2021	12/07/2020	01/08/2021	PLANNED	000		FG	Q	A
30000004	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	01/29/2021	01/29/2021	01/22/2021	PLANNED	000		FG	Q	A
30000005	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	02/12/2021	02/12/2021	02/05/2021	PLANNED	000		FG	Q	A
30000006	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	02/26/2021	02/26/2021	02/19/2021	PLANNED	000		FG	Q	A
30000007	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	03/12/2021	03/12/2021	03/05/2021	PLANNED	000		FG	Q	A
30000008	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	03/26/2021	03/26/2021	03/19/2021	PLANNED	000		FG	Q	A
30000009	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	04/09/2021	04/09/2021	04/02/2021	PLANNED	000		FG	Q	A
30000010	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	04/23/2021	04/23/2021	04/16/2021	PLANNED	000		FG	Q	A
30000011	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	05/07/2021	05/07/2021	04/30/2021	PLANNED	000		FG	Q	A
30000012	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	05/21/2021	05/21/2021	05/14/2021	PLANNED	000		FG	Q	A
30000013	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	06/04/2021	06/04/2021	05/28/2021	PLANNED	000		FG	Q	A
30000014	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	06/18/2021	06/18/2021	06/11/2021	PLANNED	000		FG	Q	A
30000015	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	07/02/2021	07/02/2021	06/25/2021	PLANNED	000		FG	Q	A
30000016	MS	☐	☐	☑	1000	Computer	20.0000	20.0000	07/16/2021	07/16/2021	07/09/2021	PLANNED	000		FG	Q	A

The **Order Navigator** is where planners responsible for manufactured parts will spend the majority of their time. There is a similar screen in the **Purchasing** module (i.e., **Activity – Purchase Schedule**) for buyers.

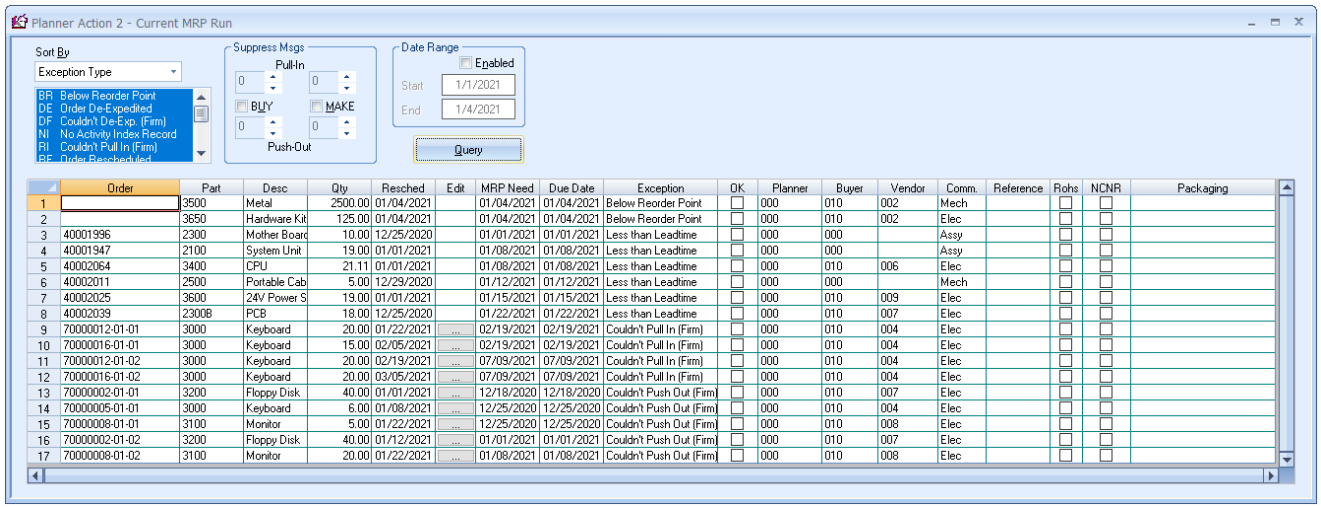
Chapter 14

Planner Actions

In this section, you will learn how to review the exception messages generated by the MRP Explosion.

Step 1

You can either click the **Exceptions** button on your MRP Explosion screen, or from the **Activity** menu, choose **Planner Action**. One of the recommended methods of reviewing exceptions is by **Exception Type**. You can however use the fields at the top of this window to narrow down the area you are concerned with. Click the **Query** button to populate the grid.

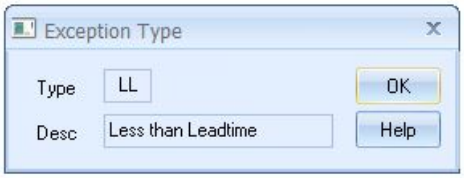


	Order	Part	Desc	Qty	Resched	Edit	MRP Need	Due Date	Exception	OK	Planner	Buyer	Vendor	Comm.	Reference	Rohs	NCNR	Packaging
1		3500	Metal	2500.00	01/04/2021		01/04/2021	01/04/2021	Below Reorder Point	☐	000	010	002	Mech		☐	☐	
2		3650	Hardware Kit	125.00	01/04/2021		01/04/2021	01/04/2021	Below Reorder Point	☐	000	010	002	Elec		☐	☐	
3	40001996	2300	Mother Board	10.00	12/25/2020		01/01/2021	01/01/2021	Less than Leadtime	☐	000	000		Assy		☐	☐	
4	40001947	2100	System Unit	19.00	01/01/2021		01/08/2021	01/08/2021	Less than Leadtime	☐	000	000		Assy		☐	☐	
5	40002064	3400	CPU	21.11	01/01/2021		01/08/2021	01/08/2021	Less than Leadtime	☐	000	010	006	Elec		☐	☐	
6	40002011	2500	Portable Cab	5.00	12/29/2020		01/12/2021	01/12/2021	Less than Leadtime	☐	000	000		Mech		☐	☐	
7	40002025	3600	24V Power S	19.00	01/01/2021		01/15/2021	01/15/2021	Less than Leadtime	☐	000	010	009	Elec		☐	☐	
8	40002039	2300B	PCB	18.00	12/25/2020		01/22/2021	01/22/2021	Less than Leadtime	☐	000	010	007	Elec		☐	☐	
9	70000012-01-01	3000	Keyboard	20.00	01/22/2021	...	02/19/2021	02/19/2021	Couldn't Pull In (Firm)	☐	000	010	004	Elec		☐	☐	
10	70000016-01-01	3000	Keyboard	15.00	02/05/2021	...	02/19/2021	02/19/2021	Couldn't Pull In (Firm)	☐	000	010	004	Elec		☐	☐	
11	70000012-01-02	3000	Keyboard	20.00	02/19/2021	...	07/09/2021	07/09/2021	Couldn't Pull In (Firm)	☐	000	010	004	Elec		☐	☐	
12	70000016-01-02	3000	Keyboard	20.00	03/05/2021	...	07/09/2021	07/09/2021	Couldn't Pull In (Firm)	☐	000	010	004	Elec		☐	☐	
13	70000002-01-01	3200	Floppy Disk	40.00	01/01/2021	...	12/18/2020	12/18/2020	Couldn't Push Out (Firm)	☐	000	010	007	Elec		☐	☐	
14	70000005-01-01	3000	Keyboard	6.00	01/08/2021	...	12/25/2020	12/25/2020	Couldn't Push Out (Firm)	☐	000	010	004	Elec		☐	☐	
15	70000008-01-01	3100	Monitor	5.00	01/22/2021	...	12/25/2020	12/25/2020	Couldn't Push Out (Firm)	☐	000	010	008	Elec		☐	☐	
16	70000002-01-02	3200	Floppy Disk	40.00	01/12/2021	...	01/01/2021	01/01/2021	Couldn't Push Out (Firm)	☐	000	010	007	Elec		☐	☐	
17	70000008-01-02	3100	Monitor	20.00	01/22/2021	...	01/08/2021	01/08/2021	Couldn't Push Out (Firm)	☐	000	010	008	Elec		☐	☐	

As items are resolved, click the **OK** check box on the grid to indicate the item is handled. Exception filters allow Planners to concentrate on the most critical problems first, eliminating overwhelming amounts of data.

Step 2

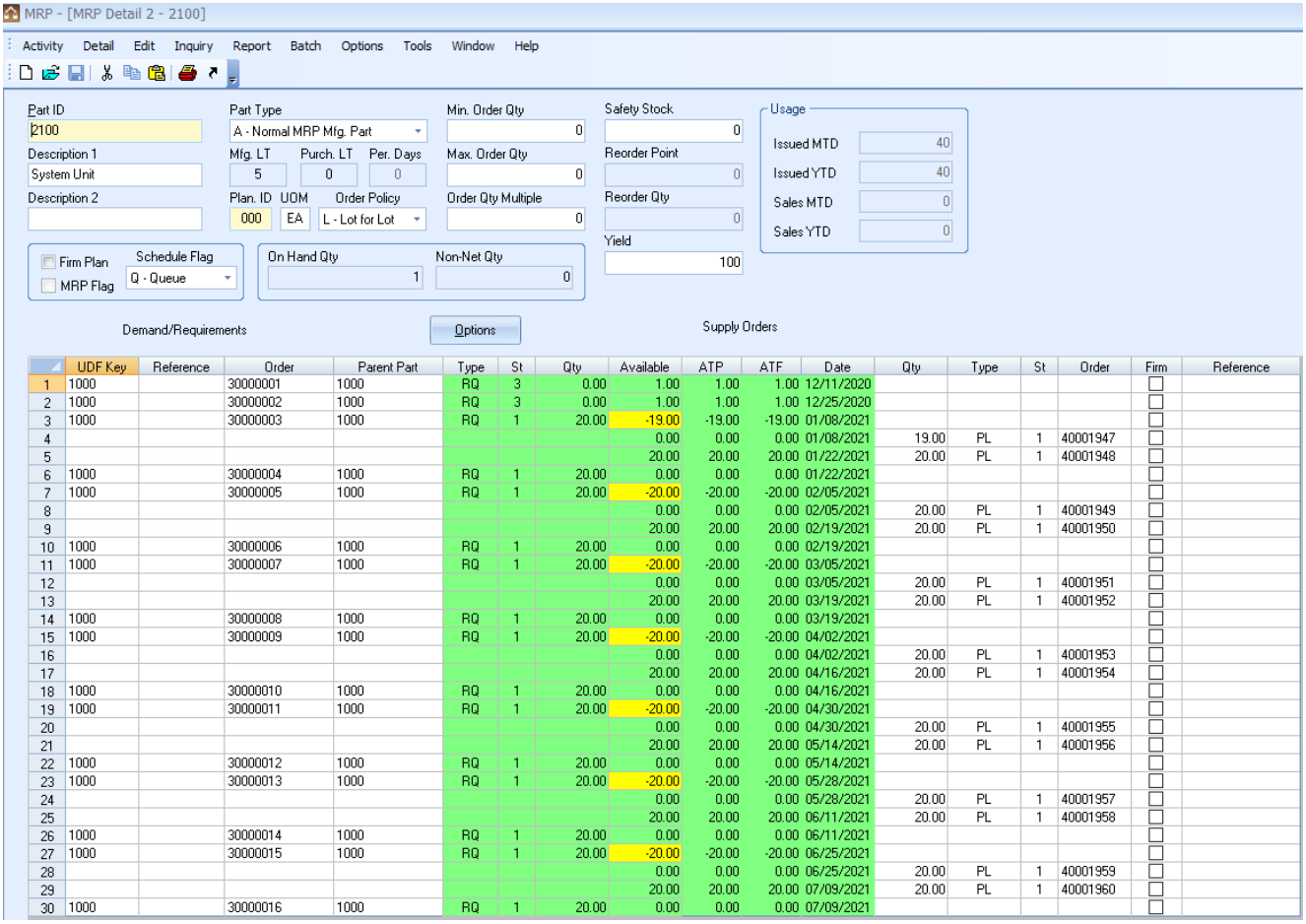
Place your cursor on one of the exception messages and double-click to view the exception message description.



You can also choose to have the Planner Action grid show the complete exception message rather than the codes. This preference is set under **Preferences** from the **Options** menu.

Step 3

Double-click on Part 2100 to view the MRP Detail information for that part.



	UDF Key	Reference	Order	Parent Part	Type	St	Qty	Available	ATP	ATF	Date	Qty	Type	St	Order	Firm	Reference
1	1000		30000001	1000	RQ	3	0.00	1.00	1.00	1.00	12/11/2020						
2	1000		30000002	1000	RQ	3	0.00	1.00	1.00	1.00	12/25/2020						
3	1000		30000003	1000	RQ	1	20.00	-19.00	-19.00	-19.00	01/08/2021						
4								0.00	0.00	0.00	01/08/2021	19.00	PL	1	40001947		
5								20.00	20.00	20.00	01/22/2021	20.00	PL	1	40001948		
6	1000		30000004	1000	RQ	1	20.00	0.00	0.00	0.00	01/22/2021						
7	1000		30000005	1000	RQ	1	20.00	-20.00	-20.00	-20.00	02/05/2021						
8								0.00	0.00	0.00	02/05/2021	20.00	PL	1	40001949		
9								20.00	20.00	20.00	02/19/2021	20.00	PL	1	40001950		
10	1000		30000006	1000	RQ	1	20.00	0.00	0.00	0.00	02/19/2021						
11	1000		30000007	1000	RQ	1	20.00	-20.00	-20.00	-20.00	03/05/2021						
12								0.00	0.00	0.00	03/05/2021	20.00	PL	1	40001951		
13								20.00	20.00	20.00	03/19/2021	20.00	PL	1	40001952		
14	1000		30000008	1000	RQ	1	20.00	0.00	0.00	0.00	03/19/2021						
15	1000		30000009	1000	RQ	1	20.00	-20.00	-20.00	-20.00	04/02/2021						
16								0.00	0.00	0.00	04/02/2021	20.00	PL	1	40001953		
17								20.00	20.00	20.00	04/16/2021	20.00	PL	1	40001954		
18	1000		30000010	1000	RQ	1	20.00	0.00	0.00	0.00	04/16/2021						
19	1000		30000011	1000	RQ	1	20.00	-20.00	-20.00	-20.00	04/30/2021						
20								0.00	0.00	0.00	04/30/2021	20.00	PL	1	40001955		
21								20.00	20.00	20.00	05/14/2021	20.00	PL	1	40001956		
22	1000		30000012	1000	RQ	1	20.00	0.00	0.00	0.00	05/14/2021						
23	1000		30000013	1000	RQ	1	20.00	-20.00	-20.00	-20.00	05/28/2021						
24								0.00	0.00	0.00	05/28/2021	20.00	PL	1	40001957		
25								20.00	20.00	20.00	06/11/2021	20.00	PL	1	40001958		
26	1000		30000014	1000	RQ	1	20.00	0.00	0.00	0.00	06/11/2021						
27	1000		30000015	1000	RQ	1	20.00	-20.00	-20.00	-20.00	06/25/2021						
28								0.00	0.00	0.00	06/25/2021	20.00	PL	1	40001959		
29								20.00	20.00	20.00	07/09/2021	20.00	PL	1	40001960		
30	1000		30000016	1000	RQ	1	20.00	0.00	0.00	0.00	07/09/2021						

Congratulations

You learned how to review exception messages from an MRP Explosion and where to go to view more detailed information on any part. In the next section, you will find out how to peg up to the orders that are creating the requirements for the part.

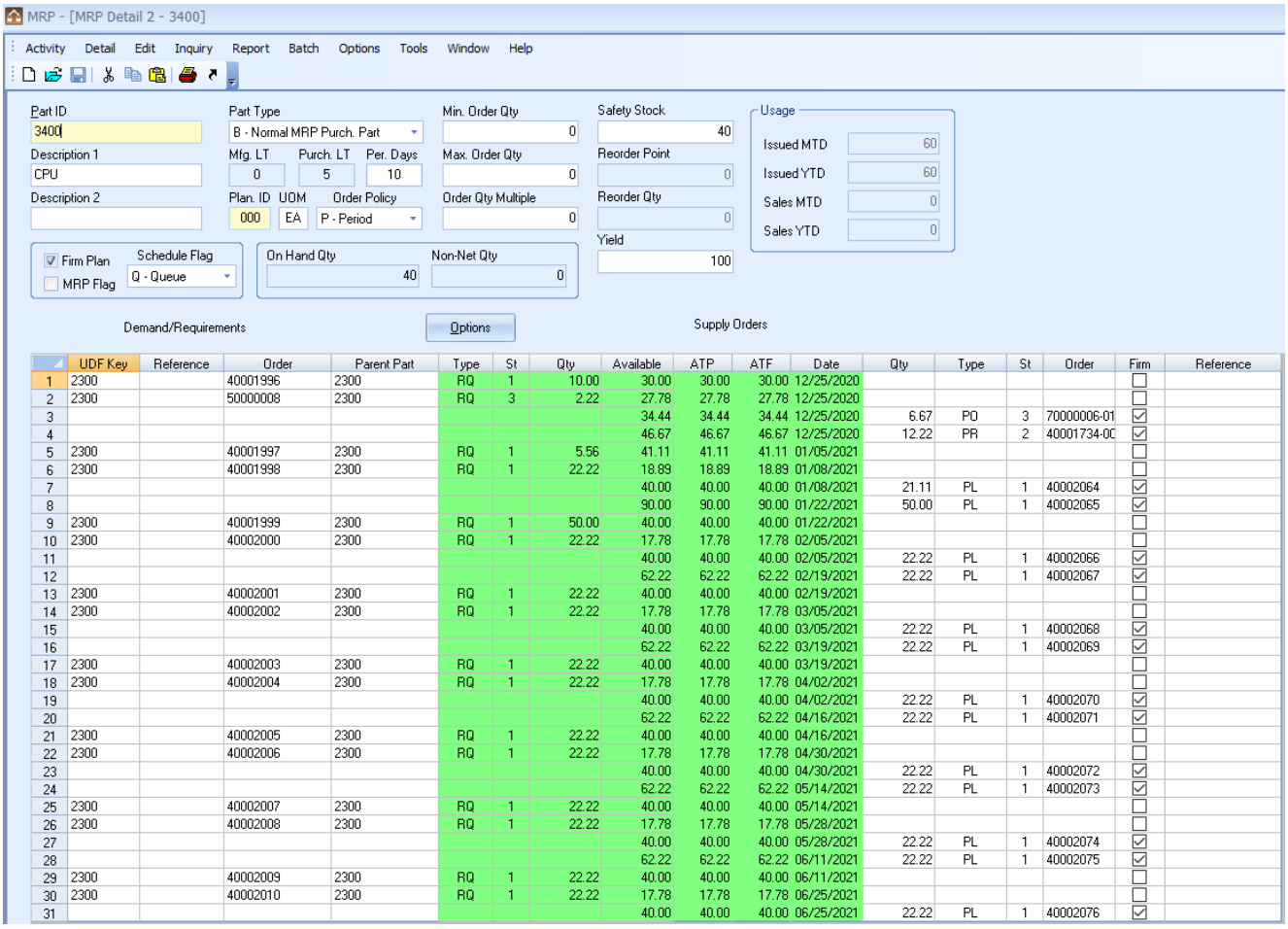
Chapter 15

Order Pegging

The MRP Detail screen can be reached by double-clicking on a part in the Planner Action grid as was done in the last chapter or you can access it directly from the **Activity** menu. From the **MRP Detail** screen, you can either peg up to view the orders that are creating requirements on the *Demand/ Requirements* side of the grid, or you can, view and edit the actual orders on the *Supply* side.

Step 1

Bring up the MRP Detail screen for Part 3400 if you have not done so already.

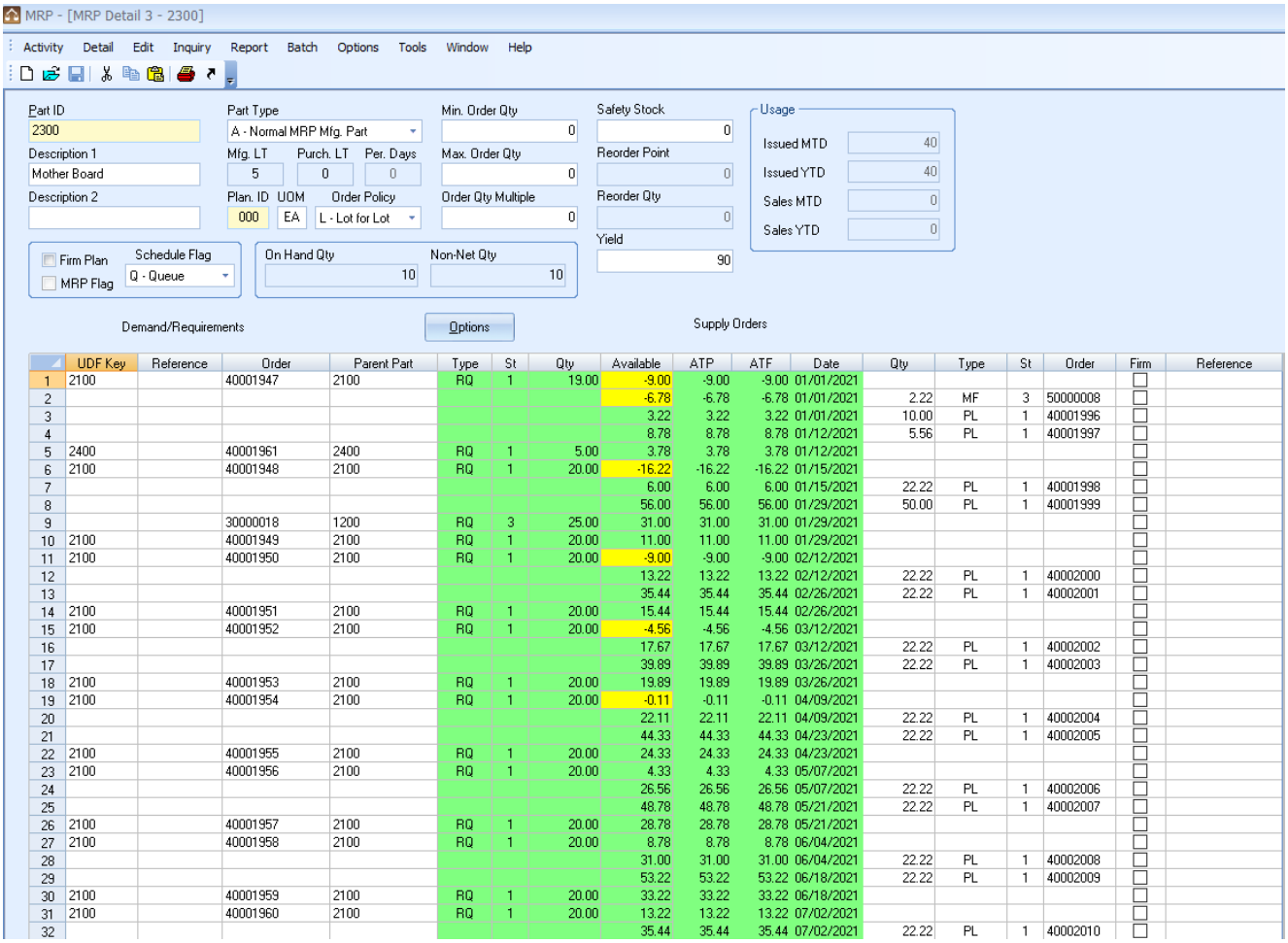


	UDF Key	Reference	Order	Parent Part	Type	St	Qty	Available	ATP	ATF	Date	Qty	Type	St	Order	Firm	Reference
1	2300		40001996	2300	RQ	1	10.00	30.00	30.00	30.00	12/25/2020					☐	
2	2300		50000008	2300	RQ	3	2.22	27.78	27.78	27.78	12/25/2020					☐	
3								34.44	34.44	34.44	12/25/2020	6.67	PO	3	70000006-01	☑	
4								46.67	46.67	46.67	12/25/2020	12.22	PR	2	40001734-00	☑	
5	2300		40001997	2300	RQ	1	5.56	41.11	41.11	41.11	01/05/2021					☐	
6	2300		40001998	2300	RQ	1	22.22	18.89	18.89	18.89	01/08/2021					☐	
7								40.00	40.00	40.00	01/08/2021	21.11	PL	1	40002064	☑	
8								90.00	90.00	90.00	01/22/2021	50.00	PL	1	40002065	☑	
9	2300		40001999	2300	RQ	1	50.00	40.00	40.00	40.00	01/22/2021					☐	
10	2300		40002000	2300	RQ	1	22.22	17.78	17.78	17.78	02/05/2021					☐	
11								40.00	40.00	40.00	02/05/2021	22.22	PL	1	40002066	☑	
12								62.22	62.22	62.22	02/19/2021	22.22	PL	1	40002067	☑	
13	2300		40002001	2300	RQ	1	22.22	40.00	40.00	40.00	02/19/2021					☐	
14	2300		40002002	2300	RQ	1	22.22	17.78	17.78	17.78	03/05/2021					☐	
15								40.00	40.00	40.00	03/05/2021	22.22	PL	1	40002068	☑	
16								62.22	62.22	62.22	03/19/2021	22.22	PL	1	40002069	☑	
17	2300		40002003	2300	RQ	1	22.22	40.00	40.00	40.00	03/19/2021					☐	
18	2300		40002004	2300	RQ	1	22.22	17.78	17.78	17.78	04/02/2021					☐	
19								40.00	40.00	40.00	04/02/2021	22.22	PL	1	40002070	☑	
20								62.22	62.22	62.22	04/16/2021	22.22	PL	1	40002071	☑	
21	2300		40002005	2300	RQ	1	22.22	40.00	40.00	40.00	04/16/2021					☐	
22	2300		40002006	2300	RQ	1	22.22	17.78	17.78	17.78	04/30/2021					☐	
23								40.00	40.00	40.00	04/30/2021	22.22	PL	1	40002072	☑	
24								62.22	62.22	62.22	05/14/2021	22.22	PL	1	40002073	☑	
25	2300		40002007	2300	RQ	1	22.22	40.00	40.00	40.00	05/14/2021					☐	
26	2300		40002008	2300	RQ	1	22.22	17.78	17.78	17.78	05/28/2021					☐	
27								40.00	40.00	40.00	05/28/2021	22.22	PL	1	40002074	☑	
28								62.22	62.22	62.22	06/11/2021	22.22	PL	1	40002075	☑	
29	2300		40002009	2300	RQ	1	22.22	40.00	40.00	40.00	06/11/2021					☐	
30	2300		40002010	2300	RQ	1	22.22	17.78	17.78	17.78	06/25/2021					☐	
31								40.00	40.00	40.00	06/25/2021	22.22	PL	1	40002076	☑	

The color coded projected available column alerts you to actions required to prevent shortages. Also, all the MRP Part Planning data is displayed and can be maintained from this dialogue. These are the fields at the top of the screen, which update the Part Master table.

Step 2

Choose one of the order numbers on the Demand side and double-click it. A new MRP Detail screen will appear for the parent part that is creating the requirement related to the order you double-clicked. The order that was on the left side of the component part (i.e., demand) can now be found on the right side of the parent part (i.e., supply). You can match it up with additional demand on the left and repeat the process to the next level. Note that you cannot open a customer order directly from this screen.



	UDF Key	Reference	Order	Parent Part	Type	St	Qty	Available	ATP	ATF	Date	Qty	Type	St	Order	Firm	Reference
1	2100		40001947	2100	RQ	1	19.00	-9.00	-9.00	-9.00	01/01/2021					☐	
2								-6.78	-6.78	-6.78	01/01/2021	2.22	MF	3	50000008	☐	
3								3.22	3.22	3.22	01/01/2021	10.00	PL	1	40001996	☐	
4								8.78	8.78	8.78	01/12/2021	5.56	PL	1	40001997	☐	
5	2400		40001961	2400	RQ	1	5.00	3.78	3.78	3.78	01/12/2021					☐	
6	2100		40001948	2100	RQ	1	20.00	-16.22	-16.22	-16.22	01/15/2021					☐	
7								6.00	6.00	6.00	01/15/2021	22.22	PL	1	40001998	☐	
8								56.00	56.00	56.00	01/29/2021	50.00	PL	1	40001999	☐	
9			30000018	1200	RQ	3	25.00	31.00	31.00	31.00	01/29/2021					☐	
10	2100		40001949	2100	RQ	1	20.00	11.00	11.00	11.00	01/29/2021					☐	
11	2100		40001950	2100	RQ	1	20.00	-9.00	-9.00	-9.00	02/12/2021					☐	
12								13.22	13.22	13.22	02/12/2021	22.22	PL	1	40002000	☐	
13								35.44	35.44	35.44	02/26/2021	22.22	PL	1	40002001	☐	
14	2100		40001951	2100	RQ	1	20.00	15.44	15.44	15.44	02/26/2021					☐	
15	2100		40001952	2100	RQ	1	20.00	-4.56	-4.56	-4.56	03/12/2021					☐	
16								17.67	17.67	17.67	03/12/2021	22.22	PL	1	40002002	☐	
17								39.89	39.89	39.89	03/26/2021	22.22	PL	1	40002003	☐	
18	2100		40001953	2100	RQ	1	20.00	19.89	19.89	19.89	03/26/2021					☐	
19	2100		40001954	2100	RQ	1	20.00	-0.11	-0.11	-0.11	04/09/2021					☐	
20								22.11	22.11	22.11	04/09/2021	22.22	PL	1	40002004	☐	
21								44.33	44.33	44.33	04/23/2021	22.22	PL	1	40002005	☐	
22	2100		40001955	2100	RQ	1	20.00	24.33	24.33	24.33	04/23/2021					☐	
23	2100		40001956	2100	RQ	1	20.00	4.33	4.33	4.33	05/07/2021					☐	
24								26.56	26.56	26.56	05/07/2021	22.22	PL	1	40002006	☐	
25								48.78	48.78	48.78	05/21/2021	22.22	PL	1	40002007	☐	
26	2100		40001957	2100	RQ	1	20.00	28.78	28.78	28.78	05/21/2021					☐	
27	2100		40001958	2100	RQ	1	20.00	8.78	8.78	8.78	06/04/2021					☐	
28								31.00	31.00	31.00	06/04/2021	22.22	PL	1	40002008	☐	
29								53.22	53.22	53.22	06/18/2021	22.22	PL	1	40002009	☐	
30	2100		40001959	2100	RQ	1	20.00	33.22	33.22	33.22	06/18/2021					☐	
31	2100		40001960	2100	RQ	1	20.00	13.22	13.22	13.22	07/02/2021					☐	
32								35.44	35.44	35.44	07/02/2021	22.22	PL	1	40002010	☐	

As up double-click further demand orders to continue pegging upward to the top-level part, all detail screens remain on your desktop so you can easily go back to them to review.

Congratulations

Now you know how to easily peg requirements upwards. In the next section, we will cover editing and approving the planned supply orders.

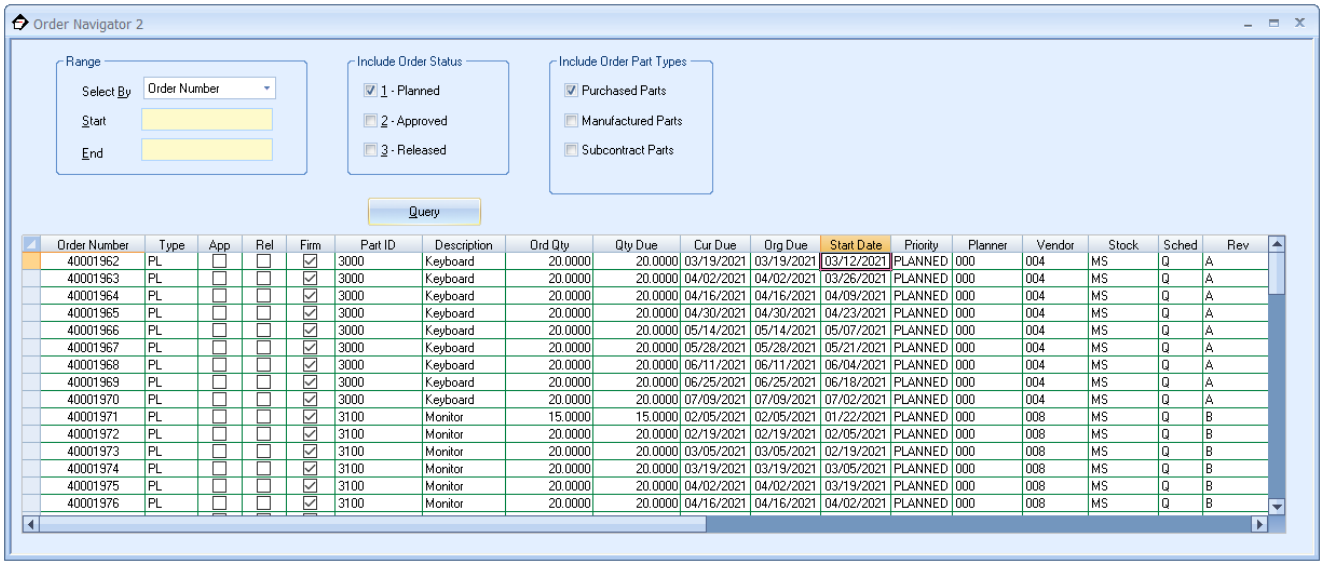
Chapter 16

Editing and Approval of MRP Generated Orders

Orders can be approved and edited on your desktop dynamically while you are working through the **Planner Action** exception messages and referring to the **MRP Detail** screens left active on your desktop.

Step 1

A double-click on a supply order in the **MRP Detail** grid will open the **Order Navigator**. You can also open it directly from the **Activity** menu by selecting **Order Navigator**. Once open, use the criteria at the top to narrow down your search and click the **Query** button.

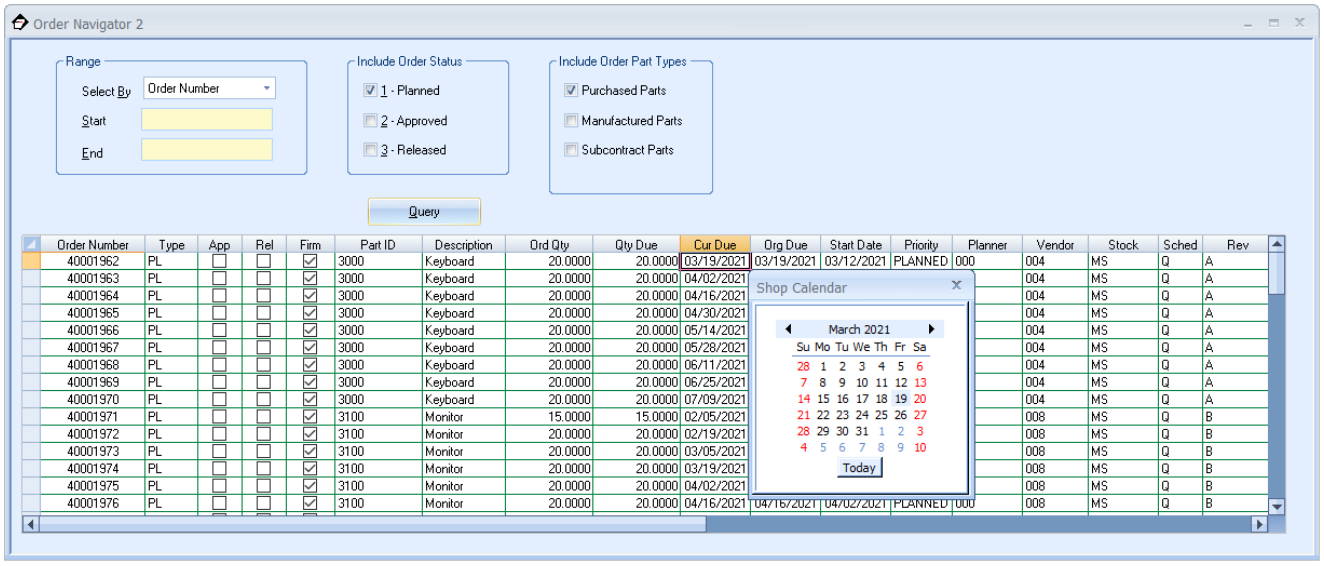


Order Number	Type	App	Rel	Firm	Part ID	Description	Ord Qty	Qty Due	Cur Due	Org Due	Start Date	Priority	Planner	Vendor	Stock	Sched	Rev
40001962	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	03/19/2021	03/19/2021	03/12/2021	PLANNED	000	004	MS	Q	A
40001963	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	04/02/2021	04/02/2021	03/26/2021	PLANNED	000	004	MS	Q	A
40001964	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	04/16/2021	04/16/2021	04/09/2021	PLANNED	000	004	MS	Q	A
40001965	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	04/30/2021	04/30/2021	04/23/2021	PLANNED	000	004	MS	Q	A
40001966	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	05/14/2021	05/14/2021	05/07/2021	PLANNED	000	004	MS	Q	A
40001967	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	05/28/2021	05/28/2021	05/21/2021	PLANNED	000	004	MS	Q	A
40001968	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	06/11/2021	06/11/2021	06/04/2021	PLANNED	000	004	MS	Q	A
40001969	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	06/25/2021	06/25/2021	06/18/2021	PLANNED	000	004	MS	Q	A
40001970	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	07/09/2021	07/09/2021	07/02/2021	PLANNED	000	004	MS	Q	A
40001971	PL	☐	☐	☑	3100	Monitor	15.0000	15.0000	02/05/2021	02/05/2021	01/22/2021	PLANNED	000	008	MS	Q	B
40001972	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	02/19/2021	02/19/2021	02/05/2021	PLANNED	000	008	MS	Q	B
40001973	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	03/05/2021	03/05/2021	02/19/2021	PLANNED	000	008	MS	Q	B
40001974	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	03/19/2021	03/19/2021	03/05/2021	PLANNED	000	008	MS	Q	B
40001975	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	04/02/2021	04/02/2021	03/19/2021	PLANNED	000	008	MS	Q	B
40001976	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	04/16/2021	04/16/2021	04/02/2021	PLANNED	000	008	MS	Q	B

Sort the orders by start date by clicking on the Start Date column. Verify the orders with the smallest current dates are on the top of the grid.

Step 2

Choose a 40000000-series order that is a status 1. Double-click the quantity field and then change the quantity. You can change the date by clicking into the date field to manually the date or double-click it again to bring up the calendar and choose a date.

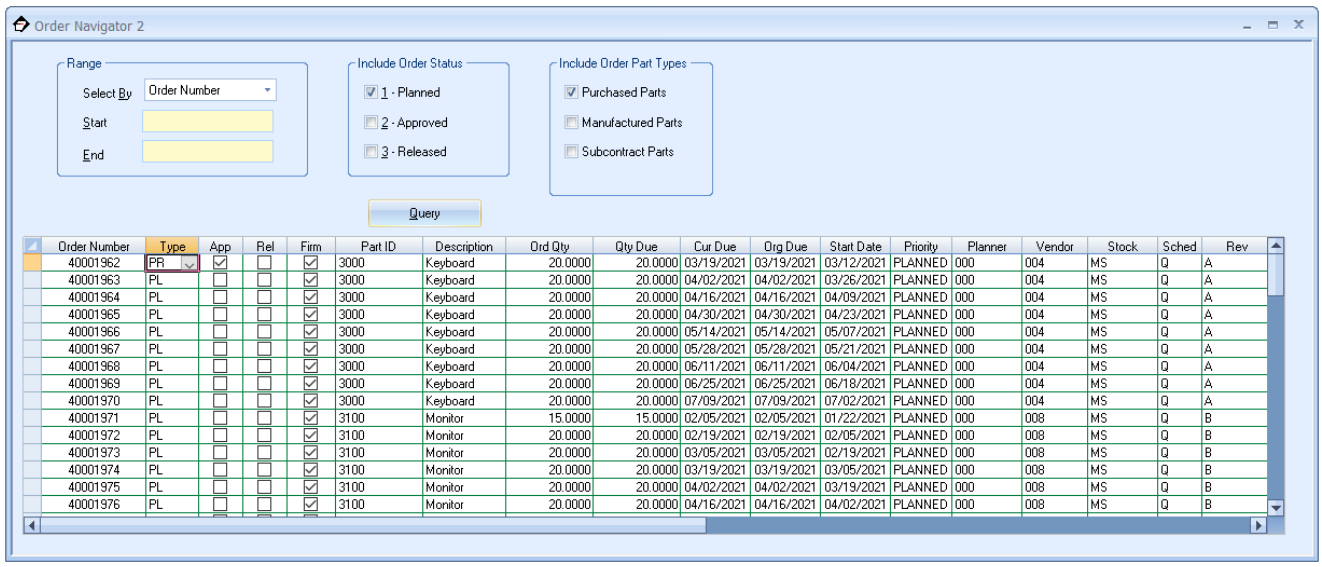


Order Number	Type	App	Rel	Firm	Part ID	Description	Ord Qty	Qty Due	Cur Due	Org Due	Start Date	Priority	Planner	Vendor	Stock	Sched	Rev
40001962	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	03/19/2021	03/19/2021	03/12/2021	PLANNED	000	004	MS	Q	A
40001963	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	04/02/2021					004	MS	Q	A
40001964	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	04/16/2021					004	MS	Q	A
40001965	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	04/30/2021					004	MS	Q	A
40001966	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	05/14/2021					004	MS	Q	A
40001967	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	05/28/2021					004	MS	Q	A
40001968	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	06/11/2021					004	MS	Q	A
40001969	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	06/25/2021					004	MS	Q	A
40001970	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	07/09/2021					004	MS	Q	A
40001971	PL	☐	☐	☑	3100	Monitor	15.0000	15.0000	02/05/2021					008	MS	Q	B
40001972	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	02/19/2021					008	MS	Q	B
40001973	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	03/05/2021					008	MS	Q	B
40001974	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	03/19/2021					008	MS	Q	B
40001975	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	04/02/2021					008	MS	Q	B
40001976	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	04/16/2021	04/16/2021	04/02/2021	PLANNED	000	008	MS	Q	B

After making the necessary changes to an order you can immediately see the effect of the changes by pegging back down to the component requirement.

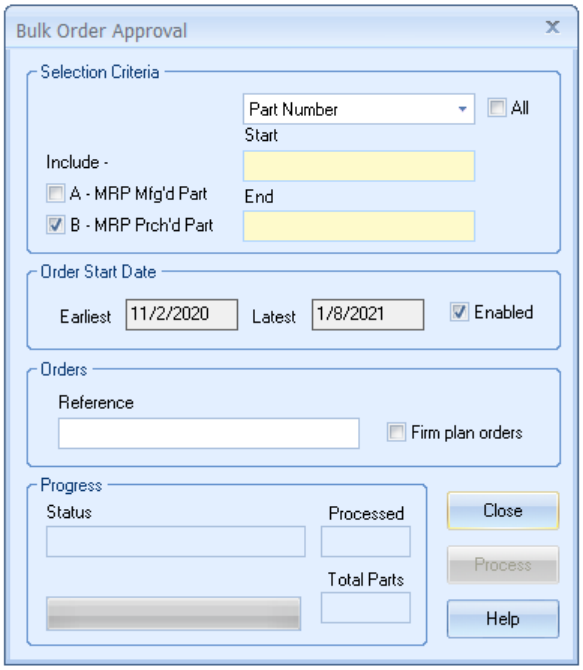
Step 3

You can now approve the order. Click on the line number button at the beginning of the line containing your order to highlight it. From the **Order** menu, choose **Approve Order**. Alternatively, you may click on the checkbox under the **App** column. Note that the Order Type will change once approved.



Order Number	Type	App	Rel	Firm	Part ID	Description	Ord Qty	Qty Due	Cur Due	Org Due	Start Date	Priority	Planner	Vendor	Stock	Sched	Rev
40001962	PR	☑	☐	☑	3000	Keyboard	20.0000	20.0000	03/19/2021	03/19/2021	03/12/2021	PLANNED	000	004	MS	Q	A
40001963	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	04/02/2021	04/02/2021	03/26/2021	PLANNED	000	004	MS	Q	A
40001964	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	04/16/2021	04/16/2021	04/09/2021	PLANNED	000	004	MS	Q	A
40001965	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	04/30/2021	04/30/2021	04/23/2021	PLANNED	000	004	MS	Q	A
40001966	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	05/14/2021	05/14/2021	05/07/2021	PLANNED	000	004	MS	Q	A
40001967	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	05/28/2021	05/28/2021	05/21/2021	PLANNED	000	004	MS	Q	A
40001968	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	06/11/2021	06/11/2021	06/04/2021	PLANNED	000	004	MS	Q	A
40001969	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	06/25/2021	06/25/2021	06/18/2021	PLANNED	000	004	MS	Q	A
40001970	PL	☐	☐	☑	3000	Keyboard	20.0000	20.0000	07/09/2021	07/09/2021	07/02/2021	PLANNED	000	004	MS	Q	A
40001971	PL	☐	☐	☑	3100	Monitor	15.0000	15.0000	02/05/2021	02/05/2021	01/22/2021	PLANNED	000	008	MS	Q	B
40001972	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	02/19/2021	02/19/2021	02/05/2021	PLANNED	000	008	MS	Q	B
40001973	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	03/05/2021	03/05/2021	02/19/2021	PLANNED	000	008	MS	Q	B
40001974	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	03/19/2021	03/19/2021	03/05/2021	PLANNED	000	008	MS	Q	B
40001975	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	04/02/2021	04/02/2021	03/19/2021	PLANNED	000	008	MS	Q	B
40001976	PL	☐	☐	☑	3100	Monitor	20.0000	20.0000	04/16/2021	04/16/2021	04/02/2021	PLANNED	000	008	MS	Q	B

Alternately, you can approve several orders at a time, provided you do not need to edit them, by choosing **Bulk Order Approval** from the **Batch** menu.



Be very careful using this process as you may approve the entire horizon if you are not careful.

Approving and releasing planned orders in the Order Navigator is the mechanism to push those orders into the **Purchasing Control** and **Shop Floor Execution** modules. Care must be taken to only release the orders that are necessary. Pushing too much into the execution phase will dramatically complicate engineering changes, raise the level of work in process and cause other ill effects on your system. Take the time and design a solid order release policy. Your Project manager can help you with that.

Congratulations

You now know how to edit and approve planned orders from the same desktop that displays your **Planner Action** exception messages and **MRP Detail**. The next section will review some of the inquiries and reports available.

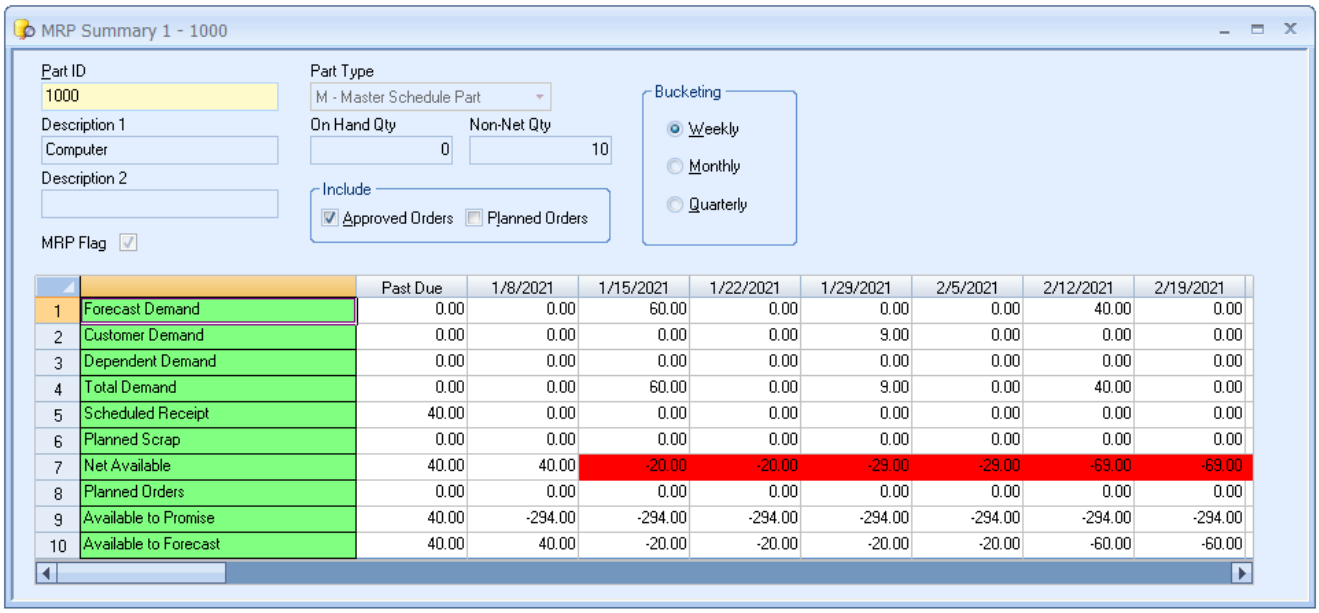
Chapter 17

Presenting Your Data

Several on-line reports are available for MRP. All are designed to help the planners do their job more efficiently.

Step 1

From the **Inquiry** menu choose **MRP Summary**. Enter Part ID 1000 or browse and choose this part.



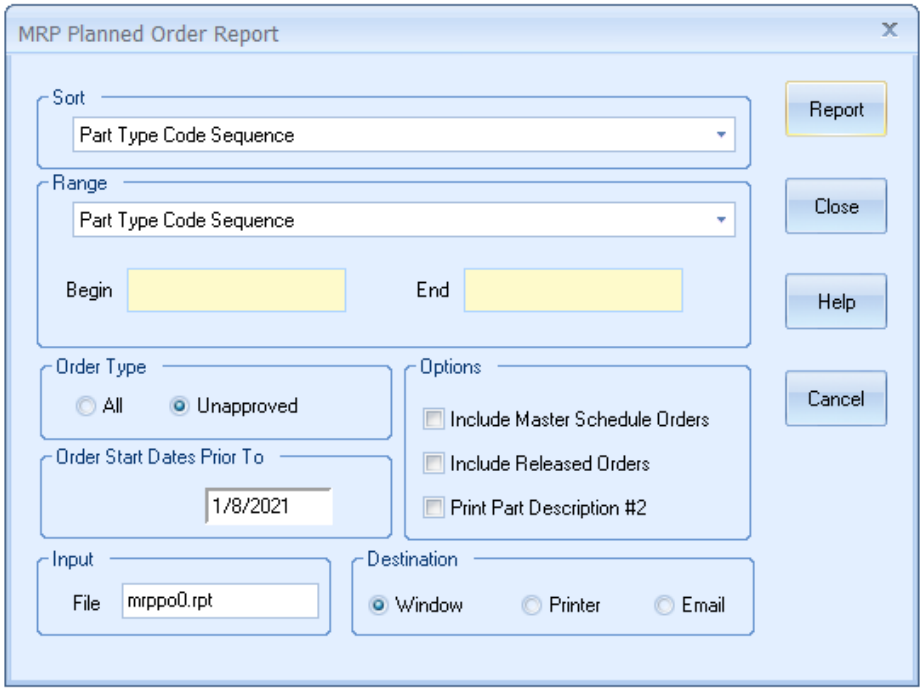
		Past Due	1/8/2021	1/15/2021	1/22/2021	1/29/2021	2/5/2021	2/12/2021	2/19/2021
1	Forecast Demand	0.00	0.00	60.00	0.00	0.00	0.00	40.00	0.00
2	Customer Demand	0.00	0.00	0.00	0.00	9.00	0.00	0.00	0.00
3	Dependent Demand	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Total Demand	0.00	0.00	60.00	0.00	9.00	0.00	40.00	0.00
5	Scheduled Receipt	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Planned Scrap	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Net Available	40.00	40.00	-20.00	-20.00	-29.00	-29.00	-69.00	-69.00
8	Planned Orders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Available to Promise	40.00	-294.00	-294.00	-294.00	-294.00	-294.00	-294.00	-294.00
10	Available to Forecast	40.00	40.00	-20.00	-20.00	-20.00	-20.00	-60.00	-60.00

This inquiry displays supply and demand information in summarized weekly time buckets. This is the standard master schedule display from ASCM, the Association for Supply Chain Management.[3]

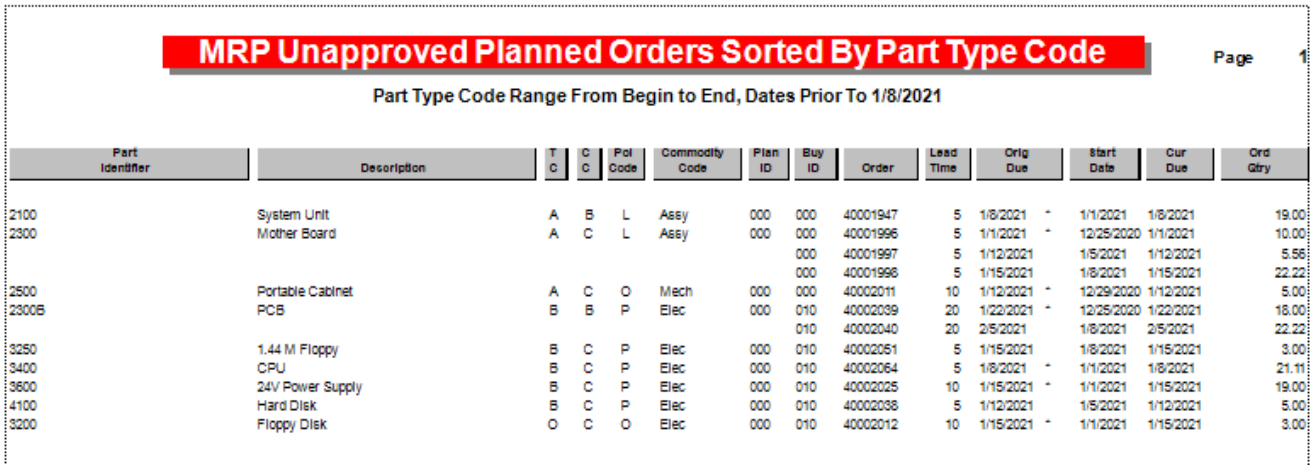
Step 2

From the **Report** menu, choose **Planned Order Report**. This report gives you a listing of all the Planned Orders that were generated from MRP. There are several options available for this report so that you can format it to your needs.

[3]More on ASCM/APICS may be found at www.ascm.org.



Choose to print *All* **Order Types** and enter an **Order Start Date Prior To** 3 weeks from today. Click the **Report** button to start the report.



MRP Unapproved Planned Orders Sorted By Part Type Code Page 1

Part Type Code Range From Begin to End, Dates Prior To 1/8/2021

Part Identifier	Description	T C	C C	Pcl Code	Commodity Code	Plan ID	Buy ID	Order	Lead Time	Orig Due		Start Date	Cur Due	Ord Qty
2100	System Unit	A	B	L	Assy	000	000	40001947	5	1/8/2021	*	1/1/2021	1/8/2021	19.00
2300	Mother Board	A	C	L	Assy	000	000	40001996	5	1/1/2021	*	12/25/2020	1/1/2021	10.00
							000	40001997	5	1/12/2021		1/5/2021	1/12/2021	5.56
							000	40001998	5	1/15/2021		1/8/2021	1/15/2021	22.22
2500	Portable Cabinet	A	C	O	Mech	000	000	40002011	10	1/12/2021	*	12/29/2020	1/12/2021	5.00
2300B	PCB	B	B	P	Elec	000	010	40002039	20	1/22/2021	*	12/25/2020	1/22/2021	18.00
							010	40002040	20	2/5/2021		1/8/2021	2/5/2021	22.22
3250	1.44 M Floppy	B	C	P	Elec	000	010	40002051	5	1/15/2021		1/8/2021	1/15/2021	3.00
3400	CPU	B	C	P	Elec	000	010	40002064	5	1/8/2021	*	1/1/2021	1/8/2021	21.11
3600	24V Power Supply	B	C	P	Elec	000	010	40002025	10	1/15/2021	*	1/1/2021	1/15/2021	19.00
4100	Hard Disk	B	C	P	Elec	000	010	40002038	5	1/12/2021		1/5/2021	1/12/2021	5.00
3200	Floppy Disk	O	C	O	Elec	000	010	40002012	10	1/15/2021	*	1/1/2021	1/15/2021	3.00

Look again through the Reports menu and run other reports that interest you.

Congratulations

This completes your review of the MRP module. Next you will walk through Shop Floor Execution.

Part VI – Shop Floor Execution

Shop Floor Execution occurs for both the Master Schedule (MS) and Manufactured (MF) order type codes. The point the order is said to be in the execution phase is when the Order Status is changed to 3, released.

Chapter 18

Introduction

One of the most significant assets of a manufacturing organization is inventory and one of the most important parts of inventory is Work in Process (WIP). The **Shop Floor Execution** module is responsible for tracking WIP inventory. WIP in MAX is the sum of all material issued, plus the sum of all labor applied to a shop order. For this reason, all shop orders must be under strict control.

Shop Orders

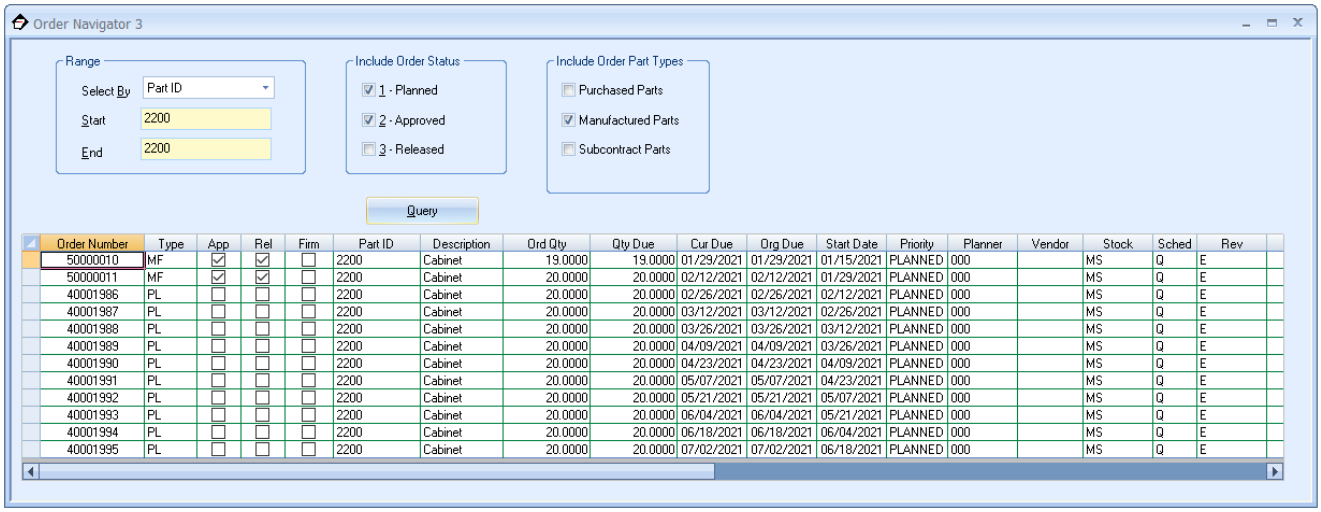
Shop orders represent one of the three significant order flows in MAX (i.e., Sales Orders, Purchase Orders and Shop Orders). The Shop Order flow is the same for Master Scheduled orders once those orders are released. Each of these order flows has a specific "cycle" that must be managed. The shop order cycle includes:

- Creating or releasing the shop order.
- Checking for component shortages.
- Issuing material to the pick list.
- Post operations complete.
- Receiving the order (partial or complete) to stock.
- Post order closing the order.

Let us step through this process.

Step 1 – Releasing the Order

You may approve and release a planned order in the **MRP module – Activity – Order Navigator** (recommended). The Order Navigator can also be found in the **Shop Floor Execution** module under **Activity**. You can also create a new "unplanned" shop order manually in **Shop Floor Execution – Activity – Shop Order.**

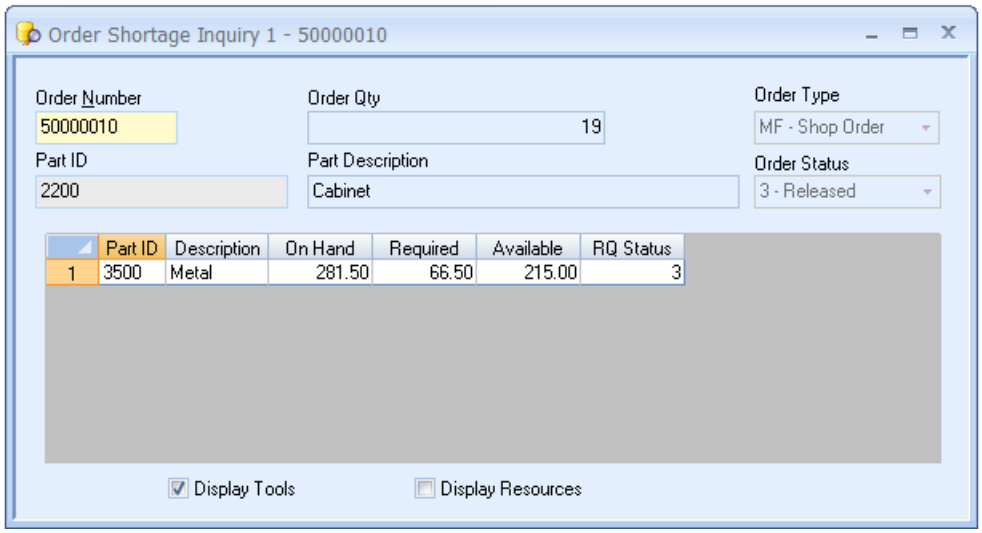


Order Number	Type	App	Rel	Firm	Part ID	Description	Ord Qty	Qty Due	Cur Due	Org Due	Start Date	Priority	Planner	Vendor	Stock	Sched	Rev
50000010	MF	☑	☑	☐	2200	Cabinet	19.0000	19.0000	01/29/2021	01/29/2021	01/15/2021	PLANNED	000		MS	Q	E
50000011	MF	☑	☑	☐	2200	Cabinet	20.0000	20.0000	02/12/2021	02/12/2021	01/29/2021	PLANNED	000		MS	Q	E
40001986	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	02/26/2021	02/26/2021	02/12/2021	PLANNED	000		MS	Q	E
40001987	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	03/12/2021	03/12/2021	02/26/2021	PLANNED	000		MS	Q	E
40001988	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	03/26/2021	03/26/2021	03/12/2021	PLANNED	000		MS	Q	E
40001989	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	04/09/2021	04/09/2021	03/26/2021	PLANNED	000		MS	Q	E
40001990	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	04/23/2021	04/23/2021	04/09/2021	PLANNED	000		MS	Q	E
40001991	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	05/07/2021	05/07/2021	04/23/2021	PLANNED	000		MS	Q	E
40001992	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	05/21/2021	05/21/2021	05/07/2021	PLANNED	000		MS	Q	E
40001993	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	06/04/2021	06/04/2021	05/21/2021	PLANNED	000		MS	Q	E
40001994	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	06/18/2021	06/18/2021	06/04/2021	PLANNED	000		MS	Q	E
40001995	PL	☐	☐	☐	2200	Cabinet	20.0000	20.0000	07/02/2021	07/02/2021	06/18/2021	PLANNED	000		MS	Q	E

Step 2 – Checking for Shortages

MAX will not allow you to issue orders in a way to cause a negative balance in stockroom inventory however, it will allow you to issue more than the original order quantity. For this reason, we need to be very careful when performing issue transactions to shop orders.

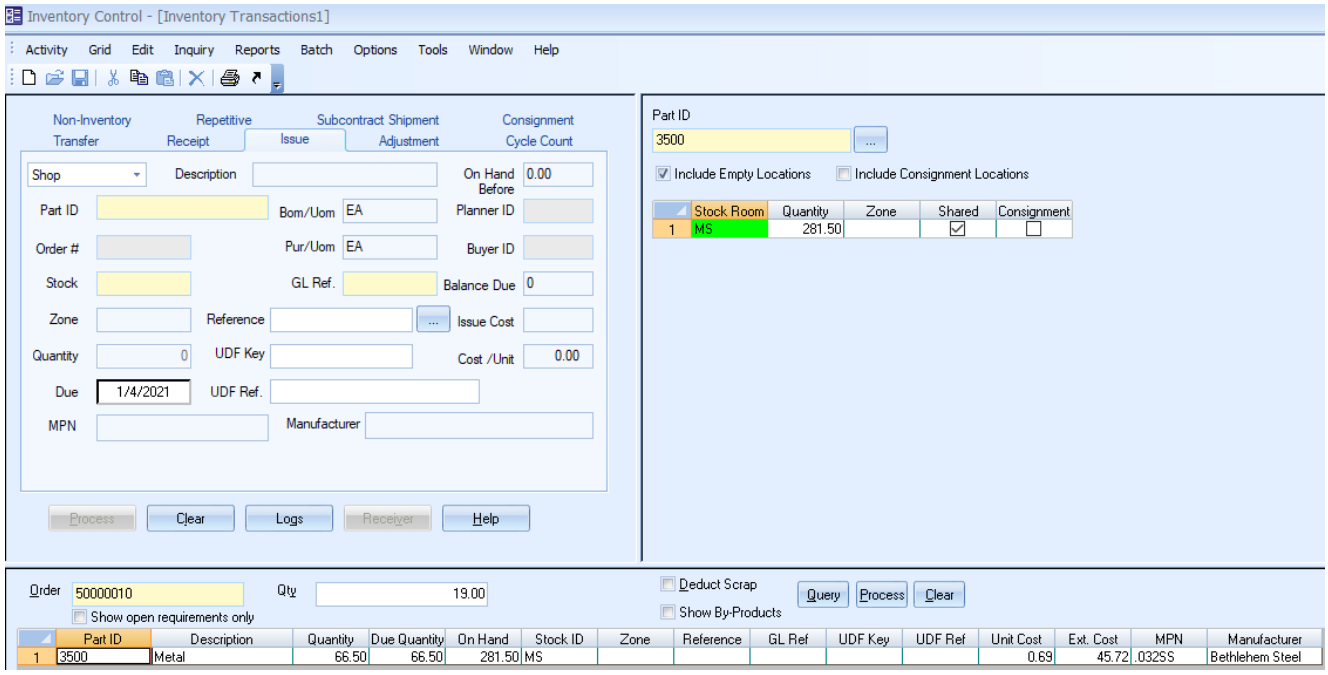
From the **Inquiries** menu, choose **Order Shortage**.



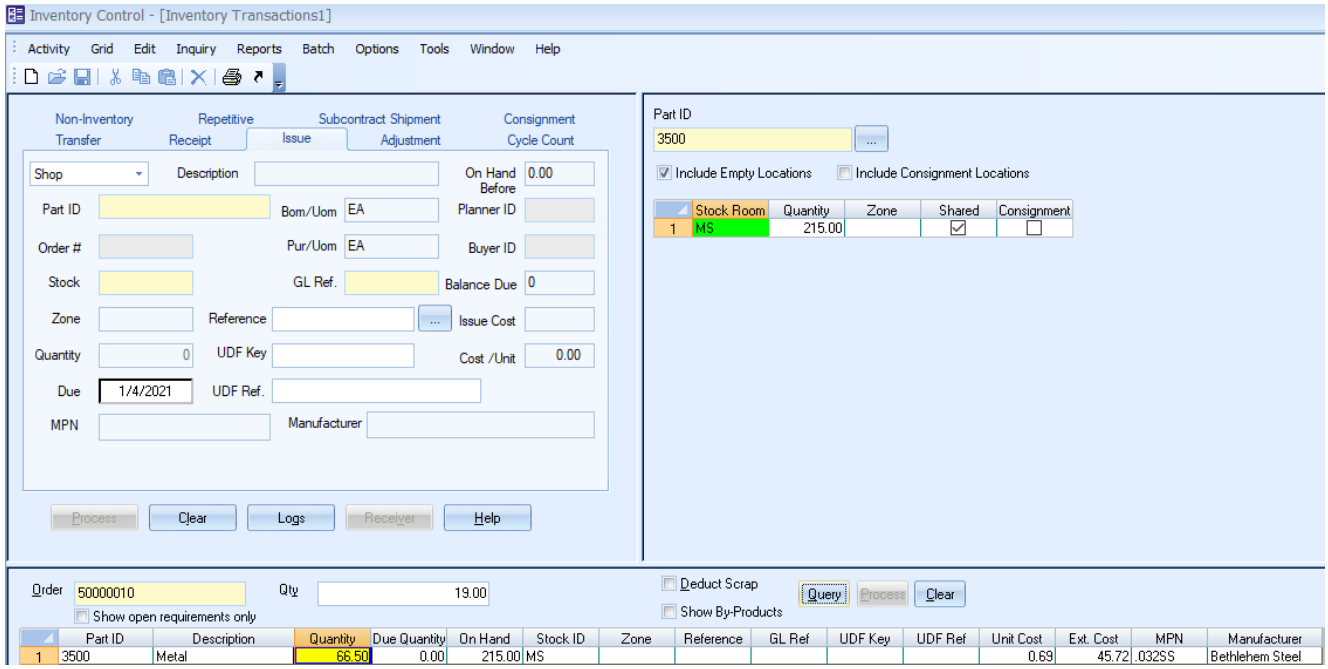
Step 3 – Issuing Material

Material transactions are performed in the Inventory Control module. From the **Activity** menu, choose **Transactions.** Select the **Issues** tab and then **Shop** from the pull-down list box. You have the choice to issue a single part at a time using the top left pane or all parts on the order in the grid at the bottom.

The Quantity field is the amount of the item that will be issued to the shop order.



To issue the item, select the row and press **Process**. Note that holding the Control key allows you to select multiple items, one at a time. Holding the shift key will select a range of items. Only rows selected will be issued.



The yellow quantity is a reminder that the part has been issued so you do not accidentally over issue the part.

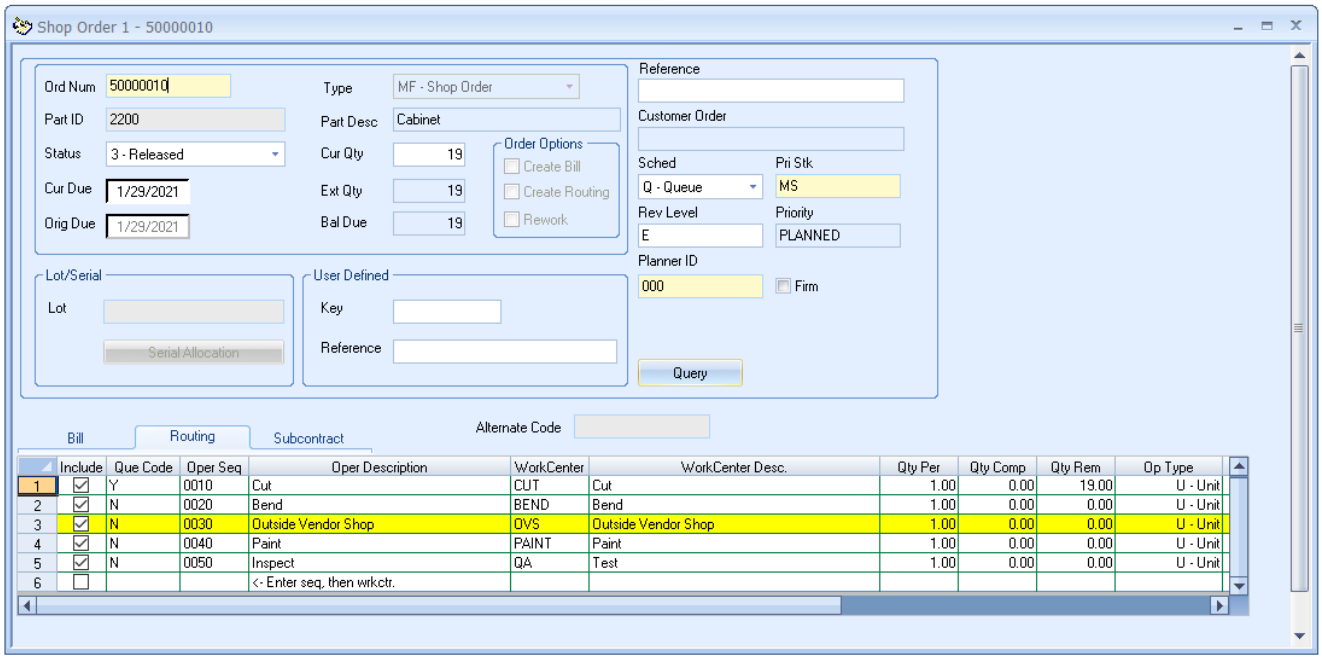
Step 4 – Post Operations Complete

When the order is released, it appears in the first sequence of the routing. This is controlled by the Queue Flag. There are three possible values for this flag that is used to control work in process:

- Y = the job is at that work center and either waiting to be worked on or being worked on. This is referred to as Queue.

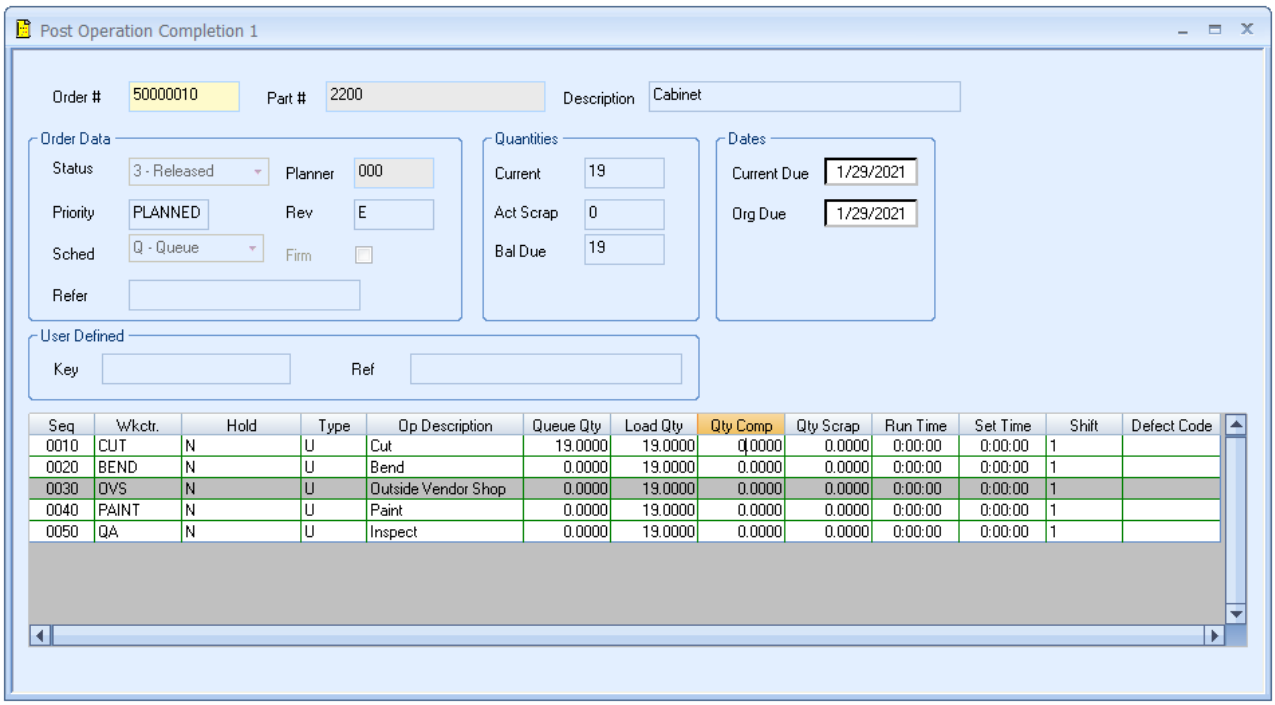
- N = the job has not made it to the work center. This is referred to as backlog.
- C = the job was completed in that work center.

Queue plus backlog equals the load (i.e., the total amount of work) for that work center.

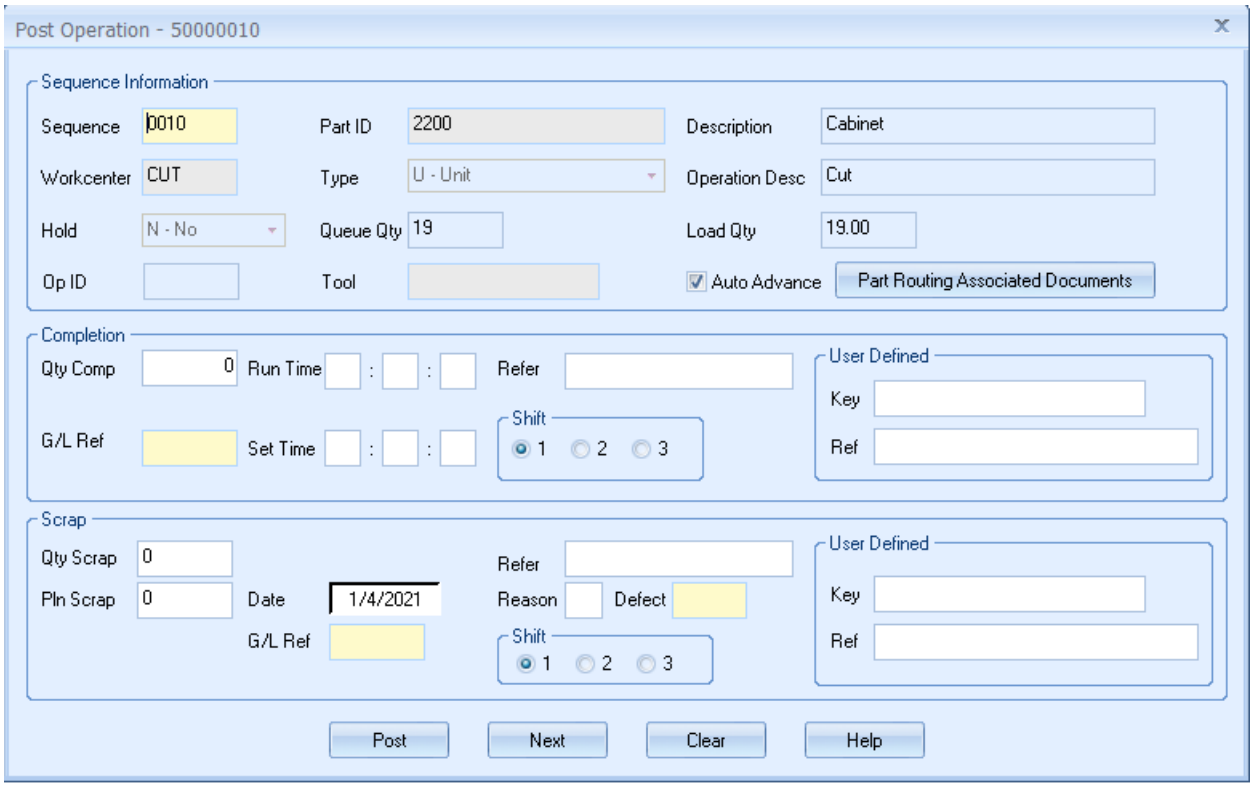


The above work order has just been released; thus, it appears in the queue of the first work center. To move it to the next, a **Post Operation** must be performed. This is performed in **Shop Floor Execution – Activity – Post Operation**. Enter the order number.

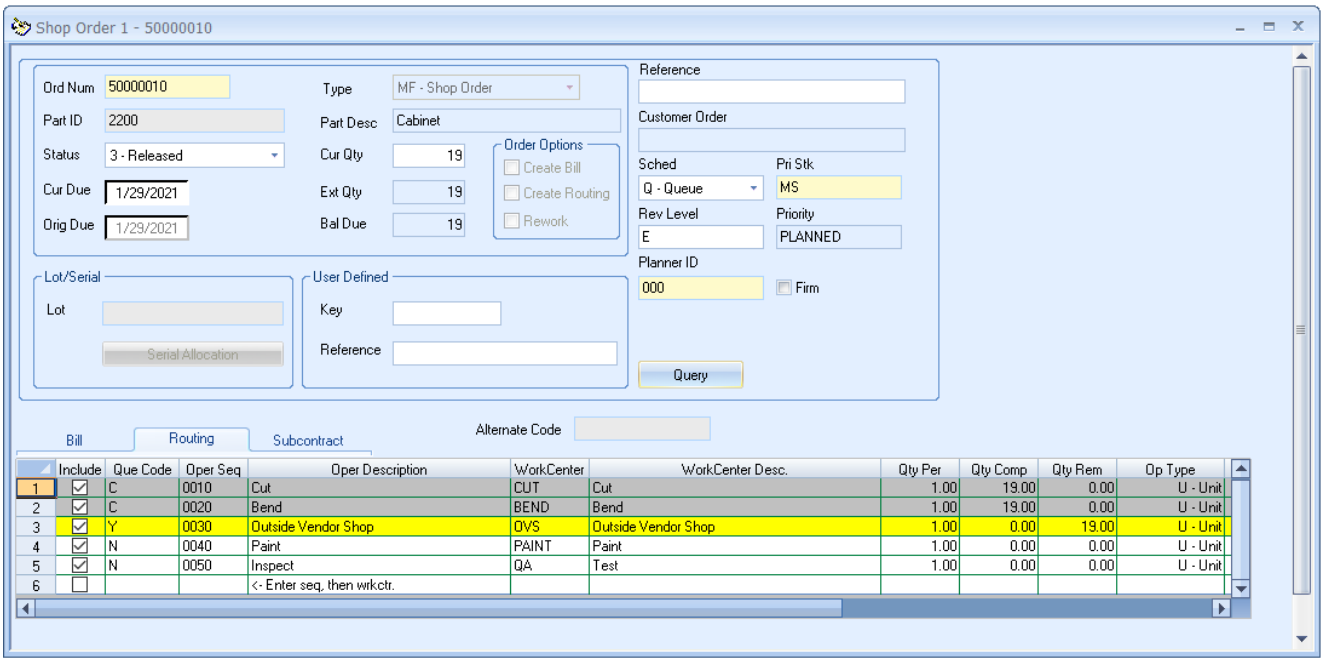
In the grid, enter the Qty Complete and/or Qty Scrap for the sequence. Enter the run and setup times.



You can double-click on the sequence number to open another screen with more details of the sequence.



When either screen is saved, the quantity processed moves to the next work center.

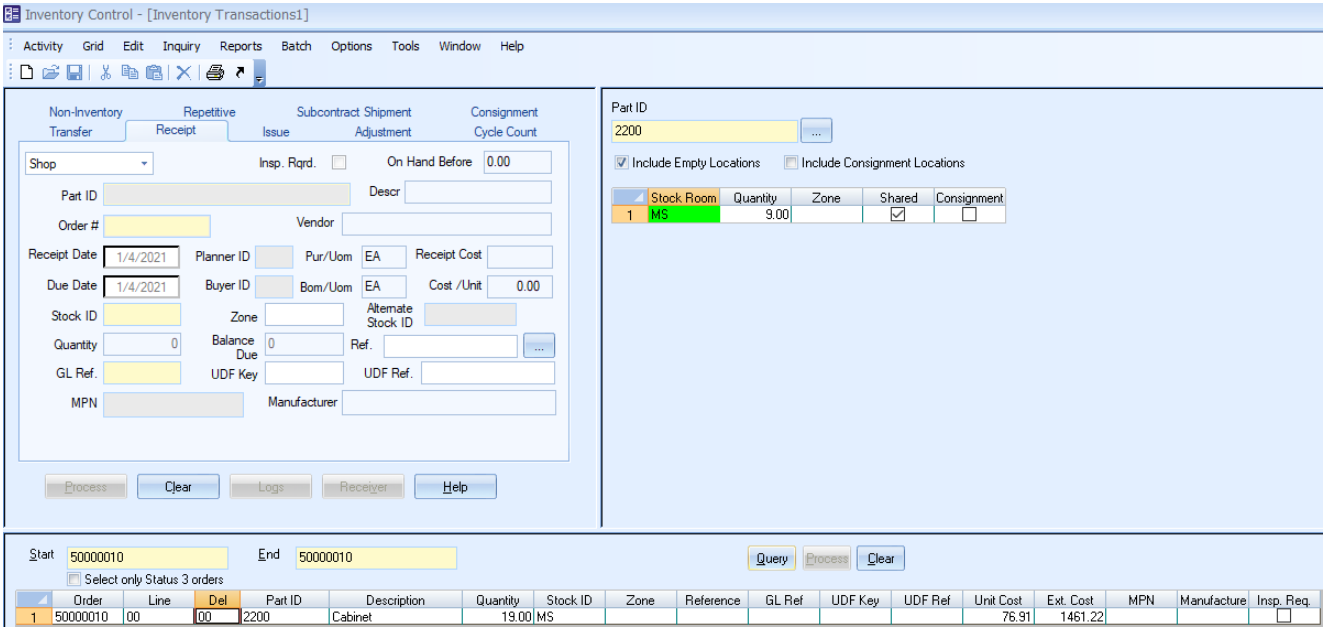


This process repeats until all the sequences on the order are completed. After the last sequence, we receive the order into stock.

Step 5 – Receiving the Order to Stock

When the quantity received is greater or equal to the order quantity, then the order is closed (i.e., set to Order Status 4). This removes the quantity from the shop floor and places the quantity of the parent item produced into stock in the Inventory Control module.

Material transactions are performed in the Inventory Control module. From the **Activity** menu, choose **Transactions.** Select the **Receipts** tab and then **Shop** from the pull-down list box. The Quantity field is the amount of the item that will be received from the shop order.

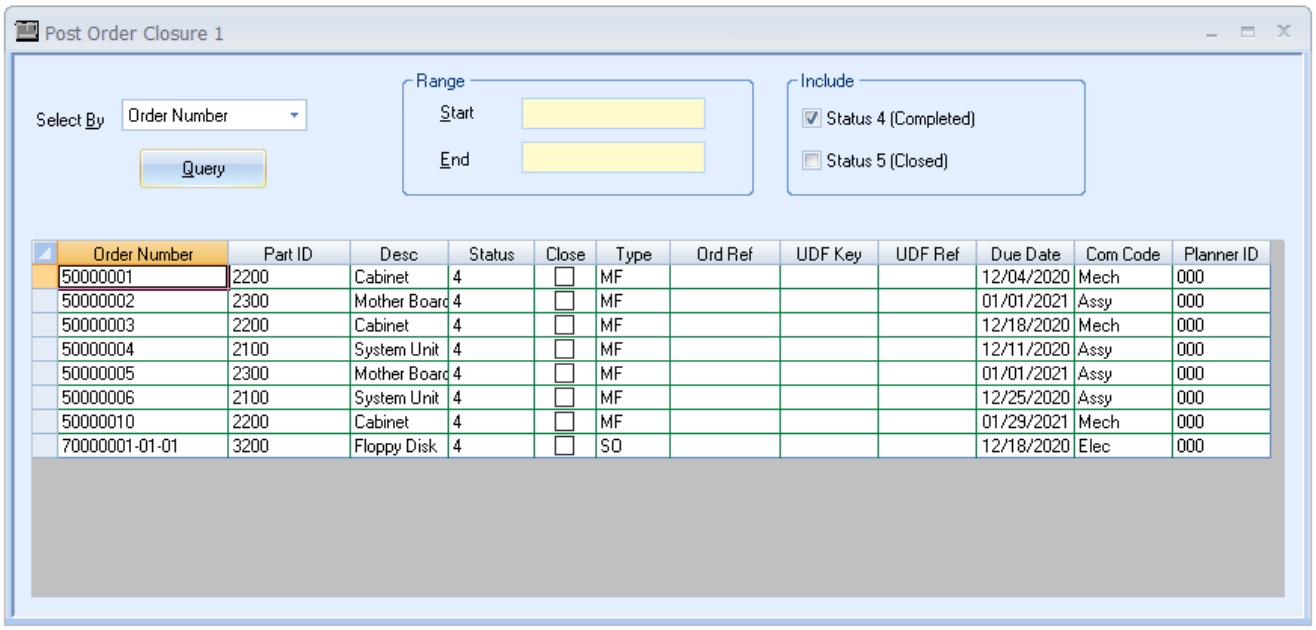


To receive the item, select the row and press **Process**.

Step 6 – Post Order Closure

Post Order Closure is an accounting function, but typically performed by shop floor supervisors as they are the most familiar with the order data. Post Order Closure is only done when the order has reached status 4, completed.

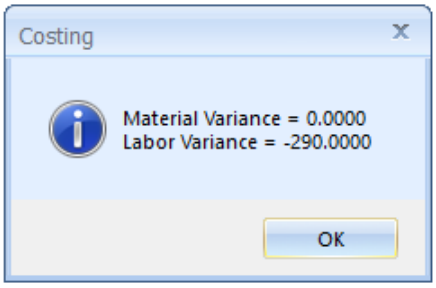
In the Costing module, under Batch choose Post Order Closure. Select Status 4 (Completed) orders only and press Query. All status 4 orders will appear in the grid.



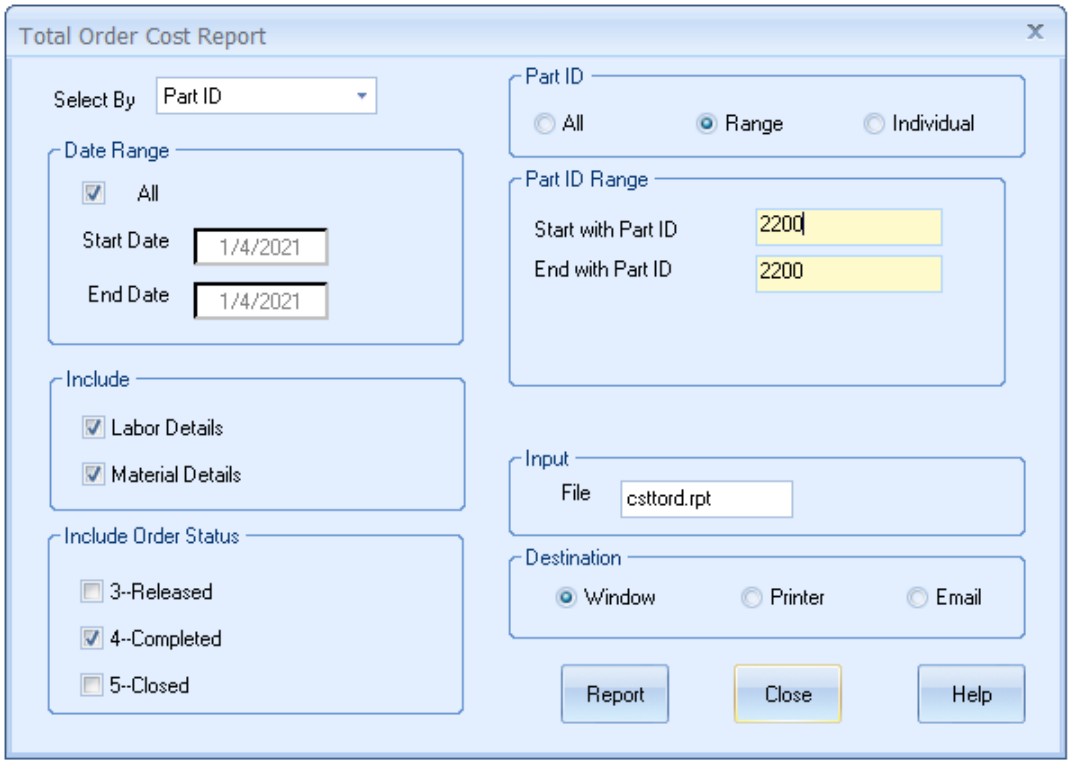
Order Number	Part ID	Desc	Status	Close	Type	Ord Ref	UDF Key	UDF Ref	Due Date	Com Code	Planner ID
50000001	2200	Cabinet	4	☐	MF				12/04/2020	Mech	000
50000002	2300	Mother Board	4	☐	MF				01/01/2021	Assy	000
50000003	2200	Cabinet	4	☐	MF				12/18/2020	Mech	000
50000004	2100	System Unit	4	☐	MF				12/11/2020	Assy	000
50000005	2300	Mother Board	4	☐	MF				01/01/2021	Assy	000
50000006	2100	System Unit	4	☐	MF				12/25/2020	Assy	000
50000010	2200	Cabinet	4	☐	MF				01/29/2021	Mech	000
70000001-01-01	3200	Floppy Disk	4	☐	SO				12/18/2020	Elec	000

Step 1

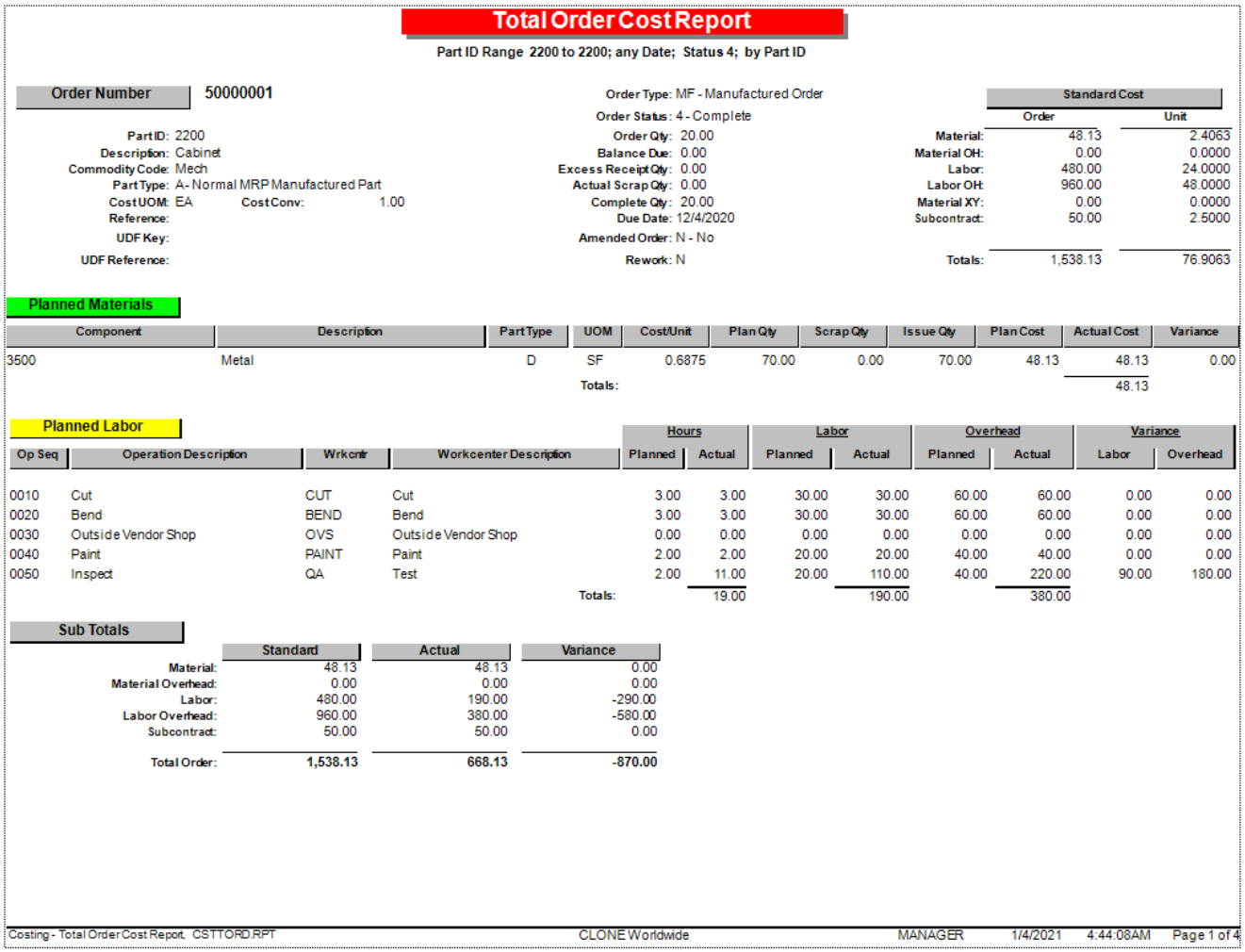
Prior to closing the order to status 5, closed by accounting you should verify if any variances have occurred. There are many ways to do this. The easiest check is to double-click the order number in the grid will open a window and report variances.



A better method of reviewing the order is the **Total Order Cos**t report. This report can be run from anytime while the order is open, closed or closed by accounting (i.e., status 3 through 5, respectively). This report is run from the **Costing module** under the **Reports** menu.



The report shows the standard cost information from the Part Master in the top right corner. Planned and Actual Materials are shown along with the sub-totals for the order.



Total Order Cost Report

Part ID Range 2200 to 2200; any Date; Status 4; by Part ID

Order Number 50000001

Part ID: 2200
Description: Cabinet
Commodity Code: Mech
Part Type: A- Normal MRP Manufactured Part
Cost UOM: EA Cost Conv: 1.00
Reference:
UDF Key:
UDF Reference:

Order Type: MF - Manufactured Order
Order Status: 4 - Complete
Order Qty: 20.00
Balance Due: 0.00
Excess Receipt Qty: 0.00
Actual Scrap Qty: 0.00
Complete Qty: 20.00
Due Date: 12/4/2020
Amended Order: N - No
Rework: N

Standard Cost	Order	Unit
Material:	48.13	2.4063
Material OH:	0.00	0.0000
Labor:	480.00	24.0000
Labor OH:	960.00	48.0000
Material XY:	0.00	0.0000
Subcontract:	50.00	2.5000
Totals:	1,538.13	76.9063

Planned Materials

Component	Description	Part Type	UOM	Cost/Unit	Plan Qty	Scrap Qty	Issue Qty	Plan Cost	Actual Cost	Variance
3500	Metal	D	SF	0.6875	70.00	0.00	70.00	48.13	48.13	0.00
			Totals:						48.13	

Planned Labor

Op Seq	Operation Description	Wrkcntr	Workcenter Description	Hours Planned	Hours Actual	Labor Planned	Labor Actual	Overhead Planned	Overhead Actual	Variance Labor	Variance Overhead
0010	Cut	CUT	Cut	3.00	3.00	30.00	30.00	60.00	60.00	0.00	0.00
0020	Bend	BEND	Bend	3.00	3.00	30.00	30.00	60.00	60.00	0.00	0.00
0030	Outside Vendor Shop	OVS	Outside Vendor Shop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0040	Paint	PAINT	Paint	2.00	2.00	20.00	20.00	40.00	40.00	0.00	0.00
0050	Inspect	QA	Test	2.00	11.00	20.00	110.00	40.00	220.00	90.00	180.00
			Totals:		19.00		190.00		380.00		

Sub Totals

	Standard	Actual	Variance
Material:	48.13	48.13	0.00
Material Overhead:	0.00	0.00	0.00
Labor:	480.00	190.00	-290.00
Labor Overhead:	960.00	380.00	-580.00
Subcontract:	50.00	50.00	0.00
Total Order:	1,538.13	668.13	-870.00

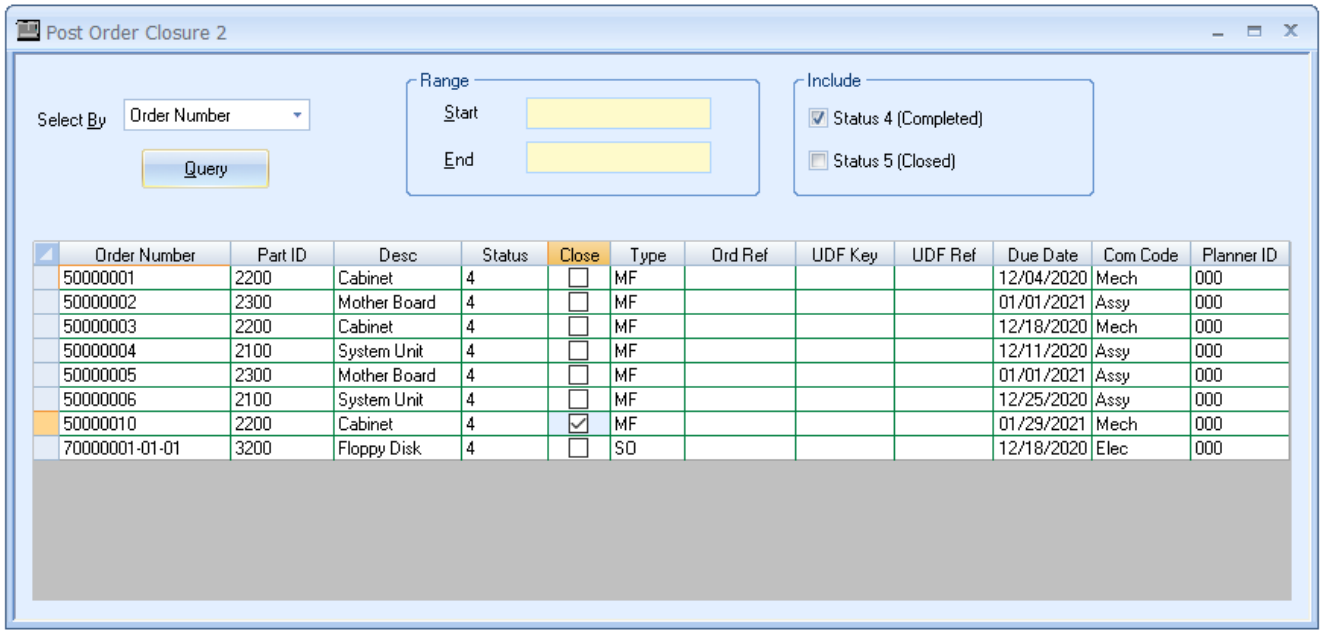
Costing - Total Order Cost Report, CSTTORD.RPT CLONE Worldwide MANAGER 1/4/2021 4:44:08AM Page 1 of 4

In the order shown, there is a favorable $220 material variance. This is because the material cost for the order is less than the standard. Because the Planned Materials section however, shows zero variance, then either a cost roll-up needs to be performed to update the Part Master or the pick list was modified for the order (i.e., a material substituted). The labor is showing as all favorable because no actuals have been posted. This is a possible implementation strategy (i.e., enter standard labor and overhead, but not post actual). Your Project Manager can help you the best cost strategy to use in your organization.

Any errors should be investigated prior to closing the order. If the variance is zero, or within an acceptable range, then close the order.

Step 2

To close the order, click on the checkbox under the **Close** column and press **Save**. The order will be changed to status 5. During this process, any variance values will be written to the actual variance accounts. These values will be posted on the next **Costing module – Report – From to Charge** report.



Order Number	Part ID	Desc	Status	Close	Type	Ord Ref	UDF Key	UDF Ref	Due Date	Com Code	Planner ID
50000001	2200	Cabinet	4	☐	MF				12/04/2020	Mech	000
50000002	2300	Mother Board	4	☐	MF				01/01/2021	Assy	000
50000003	2200	Cabinet	4	☐	MF				12/18/2020	Mech	000
50000004	2100	System Unit	4	☐	MF				12/11/2020	Assy	000
50000005	2300	Mother Board	4	☐	MF				01/01/2021	Assy	000
50000006	2100	System Unit	4	☐	MF				12/25/2020	Assy	000
50000010	2200	Cabinet	4	☑	MF				01/29/2021	Mech	000
70000001-01-01	3200	Floppy Disk	4	☐	SO				12/18/2020	Elec	000

When saved the order status will be changed.

Congratulations

You now know how to cycle a shop order through WIP, beginning with its creation and ending with its receipt to stock.

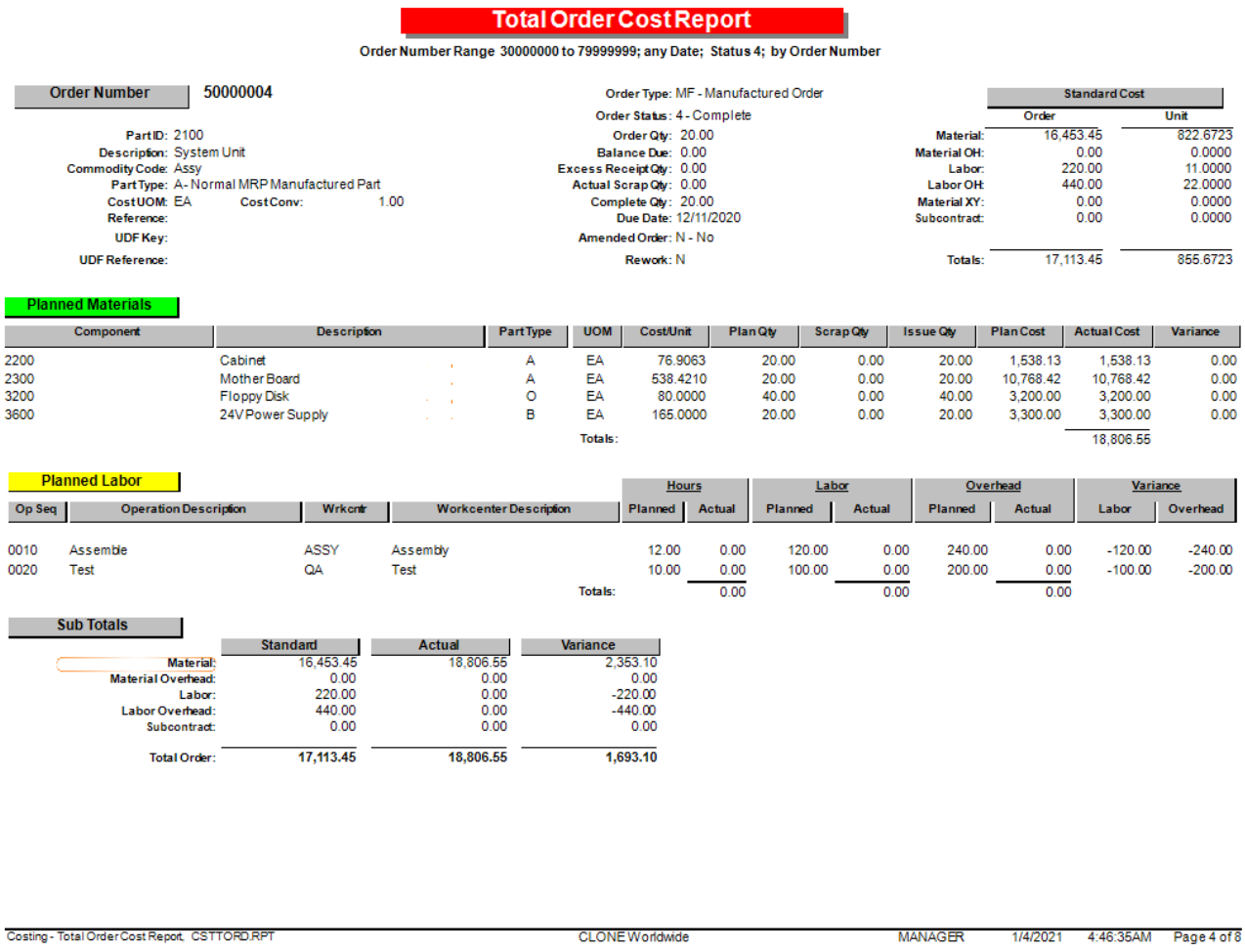
Chapter 19

Tracking Order Costs

As a standard cost system, it is important to know how actual costs are tracking around that standard. This is accomplished at the individual order level. The total of all open shop orders creates the work in process values that are also monitored.

Step 1 – Review Individual Order Costs

As mentioned in the previous Chapter, the **Costing Module – Reports – Total Order Cost** report is the best mechanism to review the costs associated with any one order. We described this report in the section above.



Total Order Cost Report

Order Number Range 30000000 to 79999999; any Date; Status 4; by Order Number

Order Number 50000004

Part ID: 2100
Description: System Unit
Commodity Code: Assy
Part Type: A- Normal MRP Manufactured Part
Cost UOM: EA Cost Conv: 1.00
Reference:
UDF Key:
UDF Reference:

Order Type: MF - Manufactured Order
Order Status: 4 - Complete
Order Qty: 20.00
Balance Due: 0.00
Excess Receipt Qty: 0.00
Actual Scrap Qty: 0.00
Complete Qty: 20.00
Due Date: 12/11/2020
Amended Order: N - No
Rework: N

Standard Cost	Order	Unit
Material:	16,453.45	822.6723
Material OH:	0.00	0.0000
Labor:	220.00	11.0000
Labor OH:	440.00	22.0000
Material XY:	0.00	0.0000
Subcontract:	0.00	0.0000
Totals:	17,113.45	855.6723

Planned Materials

Component	Description	Part Type	UOM	Cost/Unit	Plan Qty	Scrap Qty	Issue Qty	Plan Cost	Actual Cost	Variance
2200	Cabinet	A	EA	76.9063	20.00	0.00	20.00	1,538.13	1,538.13	0.00
2300	Mother Board	A	EA	538.4210	20.00	0.00	20.00	10,768.42	10,768.42	0.00
3200	Floppy Disk	O	EA	80.0000	40.00	0.00	40.00	3,200.00	3,200.00	0.00
3600	24V Power Supply	B	EA	165.0000	20.00	0.00	20.00	3,300.00	3,300.00	0.00
			Totals:						18,806.55	

Planned Labor

				Hours		Labor		Overhead		Variance	
Op Seq	Operation Description	Wrkcntr	Workcenter Description	Planned	Actual	Planned	Actual	Planned	Actual	Labor	Overhead
0010	Assemble	ASSY	Assembly	12.00	0.00	120.00	0.00	240.00	0.00	-120.00	-240.00
0020	Test	QA	Test	10.00	0.00	100.00	0.00	200.00	0.00	-100.00	-200.00
			Totals:		0.00		0.00		0.00		

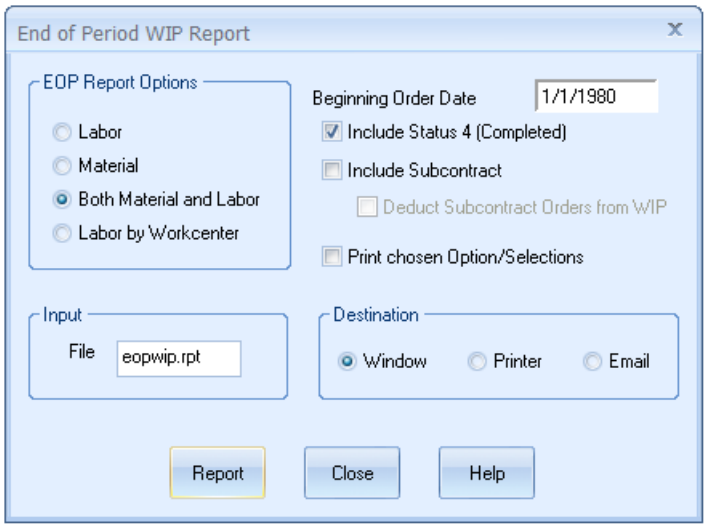
Sub Totals

	Standard	Actual	Variance
Material:	16,453.45	18,806.55	2,353.10
Material Overhead:	0.00	0.00	0.00
Labor:	220.00	0.00	-220.00
Labor Overhead:	440.00	0.00	-440.00
Subcontract:	0.00	0.00	0.00
Total Order:	17,113.45	18,806.55	1,693.10

Costing - Total Order Cost Report. CSTTORD.RPT CLONE Worldwide MANAGER 1/4/2021 4:46:35AM Page 4 of 8

Step 2 – Review Work in Process Values

The sum of all open orders, and those closed to order status 4 waiting to be closed to status 5, drive the work in process value. This is a very important measure to monitor and manage. The **Costing – Reports – End of Period WIP** report is run for all order, from the beginning of time, and includes any closed orders.



WIP Material is valued by subtracting completion and scrap values from actual values. The Net Standard WIP is the value of the order at this moment in time. Note that the status 4 orders have some residue value as the actual costs deviated from the standard value. This residue remains in WIP until he orders is closed to Order Status 5 (e.g., the Post Order Close process).

MATERIAL WORK-IN-PROCESS FOR ORDERS BEGINNING 01/01/1980 Page 1

ORDER NUMBER	S T	A T	PART IDENTIFIER	BOM UOM	CURRENT ORDER QTY	QUANTITY COMPLETE	QUANTITY SCRAPPED	TOTAL ACTUAL TO DATE: ACTUAL VALUE	TOTAL ACTUAL TO DATE: ACTUAL OVERHEAD	COMPLETE/SCRAP AT STANDARD: COMPLETE/SCRAP VALUE	COMPLETE/SCRAP AT STANDARD: COMPLETE/SCRAP OVERHEAD	COMPLETE/SCRAP AT STANDARD: COMPLETE/SCRAP MATL XY VALUE	NET STANDARD MATERIAL WIP
WIP INVENTORY ACCOUNT: 00001350000													
300000010000	3	A	1000	EA	20.00	0.00	0.00	30,313.45	2,402.74	0.00	0.00	0.00	30,313.45
300000020000	3	A	1000	EA	20.00	0.00	0.00	30,313.45	2,402.74	0.00	0.00	0.00	30,313.45
300000180000	3	A	1200	EA	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500000070000	3	A	2200	EA	20.00	0.00	0.00	48.13	4.38	0.00	0.00	0.00	48.13
UNASSIGNED		A	2200	EA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500000080000	3	A	2300	EA	22.22	20.00	0.00	6,600.00	600.00	9,031.58	912.28	0.00	-2,431.58
500000090000	3	A	2200	EA	11.00	0.00	0.00	26.47	2.41	0.00	0.00	0.00	26.47
UNASSIGNED		A	2200	EA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500000110000	3	A	2200	EA	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNASSIGNED		A	2200	EA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			RELEASED ORDER SUBTOTAL:		**138.22**	**20.00**	**0.00**	**67,301.49**	**5,412.26**	**9,031.58**	**912.28**	**0.00**	**58,269.91**
500000010000	4	A	2200	EA	20.00	20.00	0.00	48.13	4.38	48.13	4.38	0.00	0.00
700000030101	4	A	2200	EA	20.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500000020000	4	A	2300	EA	22.22	20.00	0.00	6,600.00	600.00	9,031.58	912.28	0.00	-2,431.58
500000030000	4	A	2200	EA	20.00	20.00	0.00	48.13	4.38	48.13	4.38	0.00	0.00
700000030201	4	A	2200	EA	20.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500000040000	4	A	2100	EA	20.00	20.00	0.00	18,806.55	1,416.66	16,453.45	1,202.74	0.00	2,353.10
500000050000	4	A	2300	EA	22.22	20.00	0.00	6,600.00	600.00	9,031.58	912.28	0.00	-2,431.58
500000060000	4	A	2100	EA	20.00	20.00	0.00	18,806.55	1,416.66	16,453.45	1,202.74	0.00	2,353.10
500000100000	4	A	2200	EA	19.00	19.00	0.00	45.72	4.16	45.72	4.16	0.00	0.00
UNASSIGNED		A	2200	EA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			COMPLETED ORDER SUBTOTAL:		**183.44**	**179.00**	**0.00**	**50,955.06**	**4,046.22**	**51,112.02**	**4,242.94**	**0.00**	**-156.96**
			ACCOUNT SUBTOTAL 00001350000:		**321.67**	**199.00**	**0.00**	**118,256.55**	**9,458.47**	**60,143.60**	**5,155.22**	**0.00**	**58,112.95**
			RELEASED GRANDTOTAL:		**138.22**	**20.00**	**0.00**	**67,301.49**	**5,412.26**	**9,031.58**	**912.28**	**0.00**	**58,269.91**
			COMPLETED GRANDTOTAL:		**183.44**	**179.00**	**0.00**	**50,955.06**	**4,046.22**	**51,112.02**	**4,242.94**	**0.00**	**-156.96**
			GRANDTOTAL:		**321.67**	**199.00**	**0.00**	**118,256.55**	**9,458.47**	**60,143.60**	**5,155.22**	**0.00**	**58,112.95**

WIP Labor and Overhead is valued by subtracting completion and scrap values from actual values. The Net Actual Labor WIP plus the Net Actual Overhead WIP is the value of the order at this moment in time. All these sub-totals are summarized on the last page of the WIP report.

LABOR WORK-IN-PROCESS FOR ORDERS BEGINNING 01/01/1980

ORDER NUMBER	S T	A T	PART IDENTIFIER	BOM UOM	CURRENT ORDER QTY	QUANTITY COMPLETE	QUANTITY SCRAPPED	TOTAL ACTUAL TO DATE ACTUAL VALUE	TOTAL ACTUAL TO DATE ACTUAL OVERHEAD	COMPLETE/SCRAP AT STANDARD COMPLETE/SCRAP VALUE	COMPLETE/SCRAP AT STANDARD COMPLETE/SCRAP OVERHEAD	NET ACTUAL LABOR WIP	NET OVERHEAD LABOR WIP
WIP INVENTORY ACCOUNT: 00001350000													
300000010000	3	A	1000	EA	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300000020000	3	A	1000	EA	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300000180000	3	A	1200	EA	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500000070000	3	A	2200	EA	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500000080000	3	A	2300	EA	22.22	20.00	0.00	160.00	320.00	220.00	440.00	-60.00	-120.00
500000090000	3	A	2200	EA	11.00	0.00	0.00	60.00	120.00	0.00	0.00	60.00	120.00
500000110000	3	A	2200	EA	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			RELEASED ORDER SUBTOTAL:		**138.22**	**20.00**	**0.00**	**220.00**	**440.00**	**220.00**	**440.00**	**0.00**	**0.00**
500000010000	4	A	2200	EA	20.00	20.00	0.00	190.00	380.00	480.00	960.00	-290.00	-580.00
500000020000	4	A	2300	EA	22.22	20.00	0.00	175.00	350.00	220.00	440.00	-45.00	-90.00
500000030000	4	A	2200	EA	20.00	20.00	0.00	593.33	1,186.67	480.00	960.00	113.33	226.67
500000040000	4	A	2100	EA	20.00	20.00	0.00	0.00	0.00	220.00	440.00	-220.00	-440.00
500000050000	4	A	2300	EA	22.22	20.00	0.00	180.00	360.00	220.00	440.00	-40.00	-80.00
500000060000	4	A	2100	EA	20.00	20.00	0.00	0.00	0.00	220.00	440.00	-220.00	-440.00
500000100000	4	A	2200	EA	19.00	19.00	0.00	0.00	0.00	456.00	912.00	-456.00	-912.00
			COMPLETED ORDER SUBTOTAL:		**143.44**	**139.00**	**0.00**	**1,138.33**	**2,276.67**	**2,296.00**	**4,592.00**	**-1,157.67**	**-2,315.33**
			ACCOUNT SUBTOTAL 00001350000:		**281.67**	**159.00**	**0.00**	**1,358.33**	**2,716.67**	**2,516.00**	**5,032.00**	**-1,157.67**	**-2,315.33**
			RELEASED GRANDTOTAL:		**138.22**	**20.00**	**0.00**	**220.00**	**440.00**	**220.00**	**440.00**	**0.00**	**0.00**
			COMPLETED GRANDTOTAL:		**143.44**	**139.00**	**0.00**	**1,138.33**	**2,276.67**	**2,296.00**	**4,592.00**	**-1,157.67**	**-2,315.33**
			GRANDTOTAL:		**281.67**	**159.00**	**0.00**	**1,358.33**	**2,716.67**	**2,516.00**	**5,032.00**	**-1,157.67**	**-2,315.33**

The sum of the WIP Material, WIP Labor, WIP Overhead and Subcontract Costs (if used) are the total work in process at this moment.

Account Summary

WIP ACCOUNT	STATUS	NET MATERIAL WIP	NET LABOR WIP	NET LABOR OVERHEAD WIP	NET SERVICE WIP	AT VENDOR VALUE	TOTAL WIP VALUE
00001350000	RELEASED:	58,269.91	0.00	0.00	0.00	0.00	58,269.91
	COMPLETED:	-156.96	-1,157.67	-2,315.33	0.00	0.00	-3,629.96
Total for Account: 00001350000							**54,639.95**

Congratulations

You now know how to monitor the order costs of your shop orders and value work in process.

Stage II – Inventory Management

Part VII (Chapters 20 through 22) represents Stage II of the Inventory Management portion of the Standard MAX Implementation Plan. Here, stockrooms, inventory part data and on hand quantity information are managed. On the dynamic side, we find inventory transactions.

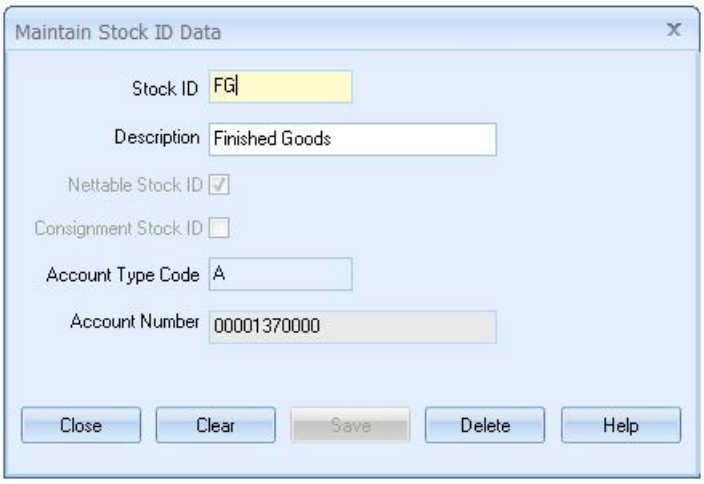
Part VII: Inventory Control

The **Inventory Control** module enables you to track and maintain inventory balances for each part that you stock, including finished goods, assemblies, component parts and raw materials. You will always know where inventory is located and how many parts are on hand. With better control and visibility, you will benefit from increased inventory turnover and improved inventory accuracy.

Chapter 20 – Inventory Data

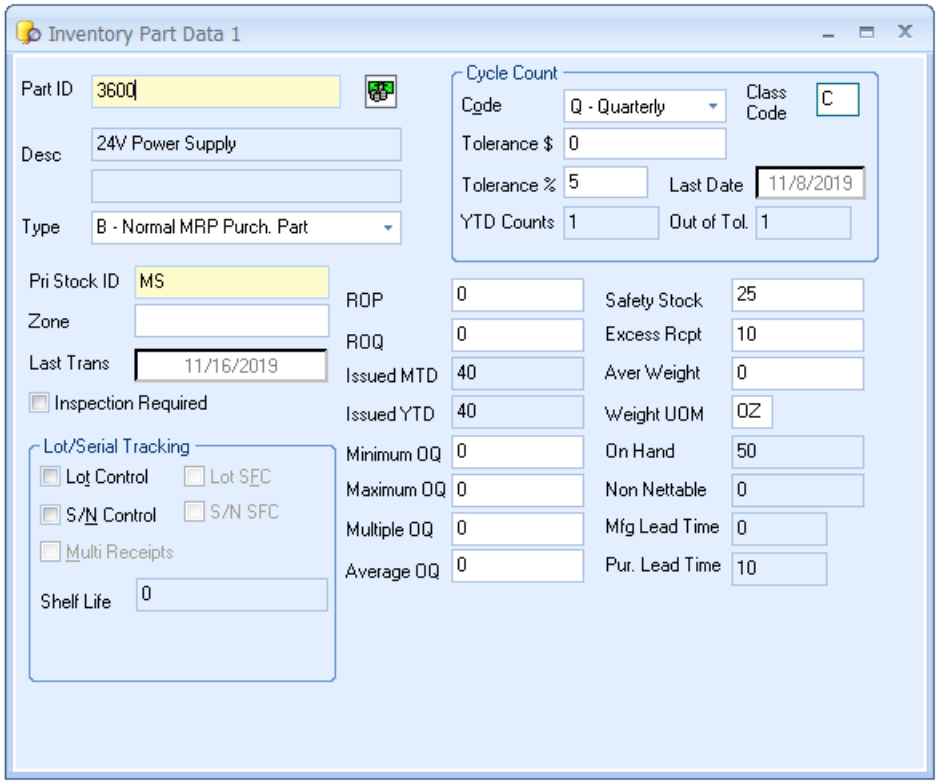
Entering Stockrooms

Inventory Control – Activity – Inventory Data – Stockroom ID Data is used to setup and maintain all your inventory stock locations and flag them as nettable, non-nettable or consignment.



Here you will want to make sure you add stockrooms for your raw material, semi-finished materials, and finished goods. You also need stockrooms for quality reasons like Material Review Board (MRB) and awaiting disposition.

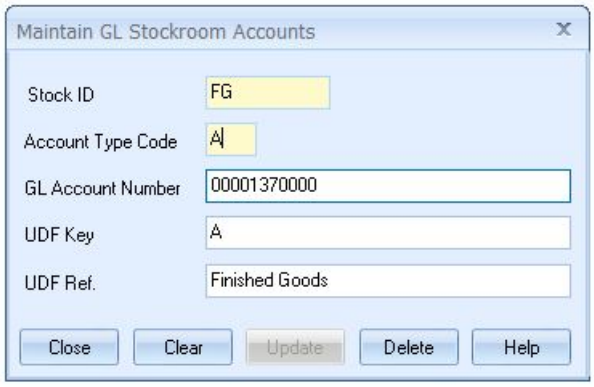
Inventory Control – Activity – Inventory Data – Inventory Part Data dialogue is very similar to the Inventory tab in the Part Master screen you used in the **Bill of Materials** module. Use this screen to setup and maintain cycle count, order quantity and other related inventory part information. Default stockroom identifiers are also setup so that MAX understands where parts should be in certain transactions.



Lot and Serial Control information is also set here for the part.

Assigning General Ledger Accounts

Once the stockroom has been created, it is important to specify the general ledger account number to be used with that stockroom. Set the appropriate general ledger account number in **Financial Integration – Activity – Maintain GL Accounts – Stockroom**.

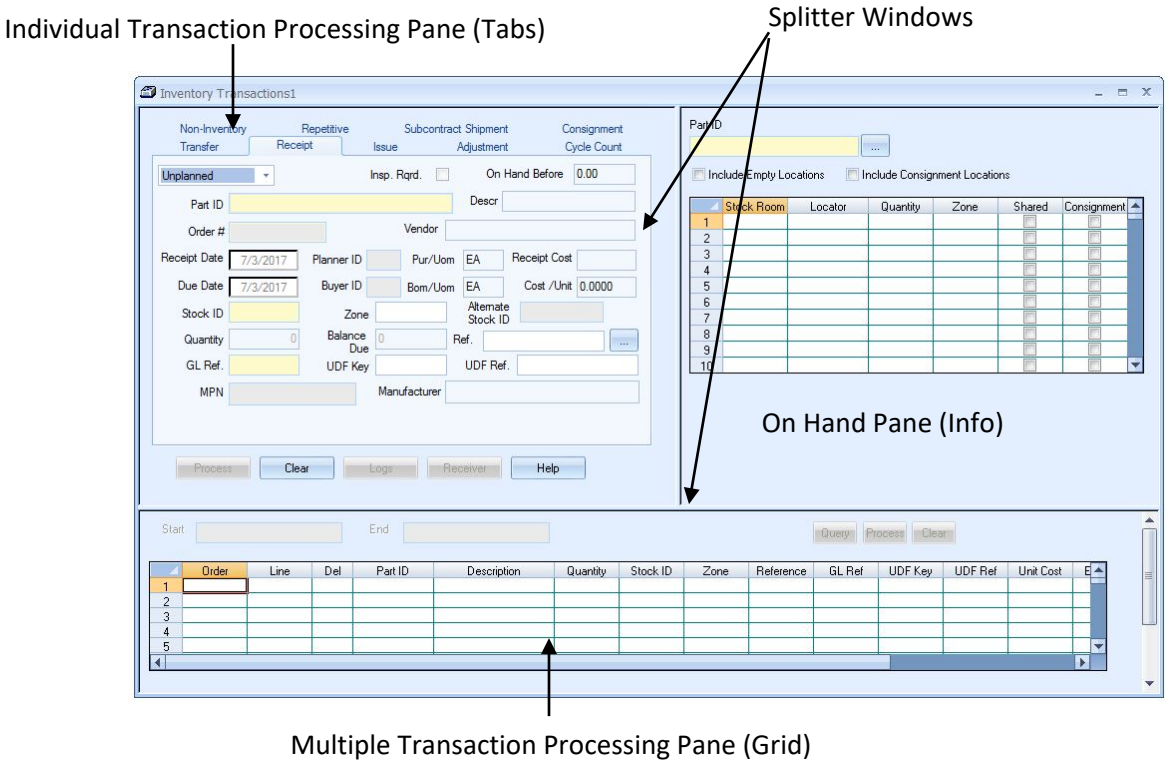


The Stockroom ID and the Account Type Code become the defining criteria for what general ledger account MAX will use on transactions.

Chapter 21 – Inventory Transactions

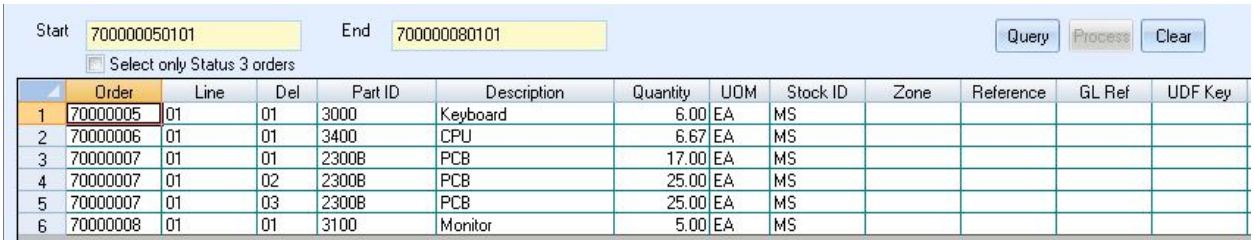
The primary activity in MAX Inventory Control is inventory transactions and this functionality can be accessed by selecting **Transactions** from the **Activity** menu. You can perform individual transactions one at a time, or perform multiple transactions using the Transaction Grid. The **Transactions** dialogue uses the same splitter window functionality that was used in the **Visual BOM**. The splitter windows separate the screen into three

sections, individual transaction processing, multiple transaction processing and on hand inventory information.



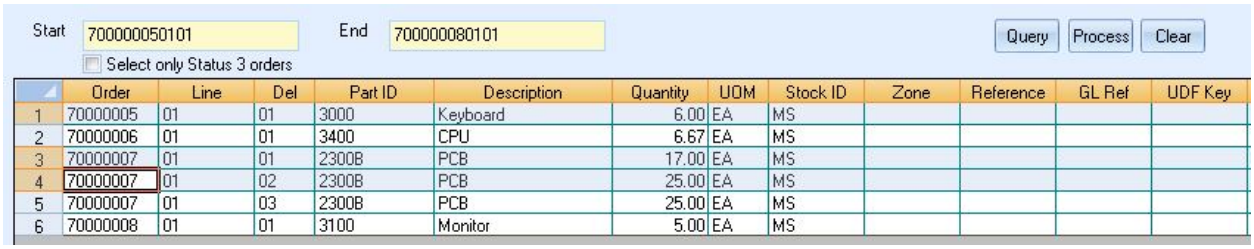
The individual transactions are all available from this window by clicking the desired tab.

Each transaction has its own grid which can be used to process multiple transactions when the **Process** button is clicked. Real productivity gains can be realized by processing more than one transaction at a time.



	Order	Line	Del	Part ID	Description	Quantity	UOM	Stock ID	Zone	Reference	GL Ref	UDF Key
1	70000005	01	01	3000	Keyboard	6.00	EA	MS				
2	70000006	01	01	3400	CPU	6.67	EA	MS				
3	70000007	01	01	2300B	PCB	17.00	EA	MS				
4	70000007	01	02	2300B	PCB	25.00	EA	MS				
5	70000007	01	03	2300B	PCB	25.00	EA	MS				
6	70000008	01	01	3100	Monitor	5.00	EA	MS				

Flexible selection criteria allow you to highlight one, several, or all rows to process. Clicking the **Process** button performs the transaction.



	Order	Line	Del	Part ID	Description	Quantity	UOM	Stock ID	Zone	Reference	GL Ref	UDF Key
1	70000005	01	01	3000	Keyboard	6.00	EA	MS				
2	70000006	01	01	3400	CPU	6.67	EA	MS				
3	70000007	01	01	2300B	PCB	17.00	EA	MS				
4	70000007	01	02	2300B	PCB	25.00	EA	MS				
5	70000007	01	03	2300B	PCB	25.00	EA	MS				
6	70000008	01	01	3100	Monitor	5.00	EA	MS				

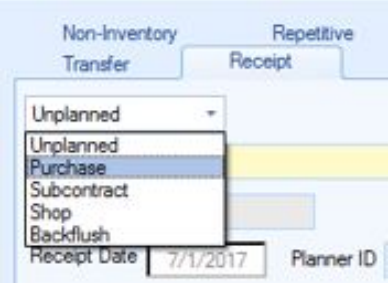
MAX is a real-time perpetual inventory control system. Transactions that are unable to be processed (for lack of inventory) provide immediate feedback by changing the color of the record to red. The grid can be populated by setting a Start and End range and clicking the **Query**. You can also enter data directly into the grid for quick data entry. Double-clicking most cells on the grid will bring up the appropriate browser. Another powerful feature of the multiple transaction grid is the ability to fill selected rows by choosing **Fill** from the **Grid** menu. For example, if you wish to issue all parts from a different stockroom you can fill the Stock ID column.

Receiving Components

You can perform receipts that are unplanned, receive goods from a vendor by choosing the relevant purchase order and receive manufactured product from your shop floor by choosing the relevant shop order.

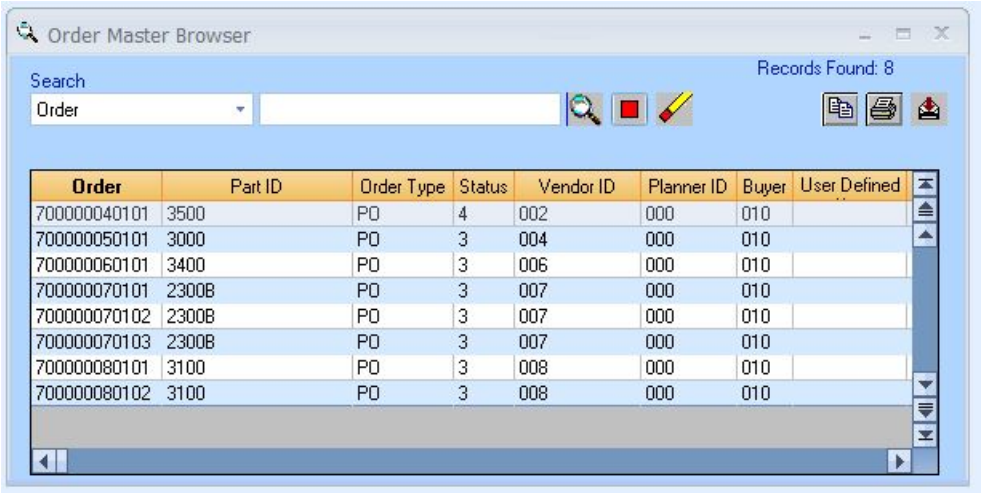
Step 1

From the **Activity** menu, choose **Transactions**. Click on the receipt tab. We are going to receive a purchase order. At the top of the tab screen, you need to activate the pull-down menu to change the type of receipt from Unplanned to Purchase.



Step 2

Use the grid to view all available purchase orders. Double-click the **Order Number** to launch the browser and choose **Start** and **End** purchase order numbers for the range you want to view.

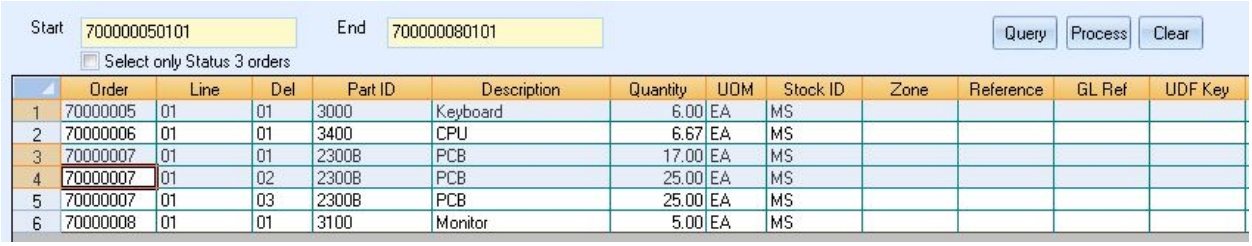


Order	Part ID	Order Type	Status	Vendor ID	Planner ID	Buyer	User Defined
700000040101	3500	PO	4	002	000	010	
700000050101	3000	PO	3	004	000	010	
700000060101	3400	PO	3	006	000	010	
700000070101	2300B	PO	3	007	000	010	
700000070102	2300B	PO	3	007	000	010	
700000070103	2300B	PO	3	007	000	010	
700000080101	3100	PO	3	008	000	010	
700000080102	3100	PO	3	008	000	010	

The click the **Query** button to populate the grid with the options.

Step 3

After the grid populates with the range of orders you selected you can complete the transaction by entering the receipt quantity.



	Order	Line	Del	Part ID	Description	Quantity	UOM	Stock ID	Zone	Reference	GL Ref	UDF Key
1	70000005	01	01	3000	Keyboard	6.00	EA	MS				
2	70000006	01	01	3400	CPU	6.67	EA	MS				
3	70000007	01	01	2300B	PCB	17.00	EA	MS				
4	70000007	01	02	2300B	PCB	25.00	EA	MS				
5	70000007	01	03	2300B	PCB	25.00	EA	MS				
6	70000008	01	01	3100	Monitor	5.00	EA	MS				

The Quantity column on the grid displays the due quantity for the Line and Delivery number. You can edit this field if the receipts quantity differs from the due quantity. To receive order 70000005-01-01, for the quantity of 6, click the row number **1** button at the beginning of the line to highlight the row.

You also want to receive order 70000007-01-01 for the quantity of 17. Click the **3** row on the grid and then click Process button to process the two receipts. Your grid will re-display with these two lines removed.

Note: By selecting Preferences from the Options menu, you can customize the grid to display or not to display the Due Quantity. We recommend that that Due Quantity is displayed.

Congratulations

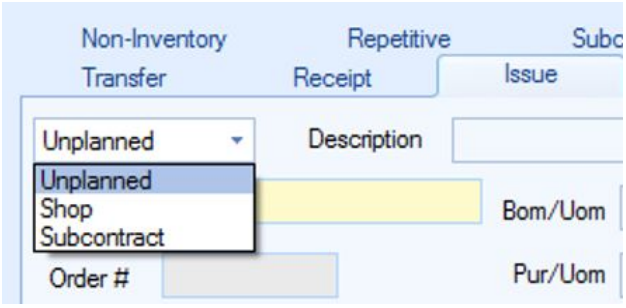
You just completed the receipt of two-line items on a purchase order using the multiple transaction grid. In the next Chapter, you will use the same techniques to issue components to a work order.

Issuing Components

The multiple transaction grid is also very useful for issuing all the necessary components to a work order in bulk, rather than one part at a time, saving valuable data entry time.

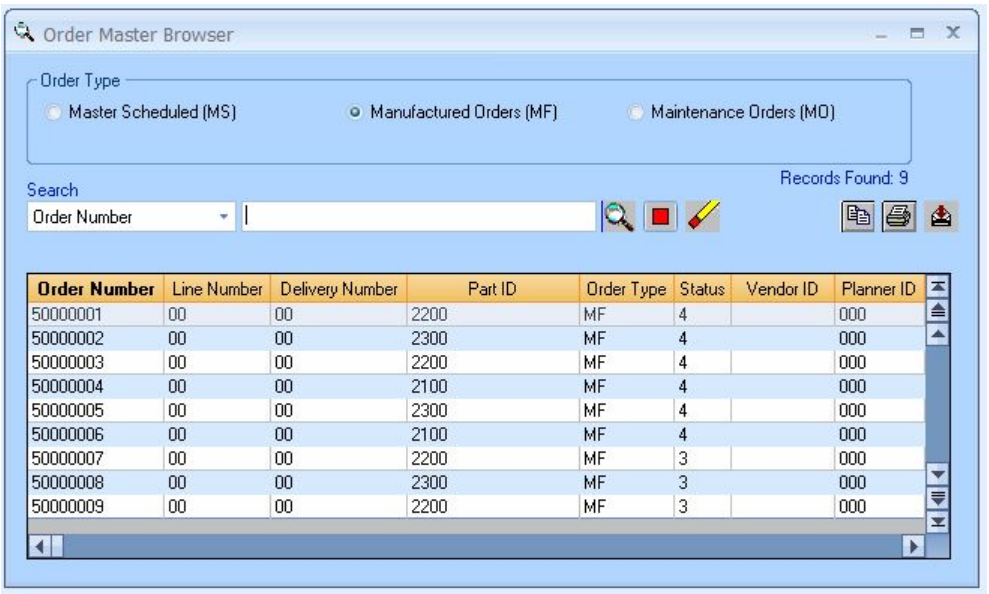
Step 1

Click the **Issue** tab and activate the pull-down menu to change the type to a **Shop** issue.



Step 2

Double-click the Order Number filed just above the grid to launch the Browser. Choose 50000008 by double-clicking on it. Press the **Query** button.



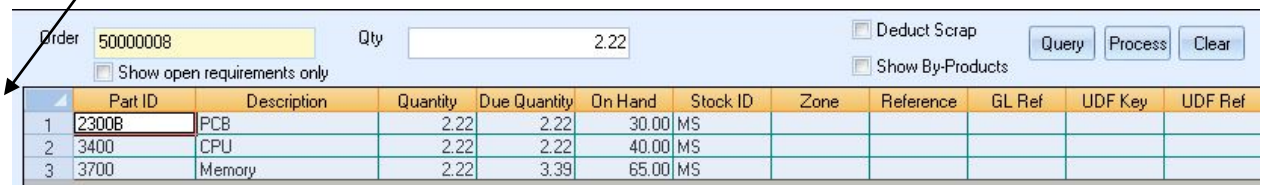
Order Number	Line Number	Delivery Number	Part ID	Order Type	Status	Vendor ID	Planner ID
50000001	00	00	2200	MF	4		000
50000002	00	00	2300	MF	4		000
50000003	00	00	2200	MF	4		000
50000004	00	00	2100	MF	4		000
50000005	00	00	2300	MF	4		000
50000006	00	00	2100	MF	4		000
50000007	00	00	2200	MF	3		000
50000008	00	00	2300	MF	3		000
50000009	00	00	2200	MF	3		000

The grid will show all the component parts that appear on the orders pick list.

Step 3

Visually verify that the On Hand Quantity is greater than or equal to the Due Quantity. If it is not, you will receive an error message indicating that there is a problem if you try to process it. You may look for additional stock by double-clicking the Stock ID field in the row for a part. The Part Stock browser will open allowing you to choose an alternate stockroom.

Click the box above the line numbers to select everything on the grid and click the **Process** button.

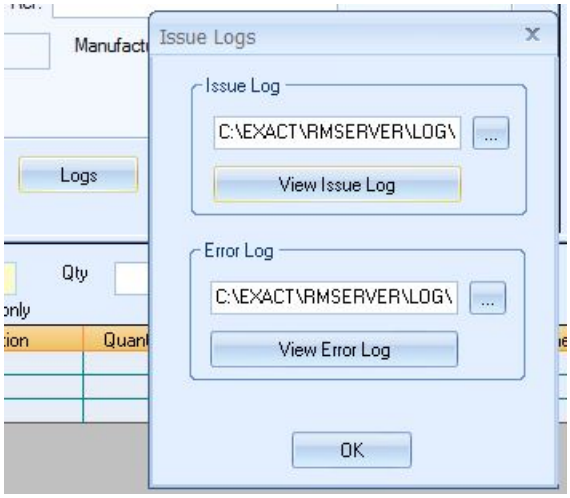


	Part ID	Description	Quantity	Due Quantity	On Hand	Stock ID	Zone	Reference	GL Ref	UDF Key	UDF Ref
1	2300B	PCB	2.22	2.22	30.00	MS					
2	3400	CPU	2.22	2.22	40.00	MS					
3	3700	Memory	2.22	3.39	65.00	MS					

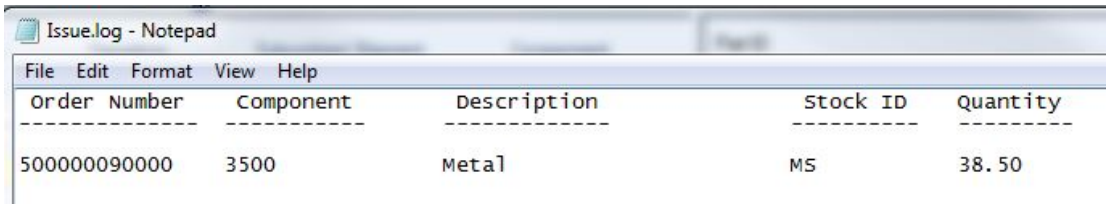
Step 4

Only lines with enough quantity on hand will be processed, so if there is insufficient stock to process a line no stock is issued. Instead, the line will appear on your grid in red to indicate it was not processed.

Errors are written to log files. To see the log file, press the **LOGS** button.



Pressing the **View Issue Log** or the **View Error Log** will show you any errors that have occurred.



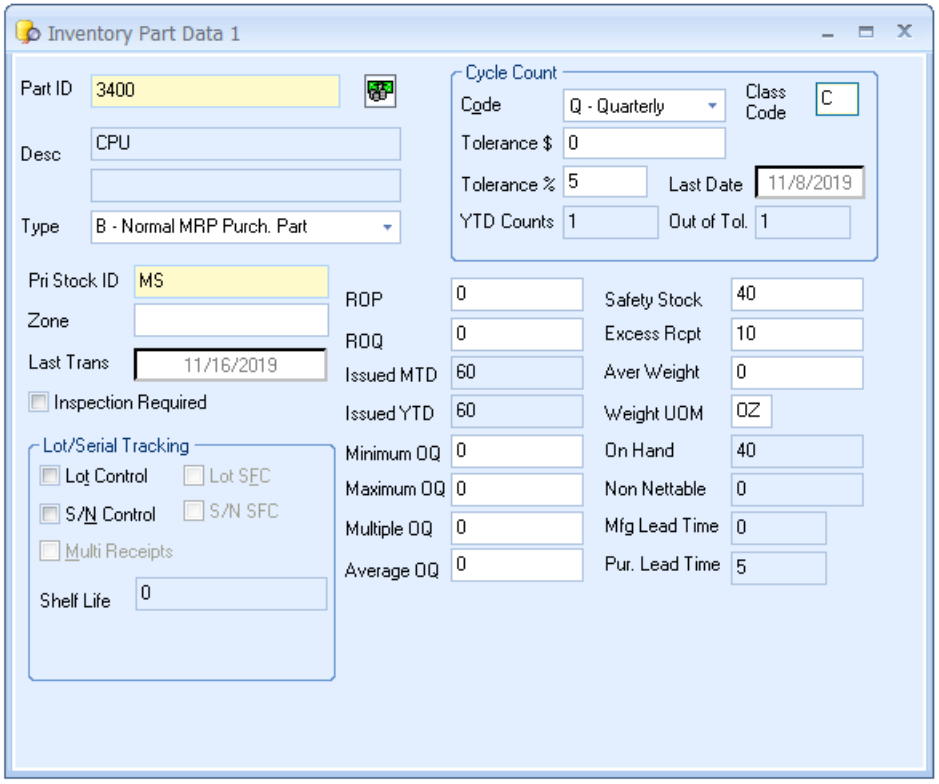
These log files are Microsoft Notepad text files and can be cleared occasionally using Notepad.

Performing a Cycle Count

Counting a few parts each day or week to verify inventory accuracy is an important part of good inventory control. Once you setup the cycle count data for your parts, MAX Inventory Control helps automate this process making it easier. Accurate inventory balances are the key to successful use of MAX.

Step 1

From the **Activity** menu select **Inventory Data – Inventory Part Data.** Double-click on the Part ID to open the Part master browser and select Part ID 3400 CPU.



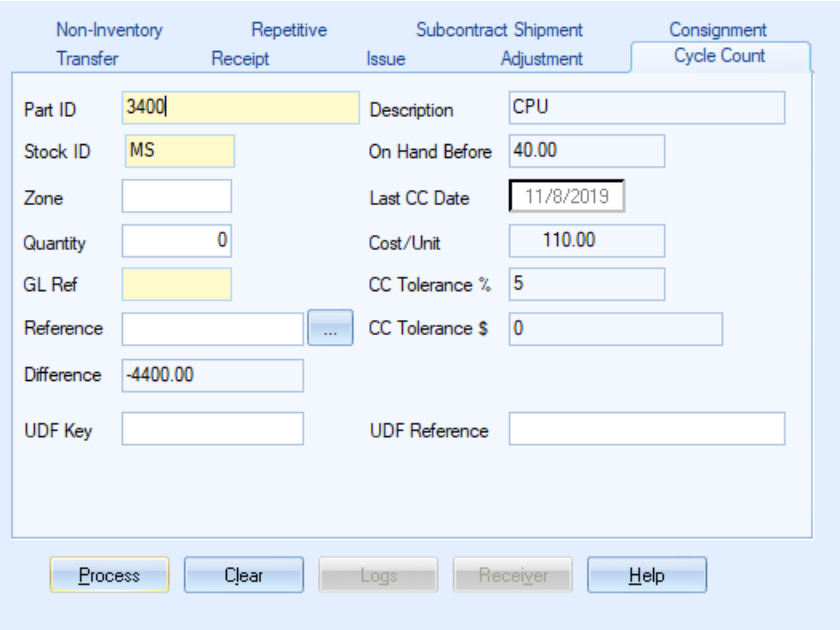
You do not need to browse for the part if you know it. You can enter the number directly into the Part ID field and tab to the next field to populate the screen.

Step 2

Verify the **Cycle Count Code** is Quarterly and the **Tolerance %** is 5. Click the **Save** button then **Close**.

Step 3

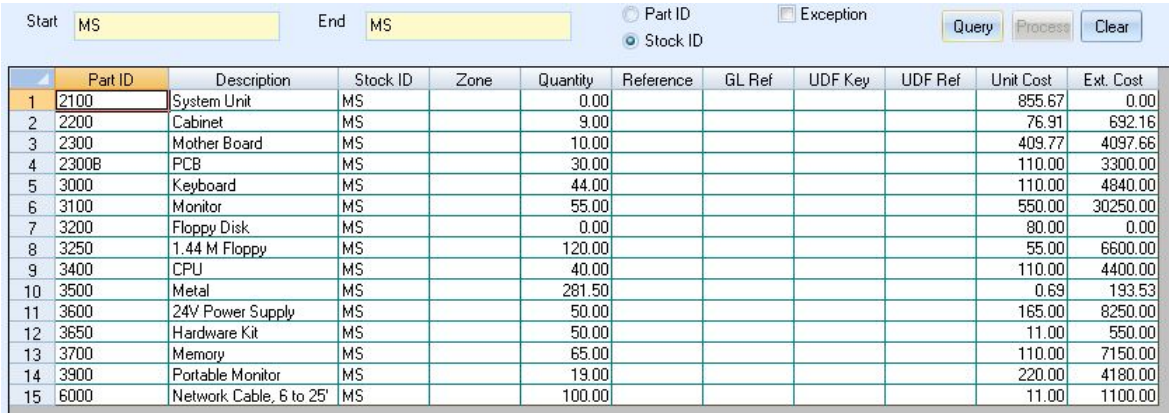
To enter a cycle count transaction, choose the **Cycle Count** tab in the Transactions dialogue.



Enter Part ID 3400 in the Part ID field or choose Part 3400 from the Part Master Browser. You also need to select which stock location for this part you want to cycle count. Enter MS in the Stockroom field. Enter the actual quantity counted in the Quantity field. Pressing the **Process** button will commit the record. If the on-hand quantity and the quantity processed were within the 5% tolerance specified, MAX will *replace* the on-hand quantity with the actual quantity without producing an error. If the differences were greater than the tolerances specified, MAX will give you a warning.

Step 4

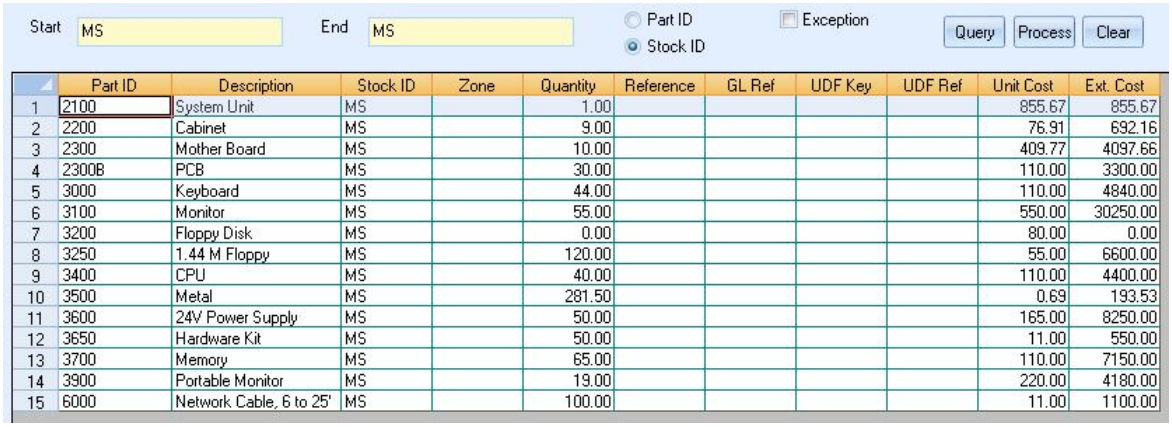
This would be a good time to perform any other cycle counts that are due in the MS stockroom. In the grid below the Cycle Count tab, click the **Stock ID** checkbox to browse and sort by Stock ID. Click the **Exception** check box to view only those items due for a cycle count or leave it unchecked to see all items in that stockroom. Type MS in the **Start** field a click **Query** to view parts that need to be counted.



	Part ID	Description	Stock ID	Zone	Quantity	Reference	GL Ref	UDF Key	UDF Ref	Unit Cost	Ext. Cost
1	2100	System Unit	MS		0.00					855.67	0.00
2	2200	Cabinet	MS		9.00					76.91	692.16
3	2300	Mother Board	MS		10.00					409.77	4097.66
4	2300B	PCB	MS		30.00					110.00	3300.00
5	3000	Keyboard	MS		44.00					110.00	4840.00
6	3100	Monitor	MS		55.00					550.00	30250.00
7	3200	Floppy Disk	MS		0.00					80.00	0.00
8	3250	1.44 M Floppy	MS		120.00					55.00	6600.00
9	3400	CPU	MS		40.00					110.00	4400.00
10	3500	Metal	MS		281.50					0.69	193.53
11	3600	24V Power Supply	MS		50.00					165.00	8250.00
12	3650	Hardware Kit	MS		50.00					11.00	550.00
13	3700	Memory	MS		65.00					110.00	7150.00
14	3900	Portable Monitor	MS		19.00					220.00	4180.00
15	6000	Network Cable, 6 to 25'	MS		100.00					11.00	1100.00

Step 5

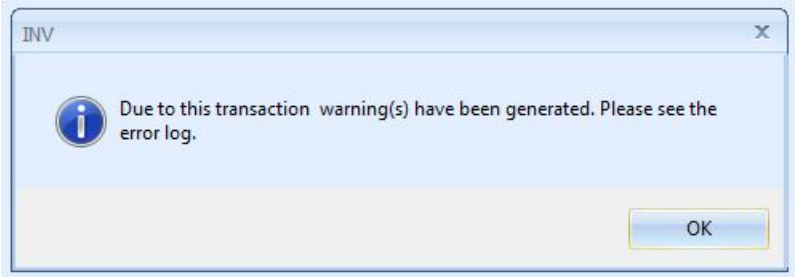
The Quantity column displays the on-hand balance according to the system. Change the displayed quantity to reflect your actual physical counts. Change Part 2100 to 1.



	Part ID	Description	Stock ID	Zone	Quantity	Reference	GL Ref	UDF Key	UDF Ref	Unit Cost	Ext. Cost
1	2100	System Unit	MS		1.00					855.67	855.67
2	2200	Cabinet	MS		9.00					76.91	692.16
3	2300	Mother Board	MS		10.00					409.77	4097.66
4	2300B	PCB	MS		30.00					110.00	3300.00
5	3000	Keyboard	MS		44.00					110.00	4840.00
6	3100	Monitor	MS		55.00					550.00	30250.00
7	3200	Floppy Disk	MS		0.00					80.00	0.00
8	3250	1.44 M Floppy	MS		120.00					55.00	6600.00
9	3400	CPU	MS		40.00					110.00	4400.00
10	3500	Metal	MS		281.50					0.69	193.53
11	3600	24V Power Supply	MS		50.00					165.00	8250.00
12	3650	Hardware Kit	MS		50.00					11.00	550.00
13	3700	Memory	MS		65.00					110.00	7150.00
14	3900	Portable Monitor	MS		19.00					220.00	4180.00
15	6000	Network Cable, 6 to 25'	MS		100.00					11.00	1100.00

Step 6

Now highlight the row that contain changes (Row 1) and click the **Process** button to record your cycle counts.



You will receive warning messages for any transaction that is out-of-tolerance. Click **OK** to continue.

Congratulations

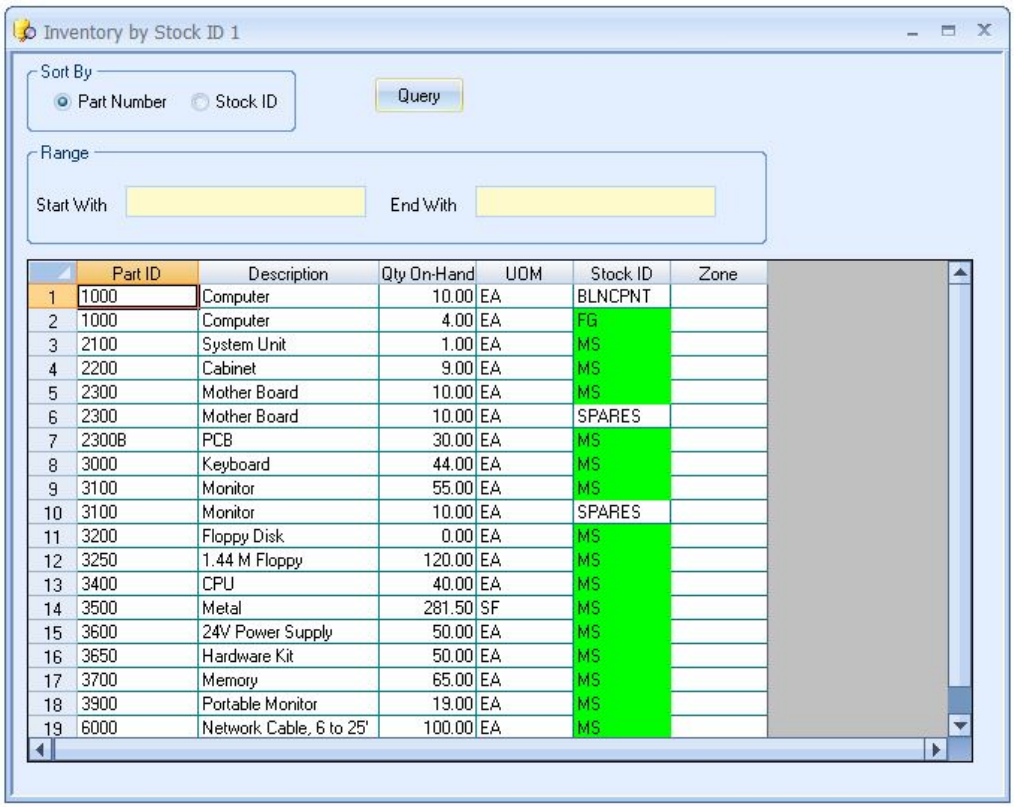
You have just completed the entering of cycle count information for a part and performing a cycle count on specific parts within a stockroom. In the next Chapter, you will look at the Reports and inquiries that are available through the **Inventory Control** module.

Chapter 22 – Presenting Your Data

We will review the two most common types of queries: **Display Stock by Location** and **Display Transaction History**.

Display Stock by Location

To view available stock for Part 1000, from the **Inquiry** menu, choose **Display Stock by Location**. Type in Part 1000 in the **Start With** field and click the **Query** button.



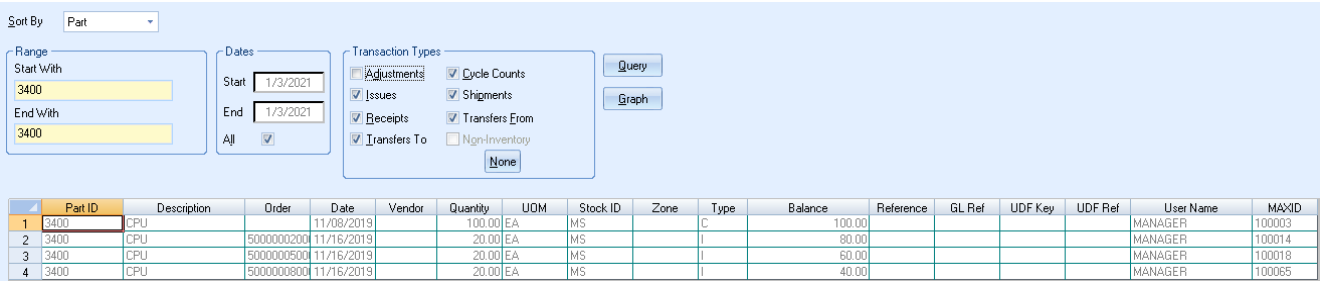
	Part ID	Description	Qty On-Hand	UOM	Stock ID	Zone
1	1000	Computer	10.00	EA	BLNCPNT	
2	1000	Computer	4.00	EA	FG	
3	2100	System Unit	1.00	EA	MS	
4	2200	Cabinet	9.00	EA	MS	
5	2300	Mother Board	10.00	EA	MS	
6	2300	Mother Board	10.00	EA	SPARES	
7	2300B	PCB	30.00	EA	MS	
8	3000	Keyboard	44.00	EA	MS	
9	3100	Monitor	55.00	EA	MS	
10	3100	Monitor	10.00	EA	SPARES	
11	3200	Floppy Disk	0.00	EA	MS	
12	3250	1.44 M Floppy	120.00	EA	MS	
13	3400	CPU	40.00	EA	MS	
14	3500	Metal	281.50	SF	MS	
15	3600	24V Power Supply	50.00	EA	MS	
16	3650	Hardware Kit	50.00	EA	MS	
17	3700	Memory	65.00	EA	MS	
18	3900	Portable Monitor	19.00	EA	MS	
19	6000	Network Cable, 6 to 25'	100.00	EA	MS	

Fields with the Stock ID in color (green) indicate that this is the primary stock location as setup in Inventory Part Data. You can also see the stock status for a single part in the On Hand Pane of the **Transactions** dialogue.

	Stock Room	Quantity	Zone	Shared	Consignment
1	MS	1.00		☑	☐

Display Transaction History

To see history of transactions for Part 3400, from **Inquiry** menu choose **Display Transaction History**. Sort by part instead of Date and type Part 3400 in the **Start With** range. Make sure you are asking for **ALL** dates and **ALL** transaction types then click the Query button.



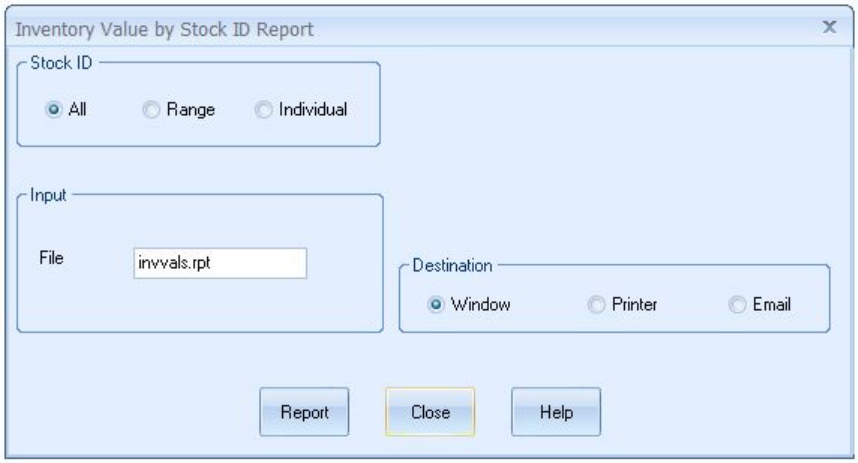
	Part ID	Description	Order	Date	Vendor	Quantity	UOM	Stock ID	Zone	Type	Balance	Reference	GL Ref	UDF Key	UDF Ref	User Name	MAXID
1	3400	CPU		11/08/2019		100.00	EA	MS		C	100.00					MANAGER	100003
2	3400	CPU	5000000200	11/16/2019		20.00	EA	MS		I	80.00					MANAGER	100014
3	3400	CPU	5000000500	11/16/2019		20.00	EA	MS		I	60.00					MANAGER	100018
4	3400	CPU	5000000800	11/16/2019		20.00	EA	MS		I	40.00					MANAGER	100065

Note that when all transactions are displayed, MAX can provide a running balance for each transaction. This is very helpful when troubleshooting out of balance conditions (i.e., what is in stock does not match what the computer says).

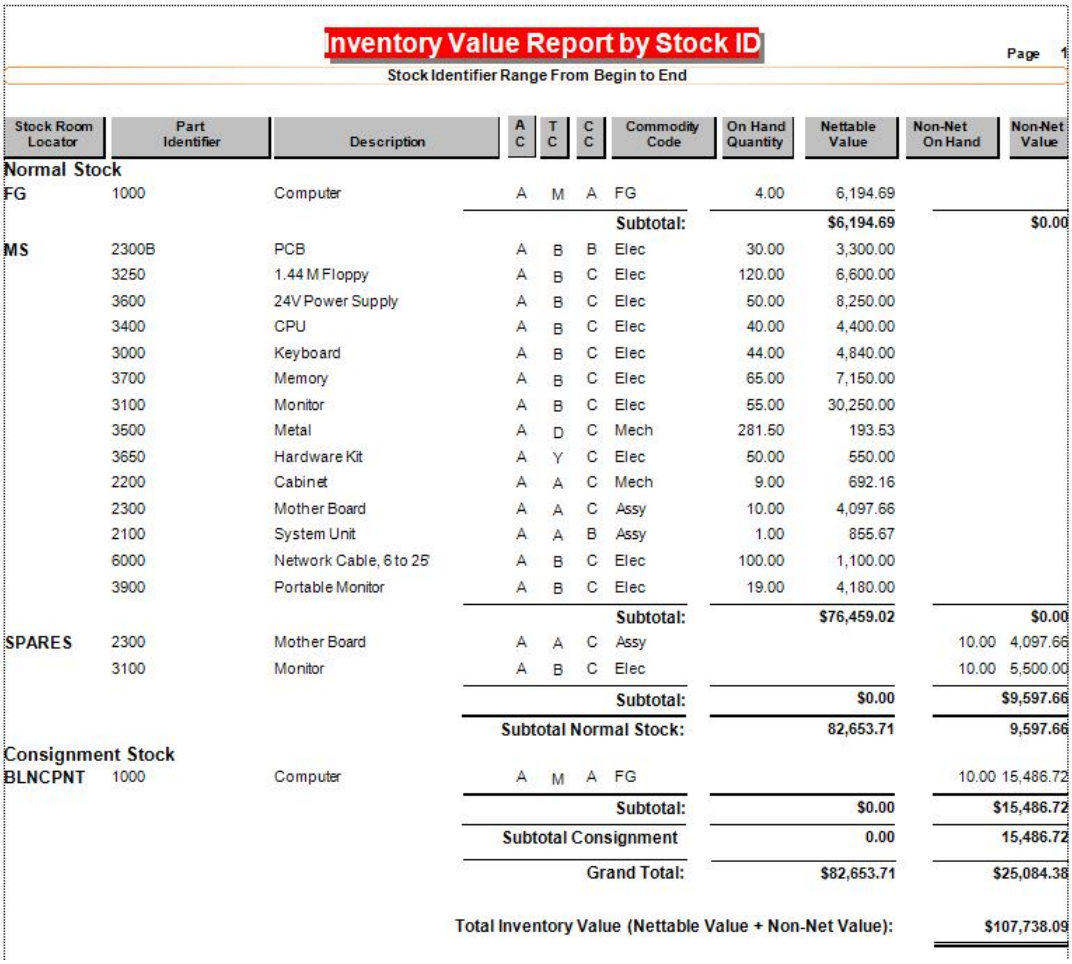
There are also many reports available in the **Inventory Control** module. Probably the most important is the **Inventory Value by Stock Location** report.

Inventory Value by Stock Location

From Reports menu, choose **Inventory Value by Stock Location**. Run the report for all.



The printed report appears as follows:



Inventory Value Report by Stock ID

Page 1

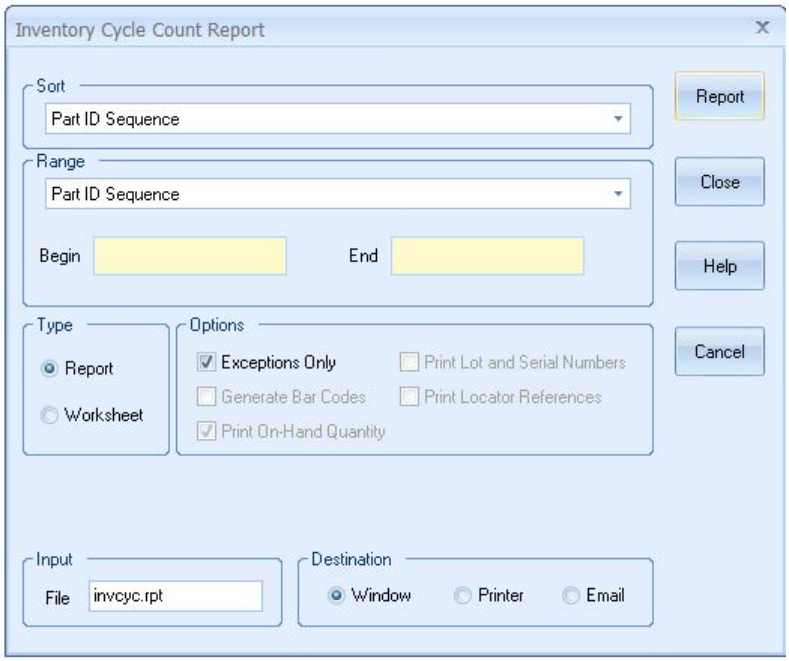
Stock Identifier Range From Begin to End

Stock Room Locator	Part Identifier	Description	AC	TC	CC	Commodity Code	On Hand Quantity	Nettable Value	Non-Net On Hand	Non-Net Value
Normal Stock										
FG	1000	Computer	A	M	A	FG	4.00	6,194.69		
						Subtotal:		**$6,194.69**		**$0.00**
MS	2300B	PCB	A	B	B	Elec	30.00	3,300.00		
	3250	1.44 M Floppy	A	B	C	Elec	120.00	6,600.00		
	3600	24V Power Supply	A	B	C	Elec	50.00	8,250.00		
	3400	CPU	A	B	C	Elec	40.00	4,400.00		
	3000	Keyboard	A	B	C	Elec	44.00	4,840.00		
	3700	Memory	A	B	C	Elec	65.00	7,150.00		
	3100	Monitor	A	B	C	Elec	55.00	30,250.00		
	3500	Metal	A	D	C	Mech	281.50	193.53		
	3650	Hardware Kit	A	Y	C	Elec	50.00	550.00		
	2200	Cabinet	A	A	C	Mech	9.00	692.16		
	2300	Mother Board	A	A	C	Assy	10.00	4,097.66		
	2100	System Unit	A	A	B	Assy	1.00	855.67		
	6000	Network Cable, 6 to 25	A	B	C	Elec	100.00	1,100.00		
	3900	Portable Monitor	A	B	C	Elec	19.00	4,180.00		
						Subtotal:		**$76,459.02**		**$0.00**
SPARES	2300	Mother Board	A	A	C	Assy			10.00	4,097.66
	3100	Monitor	A	B	C	Elec			10.00	5,500.00
						Subtotal:		**$0.00**		**$9,597.66**
						Subtotal Normal Stock:		**82,653.71**		**9,597.66**
Consignment Stock										
BLNCPNT	1000	Computer	A	M	A	FG			10.00	15,486.72
						Subtotal:		**$0.00**		**$15,486.72**
						Subtotal Consignment		**0.00**		**15,486.72**
						Grand Total:		**$82,653.71**		**$25,084.38**
						Total Inventory Value (Nettable Value + Non-Net Value):				**$107,738.09**

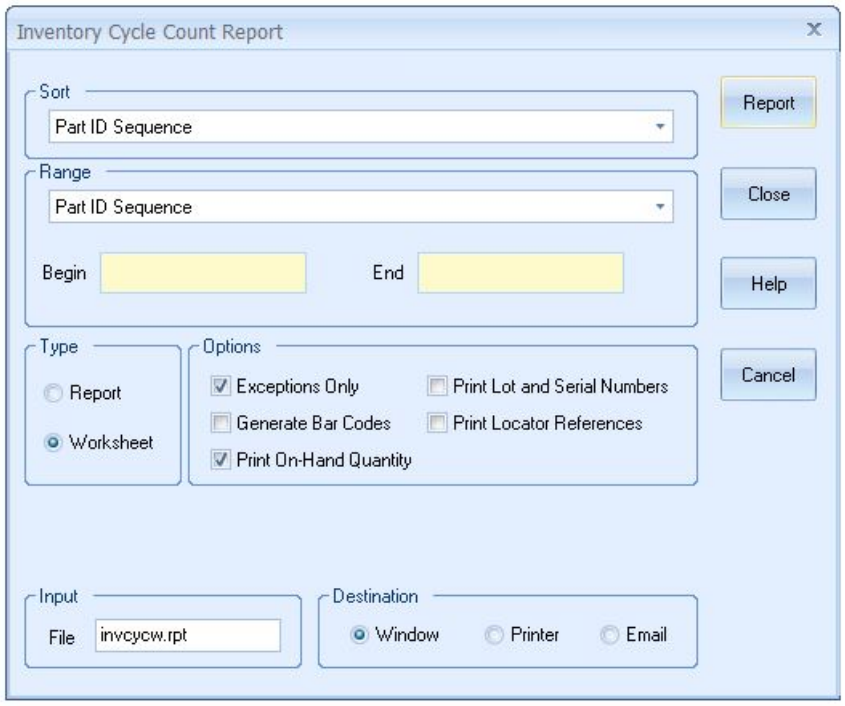
The total at the bottom, combined with the **Costing** module **End of Period WIP** report provide total inventory value for accounting.

Cycle Count Reports

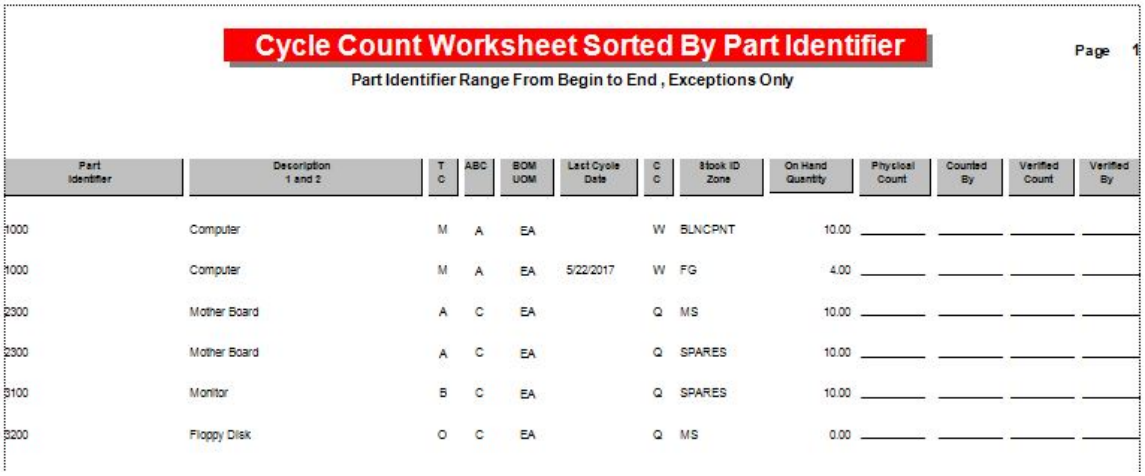
Standard reports are available within Inventory Control. To print a cycle count worksheet of all parts that need to be cycle counted; from **Report's** menu choose **Cycle Count Reports**.



Sort by Stock Identifier Sequence and ask for **Exceptions Only**. Be sure to choose the **Worksheet** rather than the Cycle Count Report.



Choose Window for your destination and click Report button to display the report.



Cycle Count Worksheet Sorted By Part Identifier

Page 1

Part Identifier Range From Begin to End , Exceptions Only

Part Identifier	Description 1 and 2	T C	ABC	BOM UOM	Last Cycle Date	C C	Stock ID Zone	On Hand Quantity	Physical Count	Counted By	Verified Count	Verified By
1000	Computer	M	A	EA		W	BLNCPNT	10.00				
1000	Computer	M	A	EA	5/22/2017	W	FG	4.00				
2300	Mother Board	A	C	EA		Q	MS	10.00				
2300	Mother Board	A	C	EA		Q	SPARES	10.00				
3100	Monitor	B	C	EA		Q	SPARES	10.00				
3200	Floppy Disk	O	C	EA		Q	MS	0.00				

Look again through the Reports menu and run other reports that interest you.

Congratulations

You have just seen how easy it is to view important inventory information.

Stage III – Purchasing Control

Part VIII (Chapters 23 through 26) represents one of the two execution modules in manufacturing control system. Here in Stage III of the Standard MAX Implementation Plan we will review Purchasing Control.

Part VIII: Purchasing Control

Purchasing control is where suppliers are managed and commitments from those suppliers logged on orders for inventoried, non-inventoried items and subcontracted services.

Chapter 23

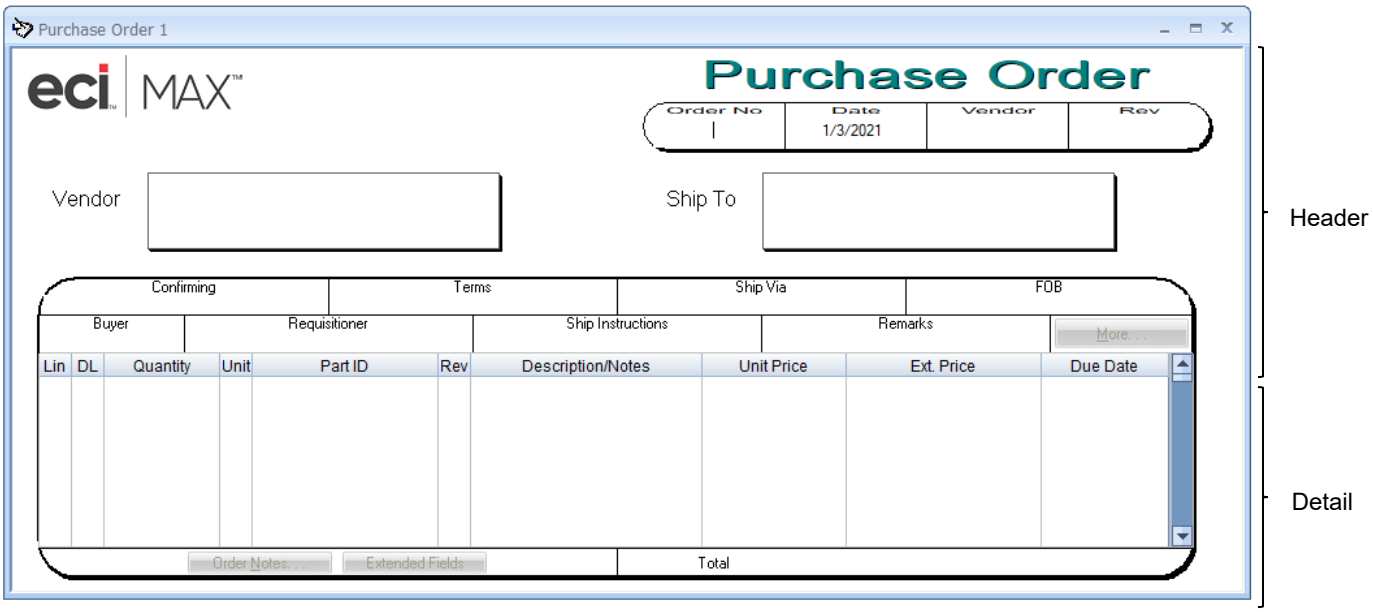
Introduction

With the **Purchasing Control** module, you can create and print purchase orders, track purchased materials, maintain vendor information, and predict your cash requirements. You will know exactly what a part will cost, when you can get it, and from which approved vendors.

The **Activity** menu covers main components of the **Purchasing Control** module. Purchase Orders, Purchasing Schedule, and Purchasing Data.

Purchase Orders

The primary object for purchasing is the Purchase Order (PO) form which is accessed from the **Activity** menu. This form is a visual representation of the PO itself. The user can enter header and multiple detail records, access vendor and other purchasing data, as well as view the entire order from one screen. As the cursor passes over a "hot spot" on the form it changes to a magnifying glass to indicate a browsable field. Double-click to browse it.

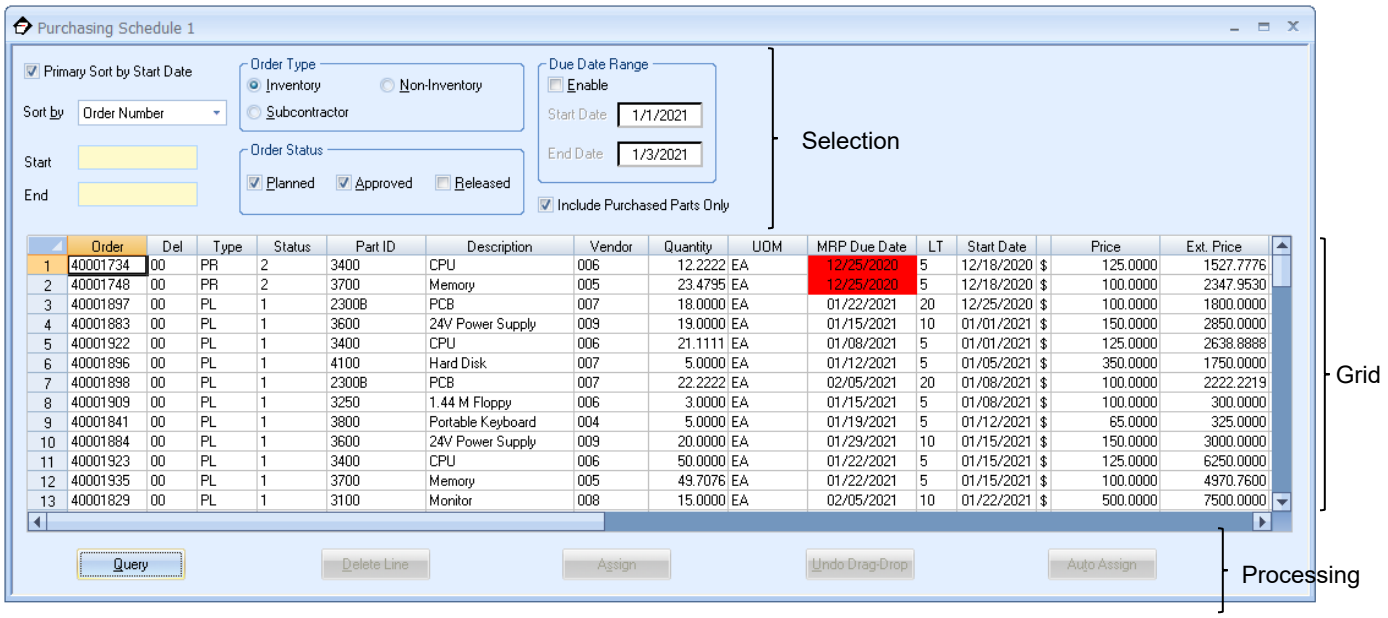


Not all the fields are visible on the form, but all are accessible from the form. By double-clicking on certain fields, such as terms or ship via codes, you can change the data for this specific order. Additional data can be accessed by clicking on the **More** button on the right side of the form.

Purchasing Schedule

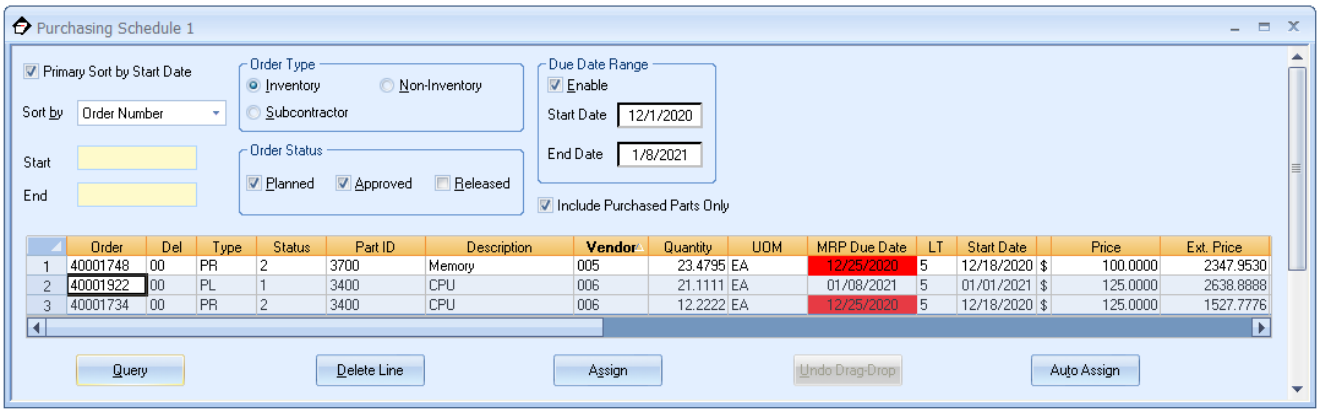
Two of the primary design objectives of Purchasing are to streamline the user's workflow and to provide a "paperless" purchasing environment. The tool that we have created to provide this capability is the Purchasing Schedule. This is accessed by choosing **Purchasing Schedule** from the **Activity** menu.

Like many of the MAX dialogues, the **Purchasing Schdule** has areas for selection, a grid that provides the results of that selection and a processing area.



	Order	Del	Type	Status	Part ID	Description	Vendor	Quantity	UOM	MRP Due Date	LT	Start Date		Price	Ext. Price
1	40001734	00	PR	2	3400	CPU	006	12.2222	EA	12/25/2020	5	12/18/2020	$	125.0000	1527.7776
2	40001748	00	PR	2	3700	Memory	005	23.4795	EA	12/25/2020	5	12/18/2020	$	100.0000	2347.9530
3	40001897	00	PL	1	2300B	PCB	007	18.0000	EA	01/22/2021	20	12/25/2020	$	100.0000	1800.0000
4	40001883	00	PL	1	3600	24V Power Supply	009	19.0000	EA	01/15/2021	10	01/01/2021	$	150.0000	2850.0000
5	40001922	00	PL	1	3400	CPU	006	21.1111	EA	01/08/2021	5	01/01/2021	$	125.0000	2638.8888
6	40001896	00	PL	1	4100	Hard Disk	007	5.0000	EA	01/12/2021	5	01/05/2021	$	350.0000	1750.0000
7	40001898	00	PL	1	2300B	PCB	007	22.2222	EA	02/05/2021	20	01/08/2021	$	100.0000	2222.2219
8	40001909	00	PL	1	3250	1.44 M Floppy	006	3.0000	EA	01/15/2021	5	01/08/2021	$	100.0000	300.0000
9	40001841	00	PL	1	3800	Portable Keyboard	004	5.0000	EA	01/19/2021	5	01/12/2021	$	65.0000	325.0000
10	40001884	00	PL	1	3600	24V Power Supply	009	20.0000	EA	01/29/2021	10	01/15/2021	$	150.0000	3000.0000
11	40001923	00	PL	1	3400	CPU	006	50.0000	EA	01/22/2021	5	01/15/2021	$	125.0000	6250.0000
12	40001935	00	PL	1	3700	Memory	005	49.7076	EA	01/22/2021	5	01/15/2021	$	100.0000	4970.7600
13	40001829	00	PL	1	3100	Monitor	008	15.0000	EA	02/05/2021	10	01/22/2021	$	500.0000	7500.0000

The **Purchasing Schedule** looks and acts like a spreadsheet. Flexible selection criteria allow you to highlight one, several, or all rows on the grid. Click the top left corner of the grid for all records. Left click to select one row. Ctrl-Left Click to select non-continuous rows. Shift-click to select a range of rows. For example, left clicking on row 2 and then holding the shift key and clicking on row 4, selected these 3 rows. Press **Auto Assign** to transfer those orders to a purchase order.

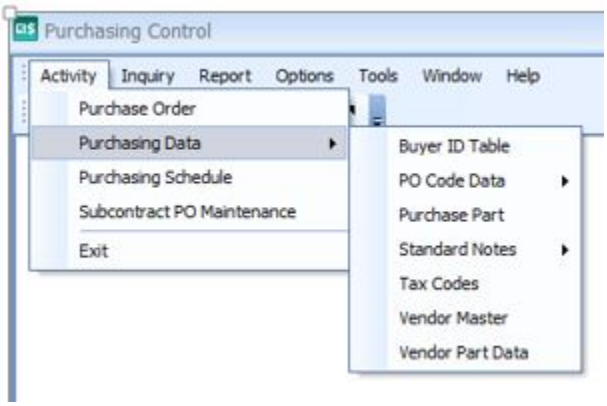


	Order	Del	Type	Status	Part ID	Description	Vendor	Quantity	UOM	MRP Due Date	LT	Start Date		Price	Ext. Price
1	40001748	00	PR	2	3700	Memory	005	23.4795	EA	12/25/2020	5	12/18/2020	$	100.0000	2347.9530
2	40001922	00	PL	1	3400	CPU	006	21.1111	EA	01/08/2021	5	01/01/2021	$	125.0000	2638.8888
3	40001734	00	PR	2	3400	CPU	006	12.2222	EA	12/25/2020	5	12/18/2020	$	125.0000	1527.7776

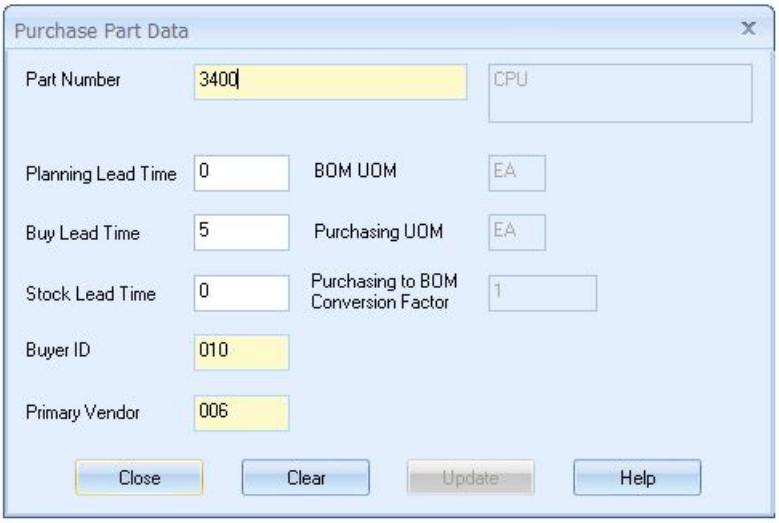
The purpose of the grid is to allow you to add; change and review purchase requisitions, and along with MRP generated orders, convert them to new purchase orders or assign them to existing purchase orders.

Purchasing Data

The entering and maintenance of all static data is handled from several dialogues located under Purchasing Data. **Purchasing Data** is accessed from the **Activity** menu.



Purchase Part Data is another method of updating the Part Master table.



Purchase Part Data is where you can update lead-times, assign a buyer to the part, and identify the recommended supplier.

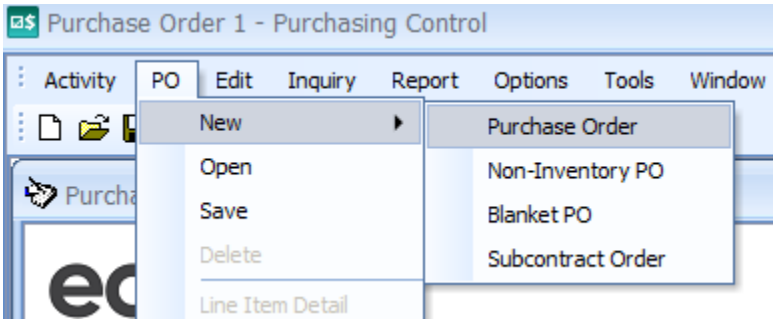
Chapter 24

Entering Purchase Orders

The **Purchasing Control** module can handle all your purchasing needs with its ability to support the entering of Unplanned, Non-Inventory and Blanket Purchase Orders. In this section, you will be entering a Non-Inventory PO for some marketing materials to be sent to one of your customers, who is also a reseller, as well as an Unplanned PO for Part 3400.

Non-Inventoried – Step 1

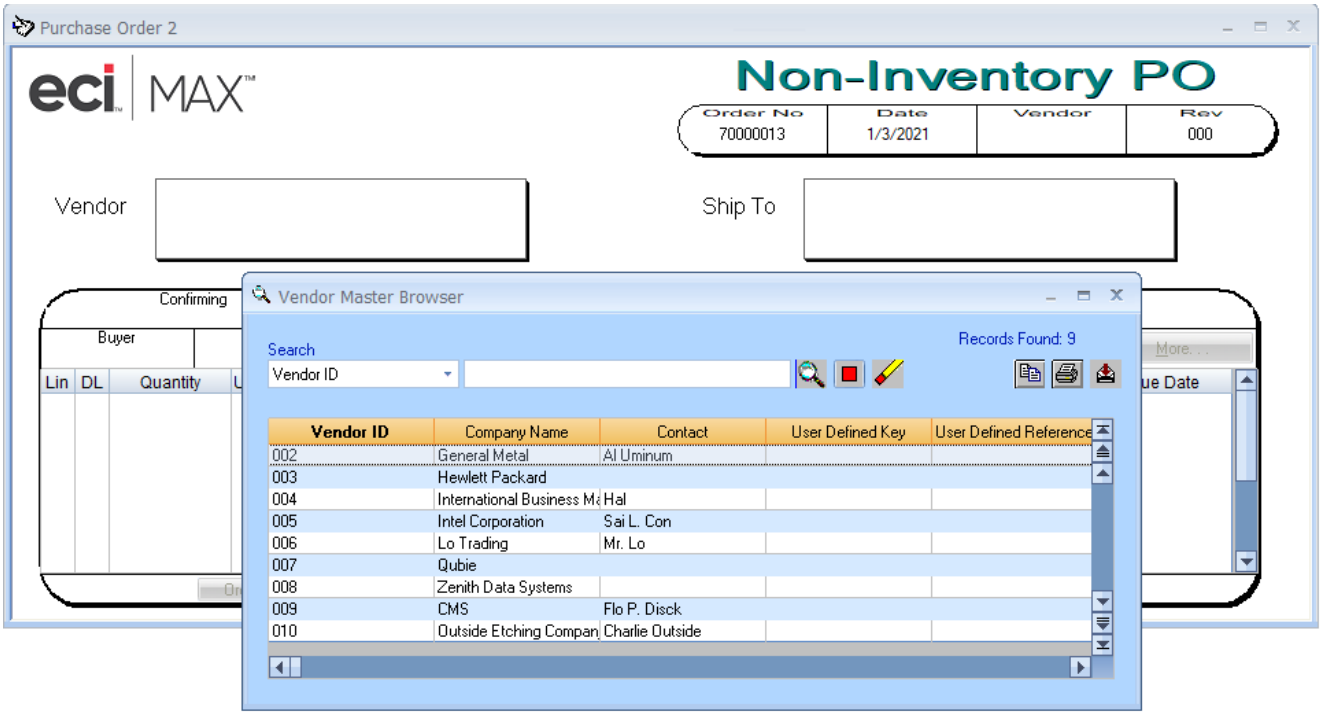
From the **Activity** menu choose **Purchase Order** and maximize your order window. Click the **PO** menu item, then **New** and choose **Non-Inventory PO**.



Notice that the Purchase Order form changes to indicate the entering of a Non-Inventoried PO. This is true for the other types of PO's.

Step 2

The system will automatically assign the next PO number and open the dialog for you to select a vendor. Choose **CMS** as a vendor. You will also need to assign a buyer to the purchase order.

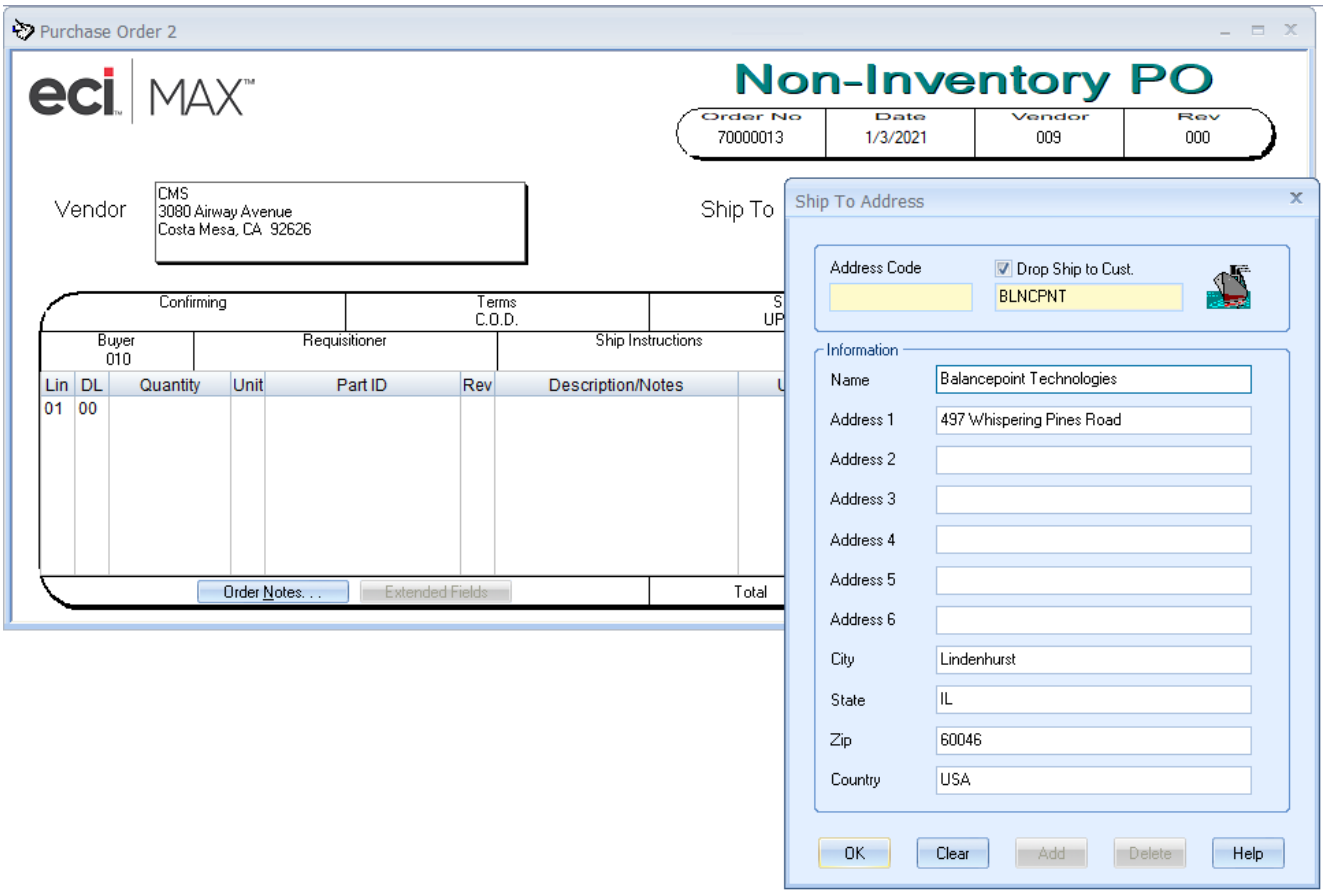


Notice that once selected, the default vendor information will automatically be entered into the Purchase Order form. Default vendor information is set-up under **Purchasing Data** from the **Activity** menu.

Step 3

MAX supports multiple Ship To addresses per vendor as well as the ability to drop-ship a Purchase Order directly to a customer.

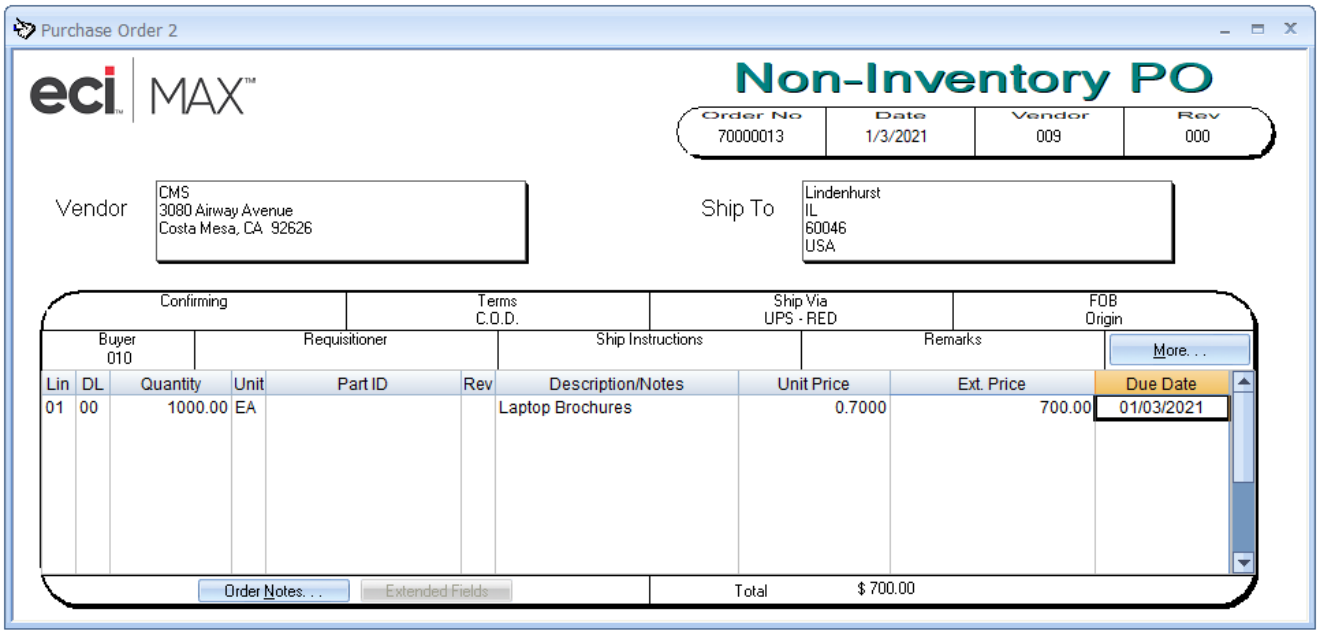
Double-click the **Ship To** box on the Purchase Order form to bring up the **Ship To** address dialogue. Click the checkbox that says **Drop Ship to Cust** and double-click the field below to browse the customers.



Choose Balance Point Technologies and click **OK**.

Step 4

Enter the following line information.



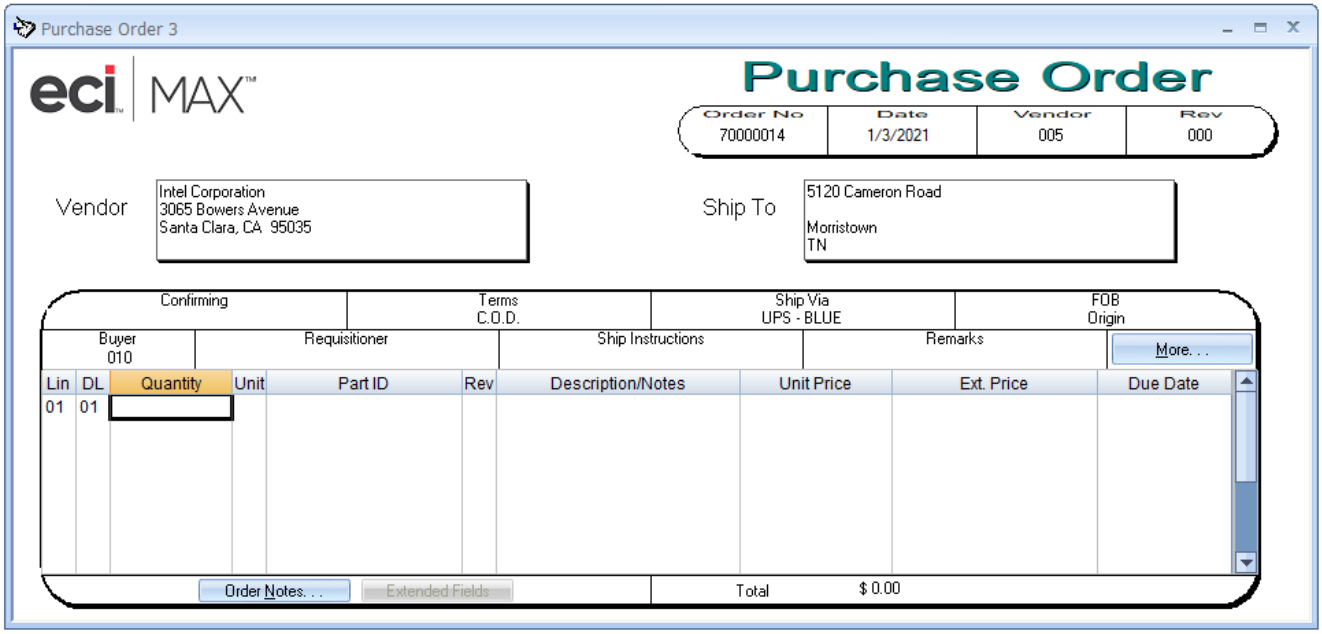
Click on **PO** from the menu and choose **Save**. If you try to leave the screen without saving, the system will notify you and ask you to save the data or not.

Unplanned PO – Step 1

To create an Inventoried Purchase Order that is not planned by MRP, select **PO – New – Purchase Order** from the menu. Once again notice that the Purchase Order form has changed to indicate the type of PO you are working on.

Step 2

Notice the Vendor Master Browser allows you to look-up vendors by Vendor ID or Company Name.
This time choose Intel as the vendor.

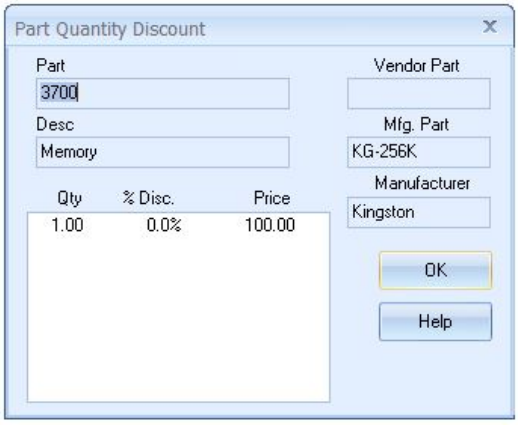


Step 3

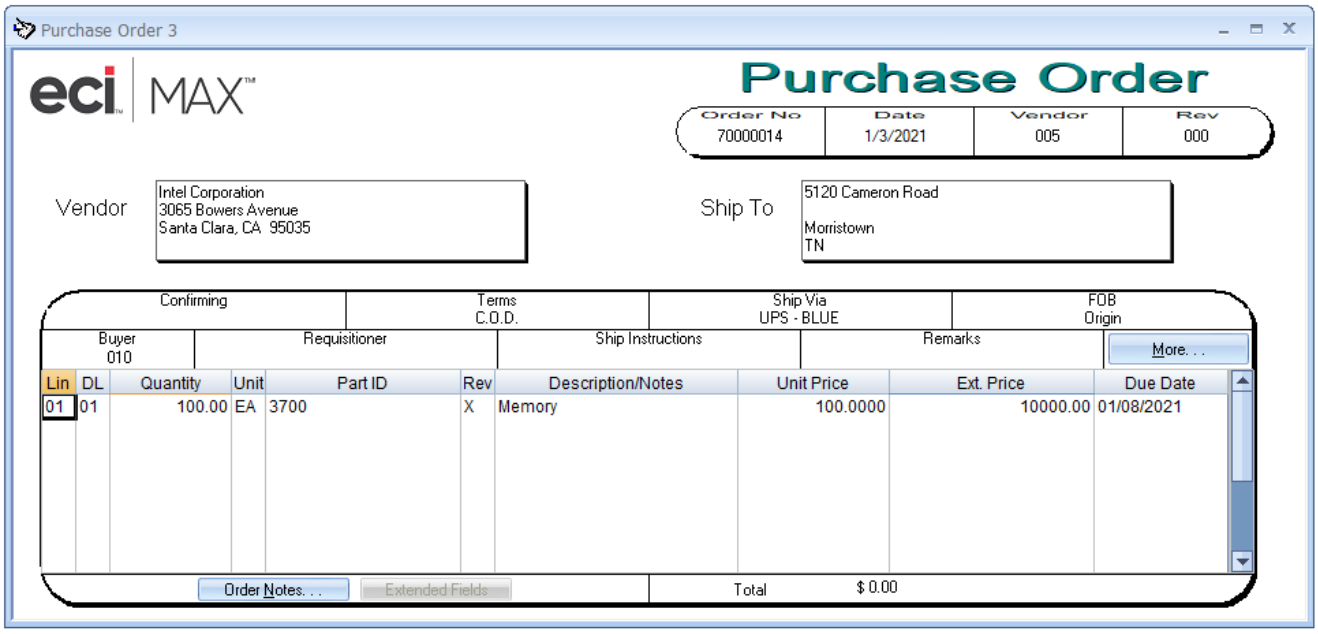
You want to order Part 3700 Memory. You can either enter the part number directly on the form or browse to display all approved parts that can be purchased from the specified vendor.

Double-click the **Part ID** field on the Purchase Order form to bring up Vendor Part Data Browser. Choose Intel for Part 3700. Notice that Manufacturer's Part Number (MPN) information is also attached to the Part Vendor record. Make sure you choose the right MPN. Double-click on the correct row to return that data to the PO line.

Once a Part ID is entered, you can double-click on the **Quantity** field on the PO form you can also display Part Quantity Price Break information directly without going to the Part Vendor screen.

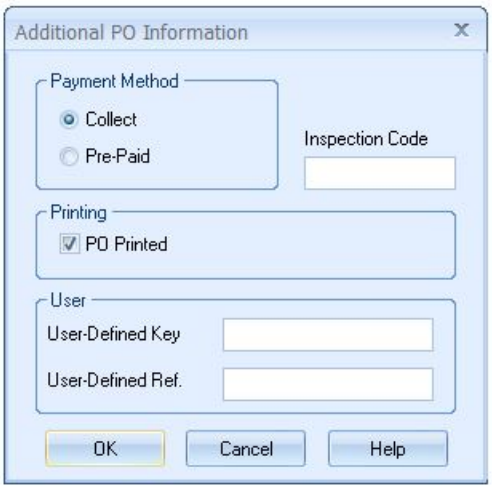


Press **OK**.



Step 4

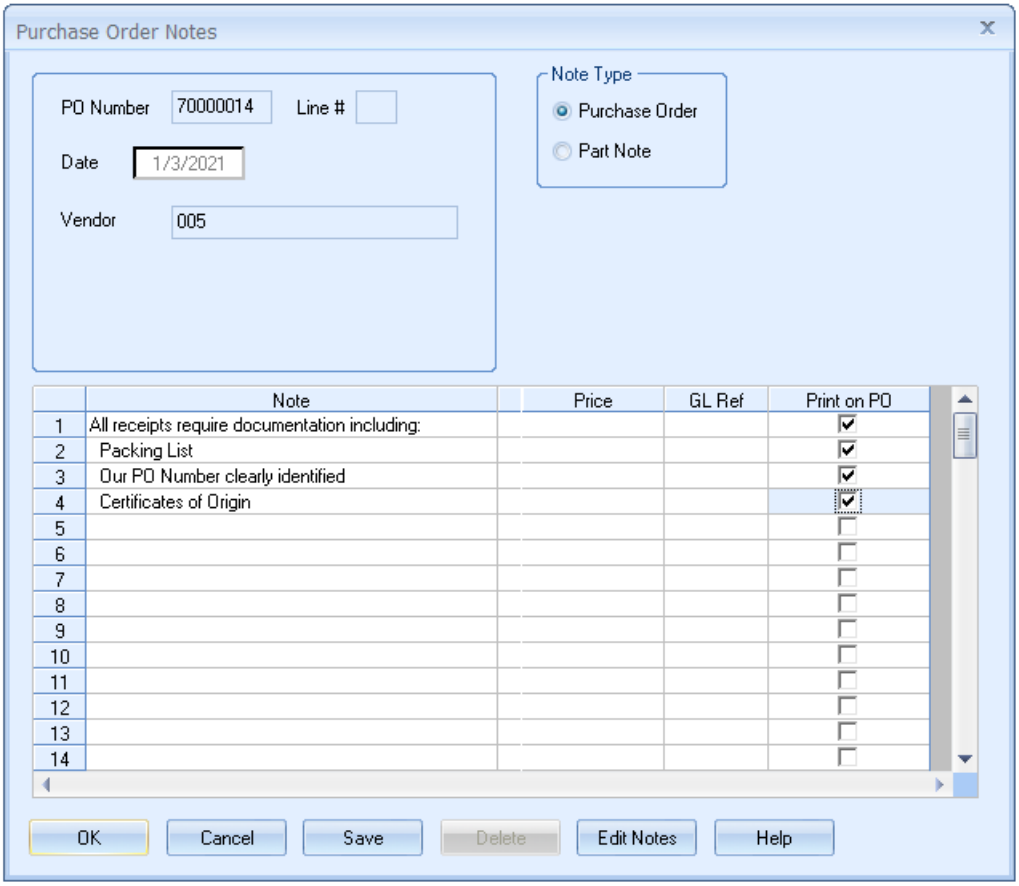
Click the **More** button.



Change the **Payment Method** from Pre-Paid to **Collect** and click on the **Purchase Order Print Flag** so *DUPLCIATE* will be printed on the Purchase Order form when you print the purchase order. Click **OK**.

Step 5

Click the **Order Notes** button. Verify the check mark under **Print on PO** is checked. Click **OK** and answer **Yes** to save your changes.

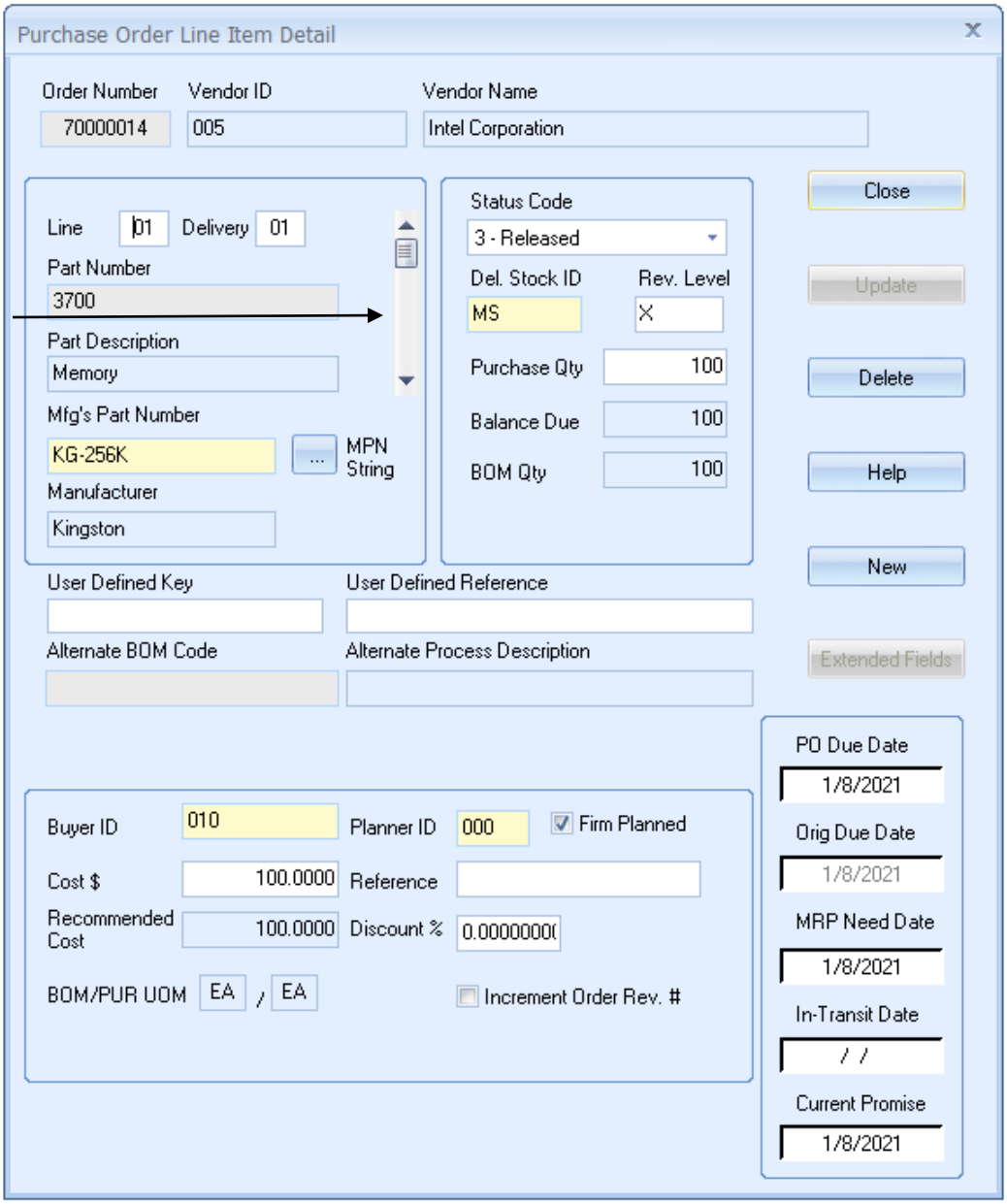


You can also enter notes specific to an order or to a line item on an order. MAX also supports Standard Notes for orders, parts, vendors, and part vendor combinations. Standard Notes automatically attach to a Purchase Order and are maintained in **Activity – Purchasing Data – Standard Notes**.

Step 5

Double-click on the **Line** 01 field on the Purchase Order form to bring up the Line-Item Detail screen. If you prefer, you can use this screen to enter PO data. The vertical scroll bar will take you to the next or previous line.

Previous Line (up)
or
Next Line (down)



Verify the Buyer ID is assigned. Verify the **Firm Planned** checkbox is checked. This will prevent the MRP program from changing the due date. Click on the Close button and answer **Yes** to save your changes.

Step 6

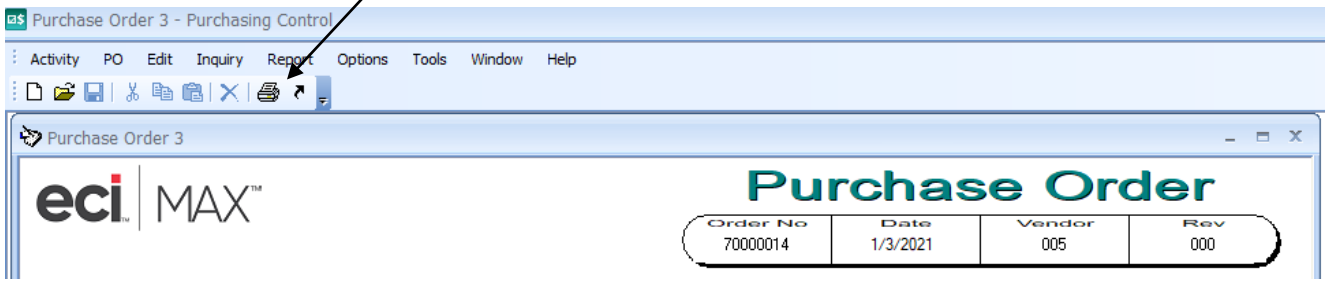
Click on the **PO** menu and choose **Save**.

At this point, you could print the Purchase Order by selecting Print Purchase Orders from the Reports menu. From here you have the option of printing a hard copy, viewing it on the screen or emailing it directly to the

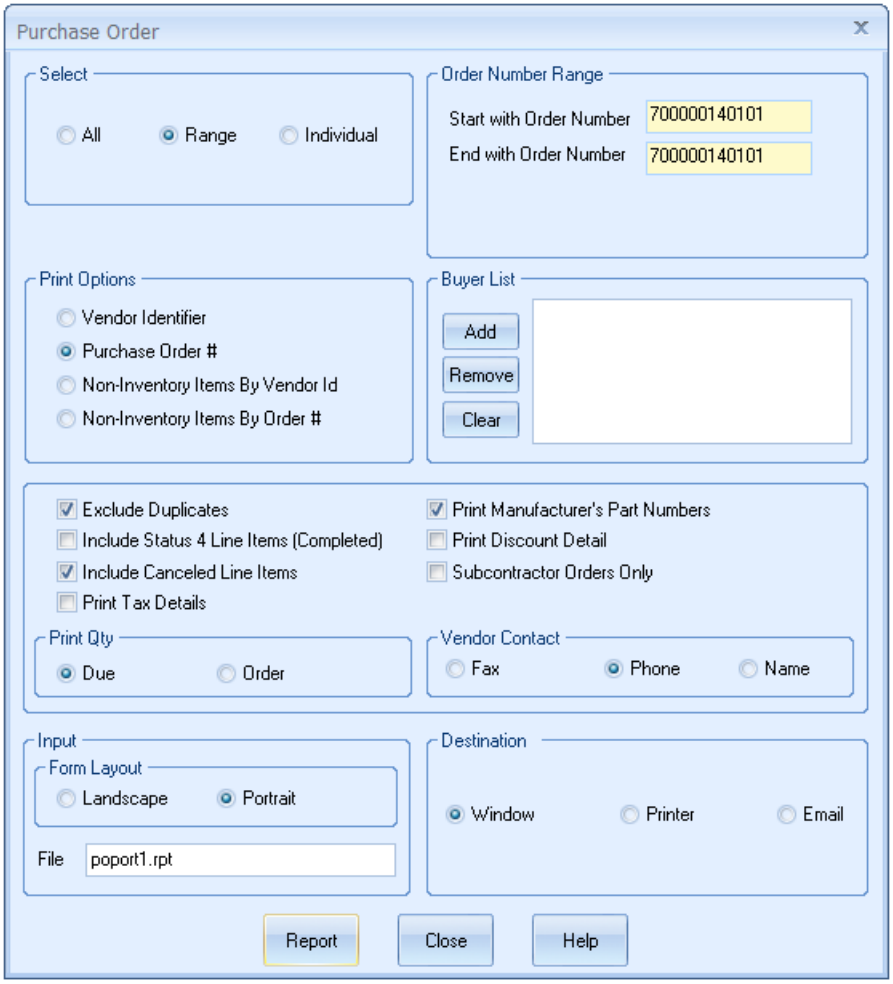
vendor. You can do so using the **Reports – Print Purchase Orders** function from the menu, or with the main PO dialog open, press the **Printer** button.

Step 7 – Printing Purchase Orders

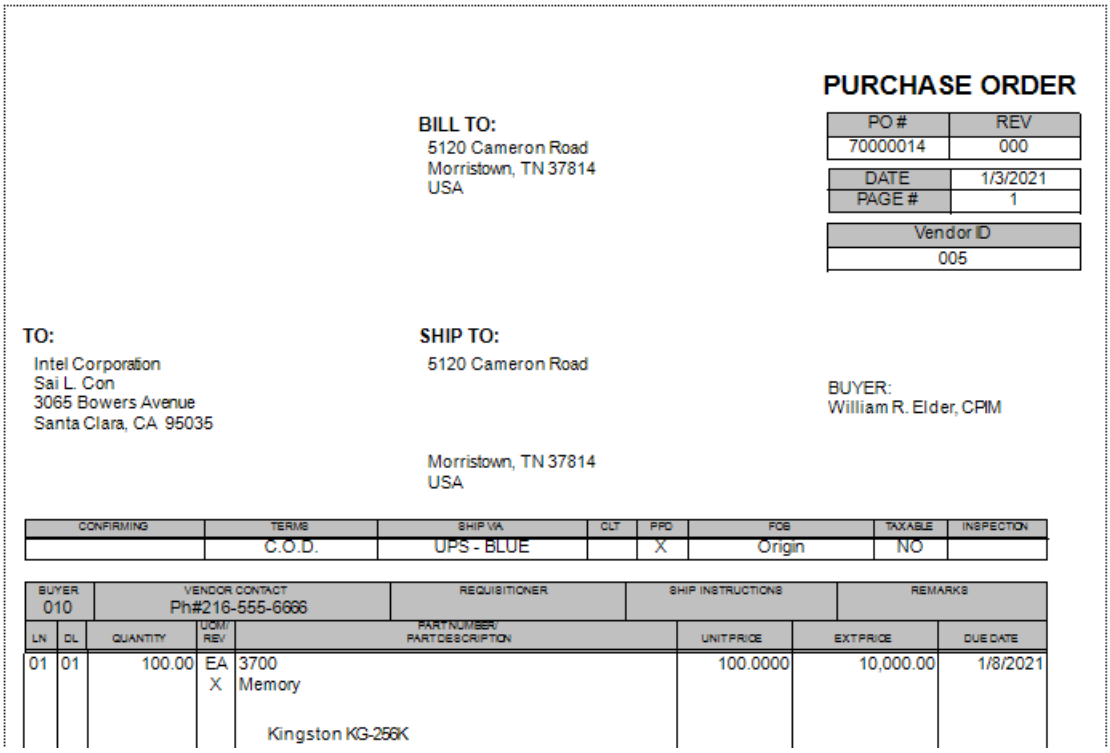
At any time after the Sales Order is entered, you may print a Purchase Order. The most direct method is to open the PO and press the **Printer** button.



The report dialog screen will open.



Enter the data that meets your needs for the PO's to be printed and press **Report**. The PO will print to the destination selected.



PURCHASE ORDER

BILL TO:
5120 Cameron Road
Morristown, TN 37814
USA

PO #	REV
70000014	000

DATE	1/3/2021
PAGE #	1

Vendor ID
005

TO:
Intel Corporation
Sal L. Con
3065 Bowers Avenue
Santa Clara, CA 95035

SHIP TO:
5120 Cameron Road

Morristown, TN 37814
USA

BUYER:
William R. Elder, CPIM

CONFIRMING	TERMS	SHIP VIA	CLT	PPD	FOB	TAXABLE	INSPECTION
	C.O.D.	UPS - BLUE		X	Origin	NO	

BUYER	VENDOR CONTACT	REQUISITIONER	SHIP INSTRUCTIONS	REMARKS
010	Ph#216-555-6666			

LN	DL	QUANTITY	UOM/ REV	PART NUMBER/ PART DESCRIPTION	UNIT PRICE	EXT PRICE	DUE DATE
01	01	100.00	EA X	3700 Memory Kingston KG-256K	100.0000	10,000.00	1/8/2021

The output of the report is the purchase order. These may be customized for your logo, local terms and conditions and signature lines using *Crystal Reports*.

Congratulations

You have completed entering two different types of Purchase Orders. Next you will address the planned orders generated by MRP.

Chapter 25

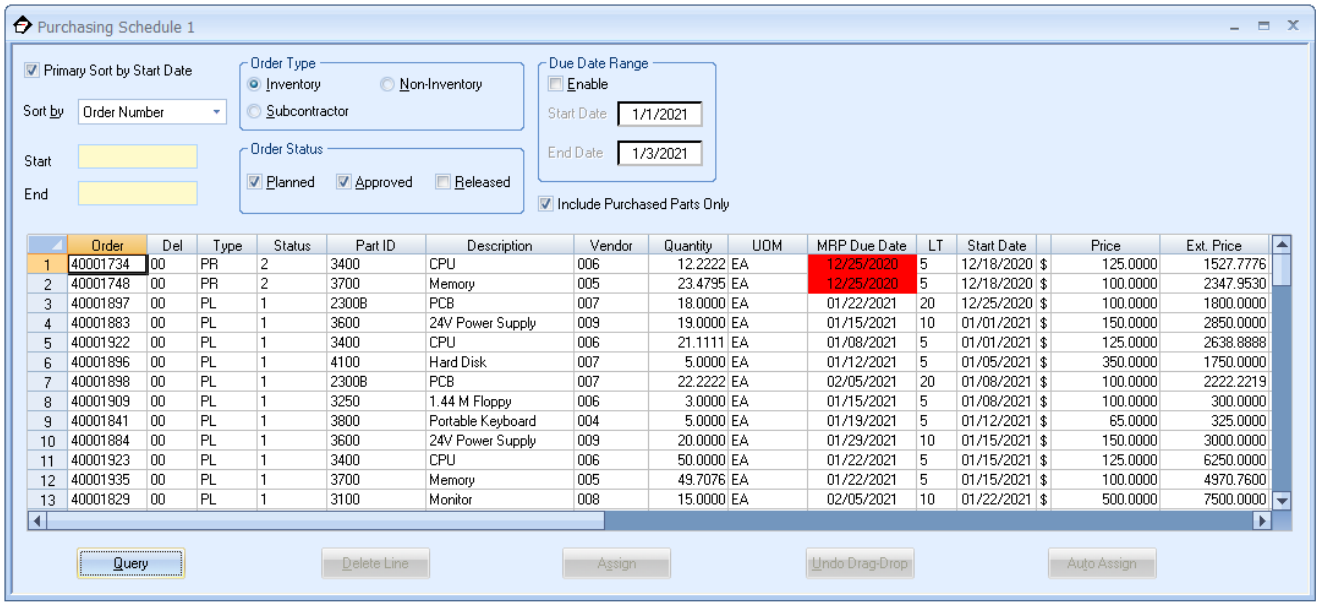
Working with MRP Generated Orders

In this section, you will walk through the process of turning MRP generated orders into Purchase Orders using the **Purchasing Schedule**. Planned Orders and Purchase Requisitions (PRs) can be assigned to Purchase Orders in several was depending on how you do business.

MAX supports a Paperless purchasing option that allows Planned Orders and Purchase Requisitions to be assigned directly to a Purchase Order without printing a single piece of paper.

Step 1

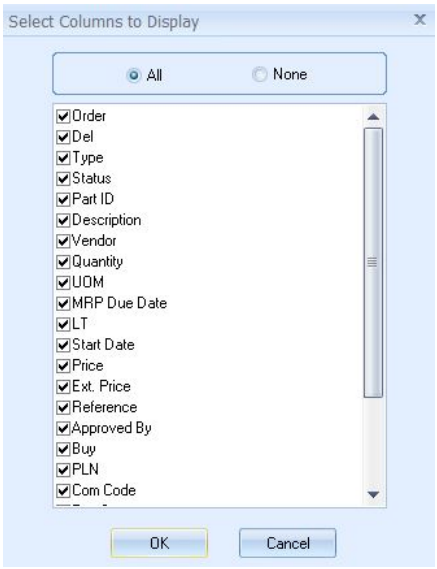
From the **Activity** menu choose **Purchasing Schedule**. Check **Primary Sort by Start Date** and check the **Planned** Order Status box. Remove the check from the **Approved** and **Released checkboxes**. Check the **Include Purchase Parts Only** checkbox and click **Query** to populate the grid with your selection criteria. This criterion will show all new MRP planned orders for purchased parts only and rank those according to their priority (i.e., start date).



	Order	Del	Type	Status	Part ID	Description	Vendor	Quantity	UOM	MRP Due Date	LT	Start Date		Price	Ext. Price
1	40001734	00	PR	2	3400	CPU	006	12.2222	EA	12/25/2020	5	12/18/2020	$	125.0000	1527.7776
2	40001748	00	PR	2	3700	Memory	005	23.4795	EA	12/25/2020	5	12/18/2020	$	100.0000	2347.9530
3	40001897	00	PL	1	2300B	PCB	007	18.0000	EA	01/22/2021	20	12/25/2020	$	100.0000	1800.0000
4	40001883	00	PL	1	3600	24V Power Supply	009	19.0000	EA	01/15/2021	10	01/01/2021	$	150.0000	2850.0000
5	40001922	00	PL	1	3400	CPU	006	21.1111	EA	01/08/2021	5	01/01/2021	$	125.0000	2638.8888
6	40001896	00	PL	1	4100	Hard Disk	007	5.0000	EA	01/12/2021	5	01/05/2021	$	350.0000	1750.0000
7	40001898	00	PL	1	2300B	PCB	007	22.2222	EA	02/05/2021	20	01/08/2021	$	100.0000	2222.2219
8	40001909	00	PL	1	3250	1.44 M Floppy	006	3.0000	EA	01/15/2021	5	01/08/2021	$	100.0000	300.0000
9	40001841	00	PL	1	3800	Portable Keyboard	004	5.0000	EA	01/19/2021	5	01/12/2021	$	65.0000	325.0000
10	40001884	00	PL	1	3600	24V Power Supply	009	20.0000	EA	01/29/2021	10	01/15/2021	$	150.0000	3000.0000
11	40001923	00	PL	1	3400	CPU	006	50.0000	EA	01/22/2021	5	01/15/2021	$	125.0000	6250.0000
12	40001935	00	PL	1	3700	Memory	005	49.7076	EA	01/22/2021	5	01/15/2021	$	100.0000	4970.7600
13	40001829	00	PL	1	3100	Monitor	008	15.0000	EA	02/05/2021	10	01/22/2021	$	500.0000	7500.0000

Clicking on any column will sort the grid by that column. For example, single click on the **Vendor** column to see orders planned by vendor.

Scroll the grid to the right to view other information. These columns can be moved to provide a customized grid for the user. They may also be hidden if you are not using the field. Right-click on the column heading and the **Select Columns to Display** dialog opens.

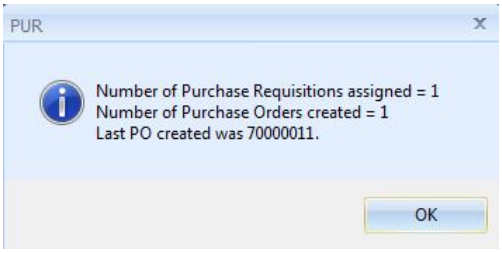


Uncheck any column you do not need to see. Press **OK**.

Step 2

Double-click on the **Vendor** column for Part 4180 as it does not have a **Recommend Vendor** assigned. Select the vendor for this order. Note that this will not set the **Part Master Recommended Vendor**, just the vendor for this order. Click the line number at the front of the row holding the order. Answer **Yes** that you want to save the change to the line.

Make sure the row is highlighted (click the row number if necessary) and then click the **Auto Assign** button. If the **Assign** and **Auto Assign** buttons are inactive, press **Query** again to refresh the screen.

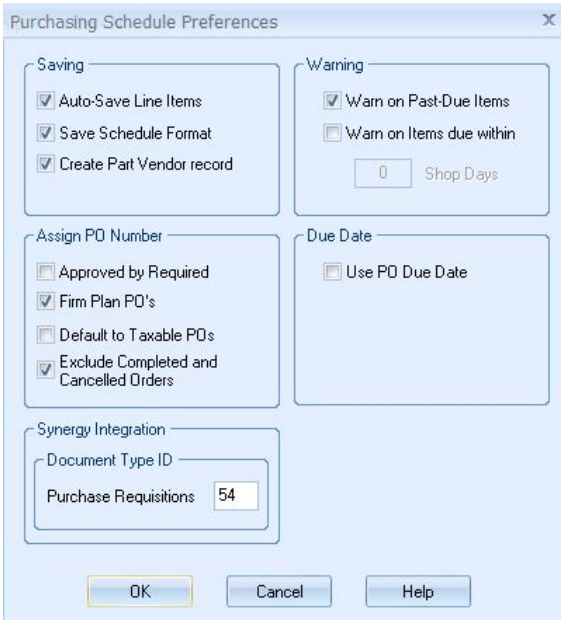


MAX automatically creates a new purchase order for the chosen vendor and assigns the part and quantity to this purchase order, all in one step.

Click **OK** to continue. The screen will refresh, that line will be gone as it no longer matches the criteria (e.g., the status 1 planned order has been processed to a status 3 PO). This fast approach of taking a Planned Order directly to a Purchase Order bypassing the Purchase Requisition cycle may not be appropriate for your business. Your Project Manager may help you decide if PRs should be used.

Step 3

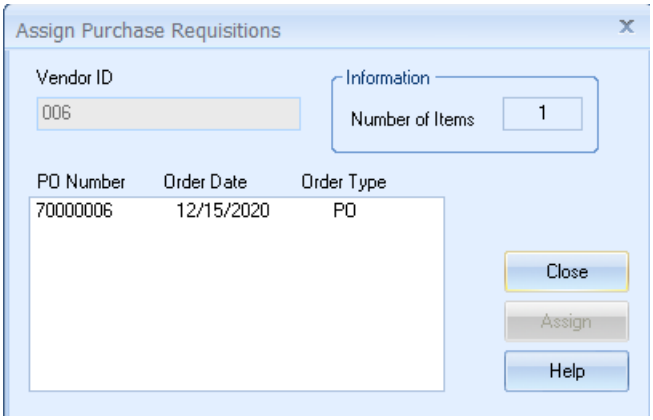
You have several choices to customize the **Purchasing Control** module to fit your business. With the Purchasing Schedule open, click on the **Options** menu choose **Preferences**.



You can require an approval before the system will assign a Purchase Order. You can also turn on/off the ability to create a part/vendor relationship on the fly. Click **OK** to continue.

Step 4

Another way to assign Planned Orders to a Purchase Order is to add them to an existing PO. Highlight a line for the 3400 Keyboard by clicking on the line number and click the **Assign** button.

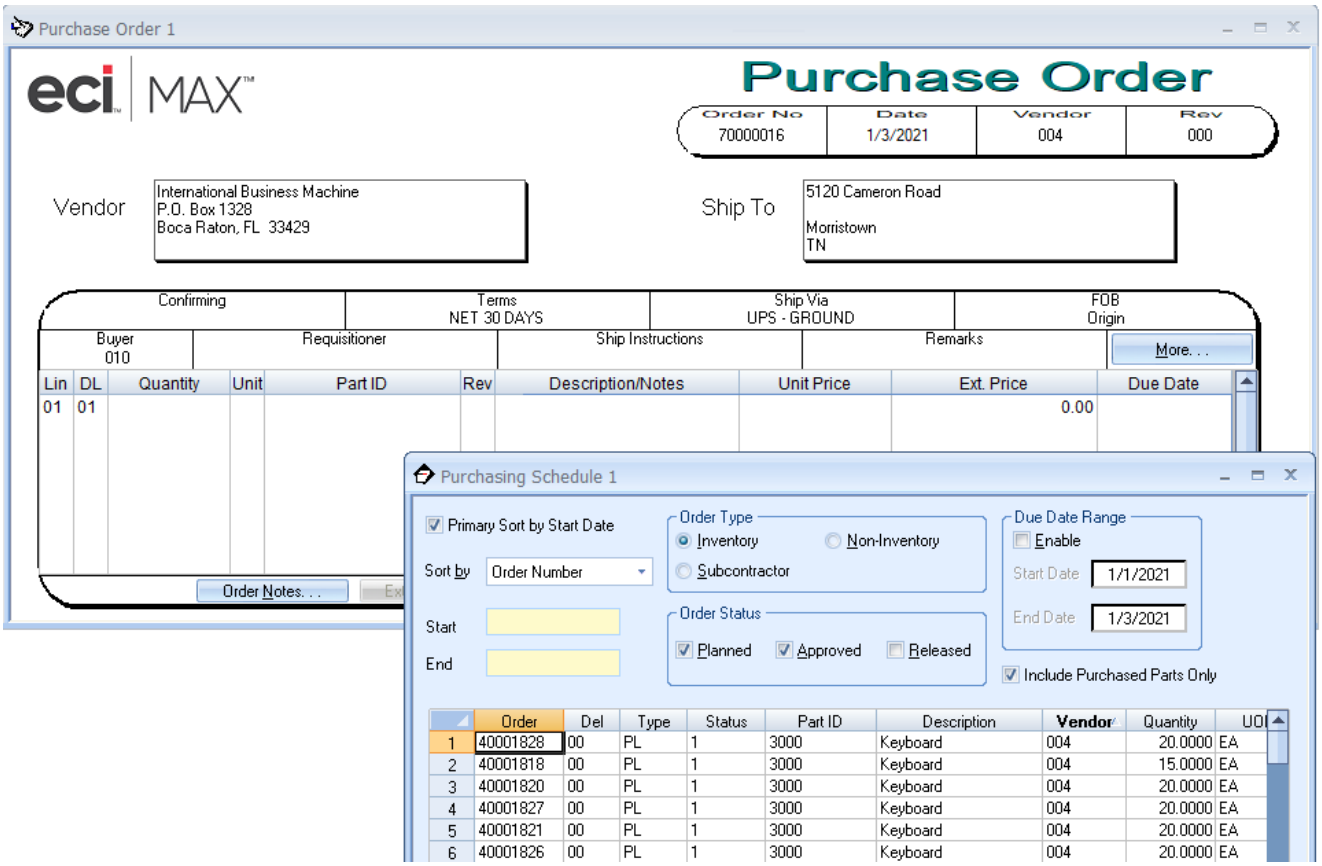


All existing Purchase Orders for the Vendor are displayed. Click to highlight a **PO Number** and then click the **Assign** button to assign the approved planned order to a Purchase Order. Note that the **Assign** button will not be active until an order is selected. Click the **Close** button.

Step 5

You can also drag and drop Planned Orders and Purchase Requisitions directly to a Purchase Order form. While leaving the Purchase Schedule grid on the screen open the Purchase Order form by selecting **Purchase Order** from the **Activity** menu. Choose the first vendor you wish to work with.

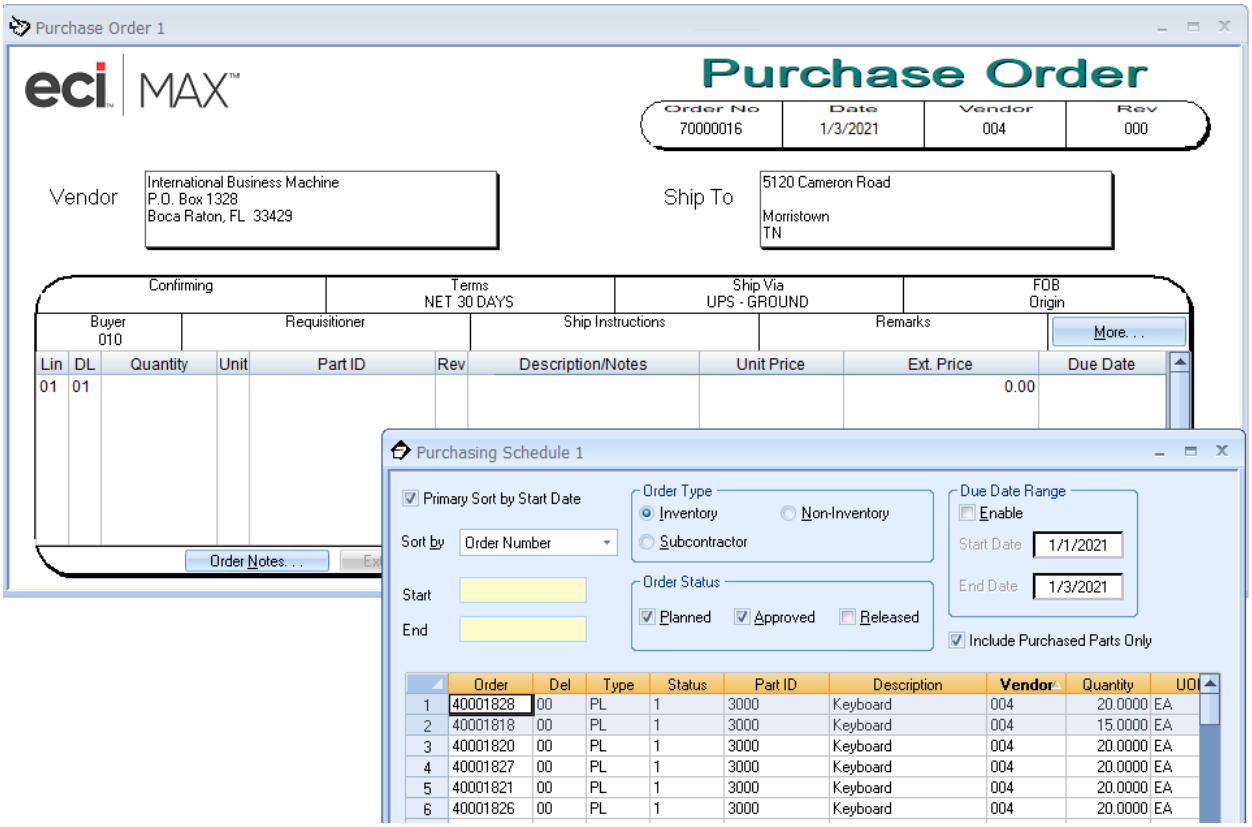
Arrange the screen so that you can see both dialogues. An easy way to accomplish this is by selecting **Tile** from the **Windows** menu.



Note that I opened a PO for the vendor that I wish to process (e.g., 004 IBM).

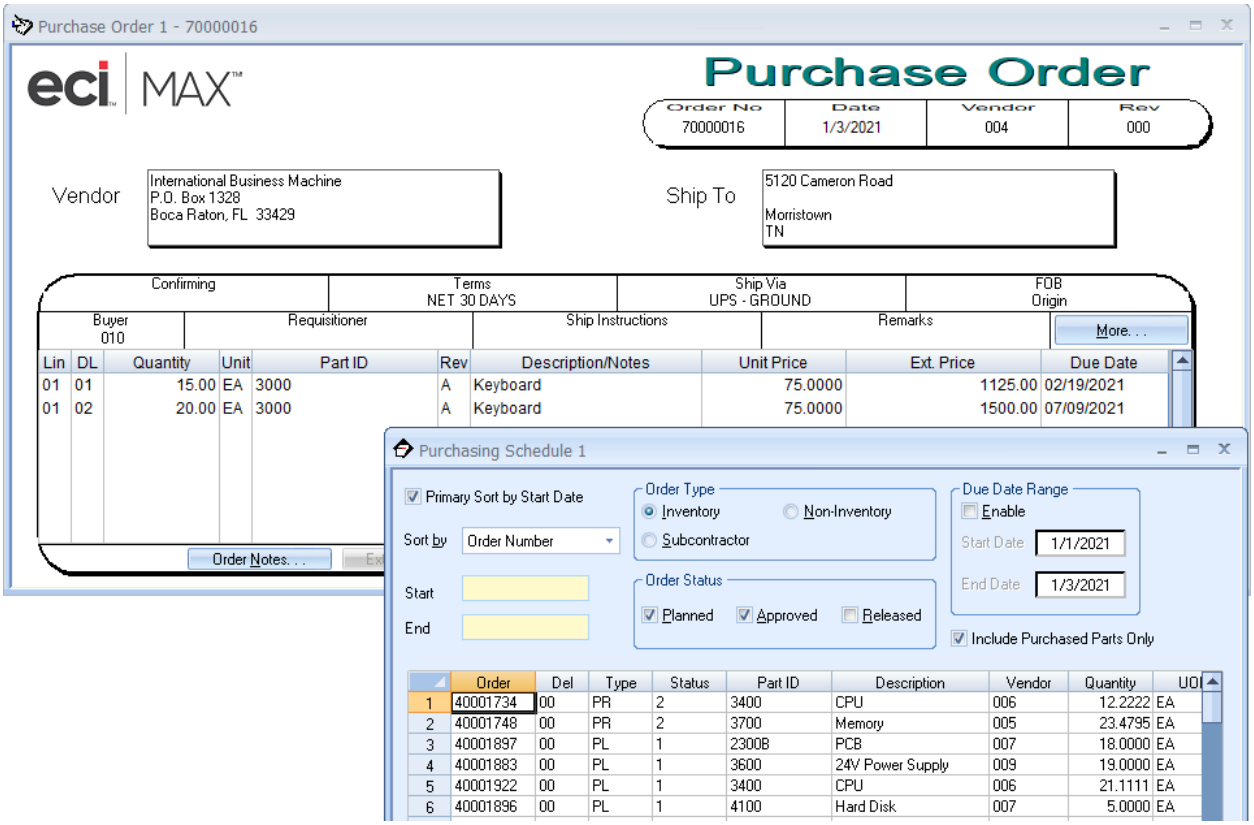
Step 6

From the Purchasing Schedule grid highlight one or more orders for Vendor 004. Note: Several or a range of Planned Orders can also be dragged and dropped to the Purchase Order form.



Step 7

From the **Purchasing Schedule**, hold the cursor over the selected rows and click the right mouse button. Hold the right button and drag the orders to the Quantity field on the PO. Note the cursor will be the "No" symbol until you get to a place where the drop will be accepted. Then, the cursor turns into a PR icon. When you see the icon change, release the button to drop the PR and assign it to that Purchase Order.



Note: The Undo **Drag and Drop** button can be used to remove the order from the PO and place it back on the **Purchasing Schedule** as a planned order, providing the order was not saved.

Congratulations

You have gone through several different processes that MAX supports for assigning MRP generated planned orders. In the next Chapter, you will familiarize yourself with some of the standard reports and inquiries available in Purchasing Control.

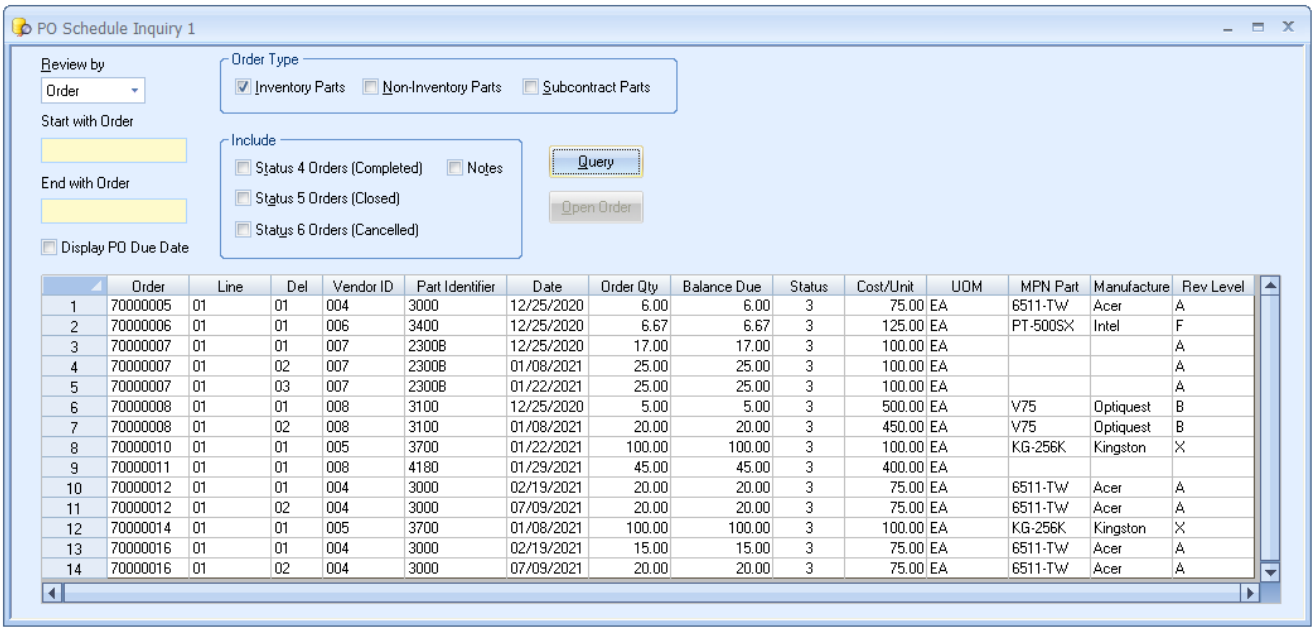
Chapter 26

Presenting Your Data

In this section, you will review the **Inquiries** and **Reports** available in the **Purchasing Control** module. Inquiries allow you to quickly look-up the status of scheduled, in-transit and received Purchase Orders. Numerous reports are available that allow you to do everything from printing Purchase Orders to getting a detailed Cash Requirements report.

Step 1

To view inquiries, choose **Inquiry** from the menu. Click on **PO Schedule**.



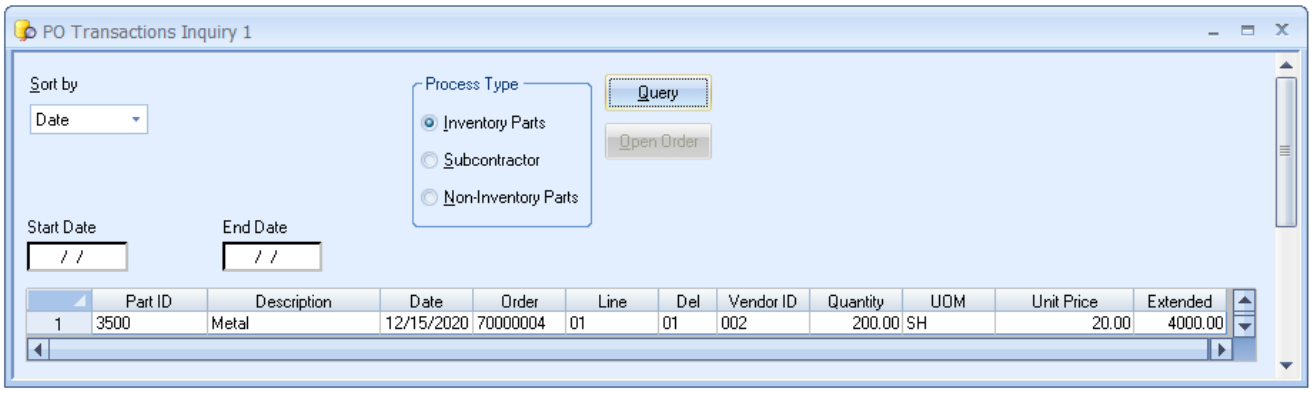
	Order	Line	Del	Vendor ID	Part Identifier	Date	Order Qty	Balance Due	Status	Cost/Unit	UOM	MPN Part	Manufacture	Rev Level
1	70000005	01	01	004	3000	12/25/2020	6.00	6.00	3	75.00	EA	6511-TW	Acer	A
2	70000006	01	01	006	3400	12/25/2020	6.67	6.67	3	125.00	EA	PT-500SX	Intel	F
3	70000007	01	01	007	2300B	12/25/2020	17.00	17.00	3	100.00	EA			A
4	70000007	01	02	007	2300B	01/08/2021	25.00	25.00	3	100.00	EA			A
5	70000007	01	03	007	2300B	01/22/2021	25.00	25.00	3	100.00	EA			A
6	70000008	01	01	008	3100	12/25/2020	5.00	5.00	3	500.00	EA	V75	Optiquest	B
7	70000008	01	02	008	3100	01/08/2021	20.00	20.00	3	450.00	EA	V75	Optiquest	B
8	70000010	01	01	005	3700	01/22/2021	100.00	100.00	3	100.00	EA	KG-256K	Kingston	X
9	70000011	01	01	008	4180	01/29/2021	45.00	45.00	3	400.00	EA			
10	70000012	01	01	004	3000	02/19/2021	20.00	20.00	3	75.00	EA	6511-TW	Acer	A
11	70000012	01	02	004	3000	07/09/2021	20.00	20.00	3	75.00	EA	6511-TW	Acer	A
12	70000014	01	01	005	3700	01/08/2021	100.00	100.00	3	100.00	EA	KG-256K	Kingston	X
13	70000016	01	01	004	3000	02/19/2021	15.00	15.00	3	75.00	EA	6511-TW	Acer	A
14	70000016	01	02	004	3000	07/09/2021	20.00	20.00	3	75.00	EA	6511-TW	Acer	A

Choose **Inventory Parts** as the Order Type and click **Query**. This lists the delivery schedule for current inventoried Purchase Orders. You may review this information by part, by vendor, by order, or by blanket PO. The grid may be sorted by clicking on the column heading. You can also choose an order from this display by selecting the row and click **Open Order** to open it into the Purchase Order form.

Click **Exit** to continue.

Step 2

Choose **Inquiry** from the menu. Click on **PO Transactions** and click the **Display** button.

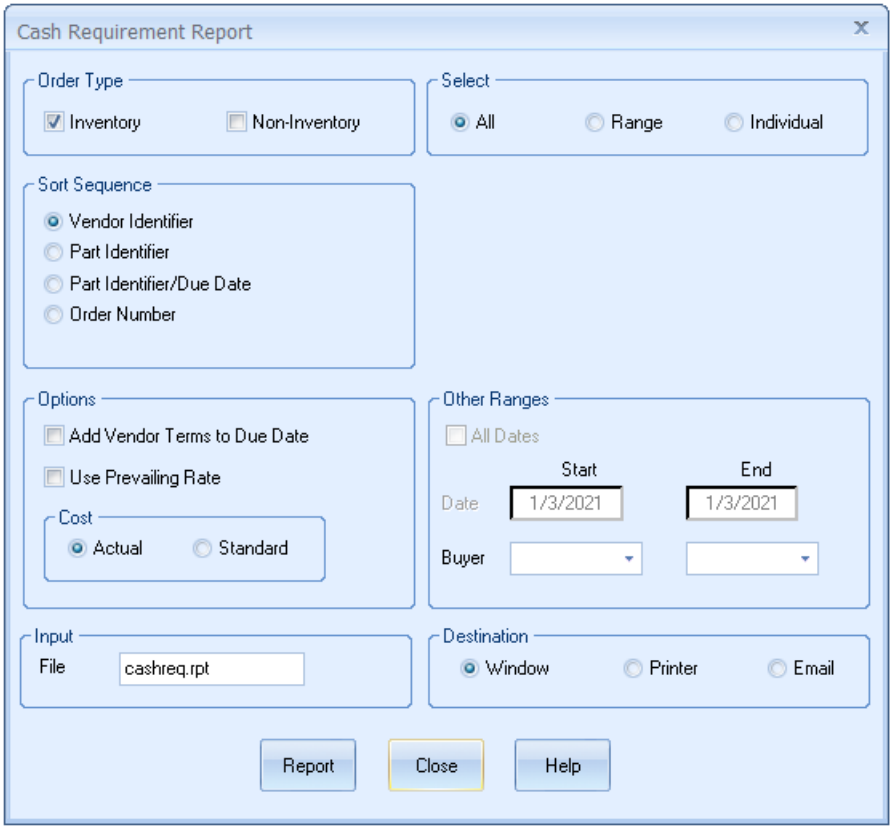


This inquiry allows you to review purchase order receipt information open and closed PO's. Click **Exit** to continue.

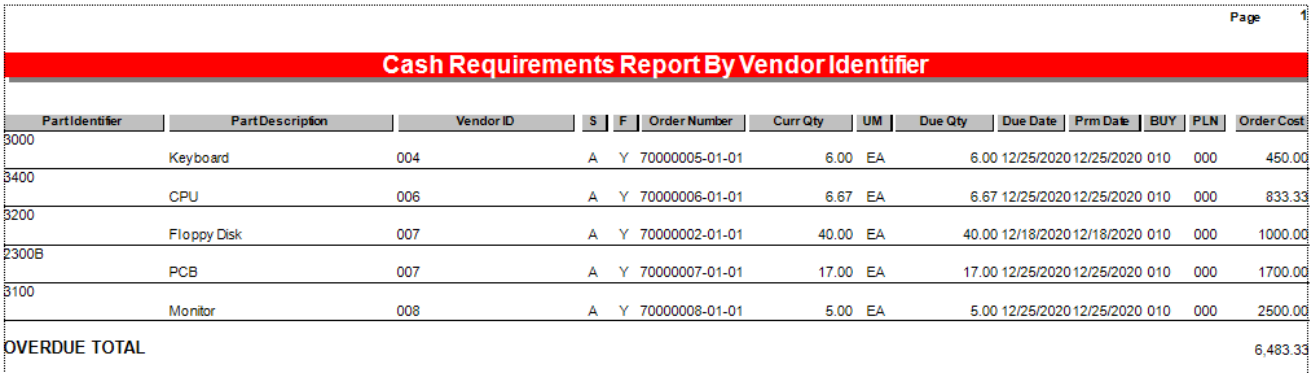
Step 3

Now let us look at one of the many available reports. As in all MAX modules, the standard reports can be customized in your specific requirements using *Crystal Reports*.

The **Cash Requirements Report** lists the costs and scheduled deliveries for outstanding Purchase Orders (Released, Status 3). Choose this report from the **Reports** menu and run the report using the settings below.



Maximize the report window to view it.



Page 1

Cash Requirements Report By Vendor Identifier

Part Identifier	Part Description	Vendor ID	S	F	Order Number	Curr Qty	UM	Due Qty	Due Date	Prm Date	BUY	PLN	Order Cost
3000	Keyboard	004	A	Y	70000005-01-01	6.00	EA	6.00	12/25/2020	12/25/2020	010	000	450.00
3400	CPU	006	A	Y	70000006-01-01	6.67	EA	6.67	12/25/2020	12/25/2020	010	000	833.33
3200	Floppy Disk	007	A	Y	70000002-01-01	40.00	EA	40.00	12/18/2020	12/18/2020	010	000	1000.00
2300B	PCB	007	A	Y	70000007-01-01	17.00	EA	17.00	12/25/2020	12/25/2020	010	000	1700.00
3100	Monitor	008	A	Y	70000008-01-01	5.00	EA	5.00	12/25/2020	12/25/2020	010	000	2500.00
OVERDUE TOTAL													6,483.33

Click **Close** to continue or click on the *Printer* icon if you are hooked-up to a printer. Look through the **Report** menu and run other reports that interest you.

Congratulations

You have learned to use the Inquiries to see what orders are due in and what orders have already been received along with printing of the Cash Requirements report.

Stage IV – Sales Order Processing

Stage IV (Chapter 27 through 29) of the Standard MAX Implementation Plan is part of demand management, but since all the other parts to it were discussed in Stage I – Structures and Scheduling, only Sales Order Processing remains. We will discuss it next.

Part IX: Sales Order Processing & Customer Service

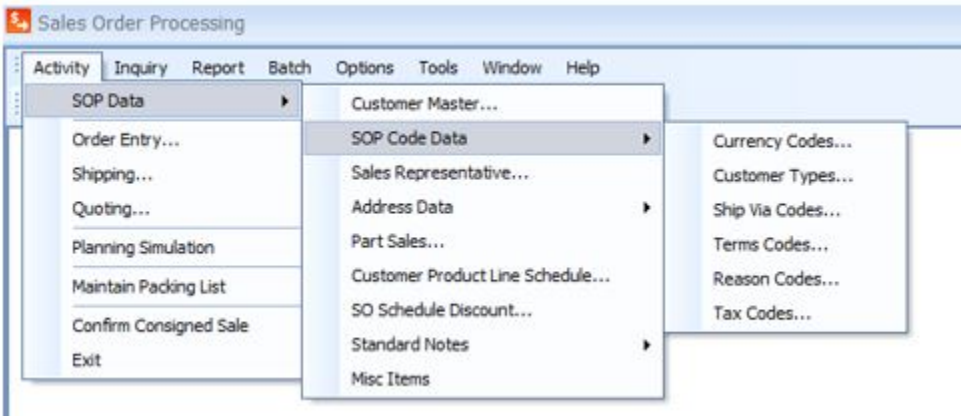
Chapter 27

Introduction

The **Sales Order Processing** module is designed to facilitate the order entry and customer inquiry functions. A customer service representative can enter and ship sales orders, while accessing all the pertinent data for immediate response to customer inquiries. The **Activity** menu covers the three main components of the **Sales Order Processing** module: Quoting, Sales Order Entry, Shipping/Invoicing. There are also plenty of inquiries and reports.

SOP Data

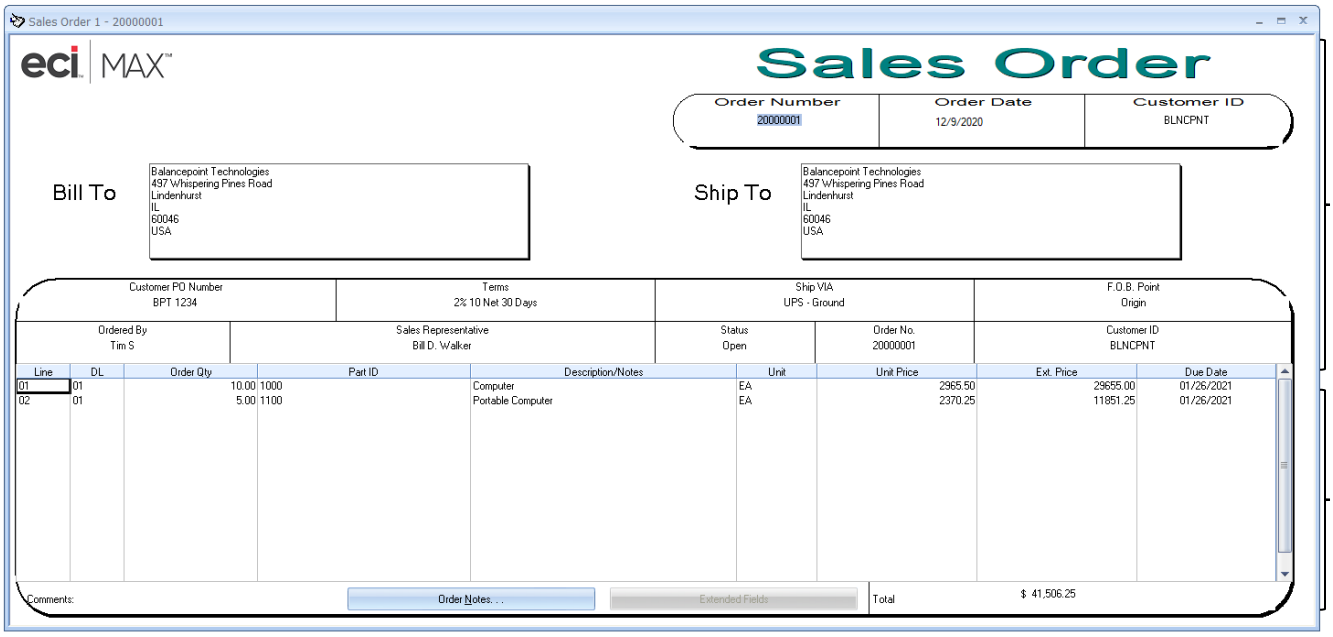
From a data viewpoint, The **Sales Order Processing** module has the largest amount of static data to enter prior to processing a sales order (or quote) than any other module. Under **Activity – SOP Data**, you can see the list of tables, some of which have submenus like the **SOP Code Data** menu shown below.



This should not be a concern as much of this data can be entered on an "as needed" basis. Details are listed in the Standard MAX Implementation Plan.

Sales Orders

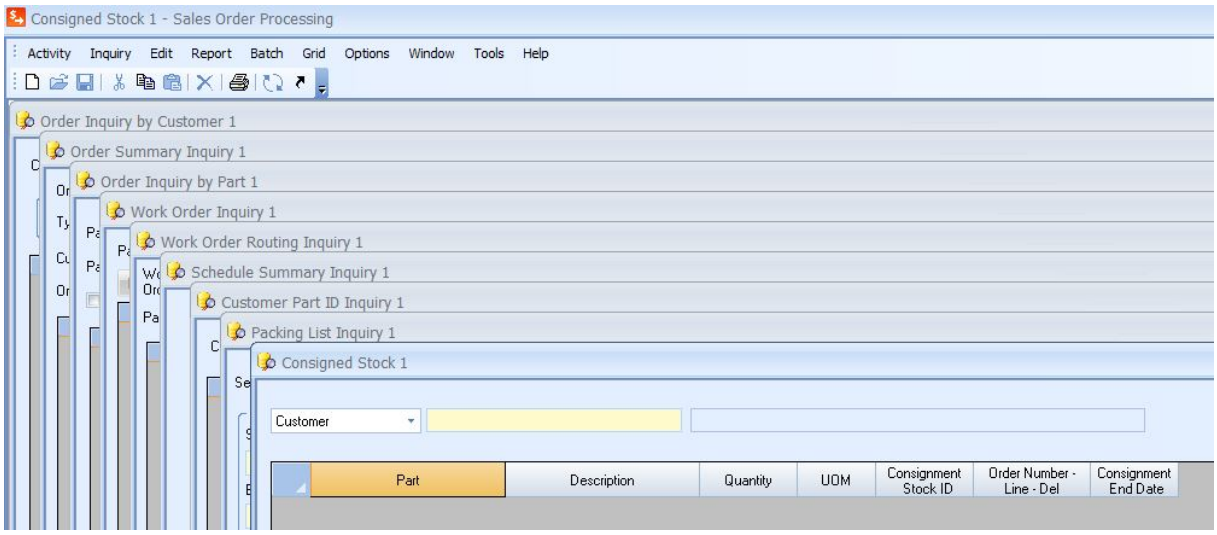
New orders can be added, or existing orders can be updated by selecting **Order Entry** from the **Activity** menu. Data entry is done on a visual representation of a Sales Order form for easier learning and operation.



As the cursor passes over a "hot spot" on the form it changes to a magnifying glass to indicate a browsable field. Double-click to browse. Additional data can be accessed by selecting the **Order Detail** from the **Sales Order** menu. This will allow you to access the sales representative data, as well as general ledger account numbers and more.

Inquiries

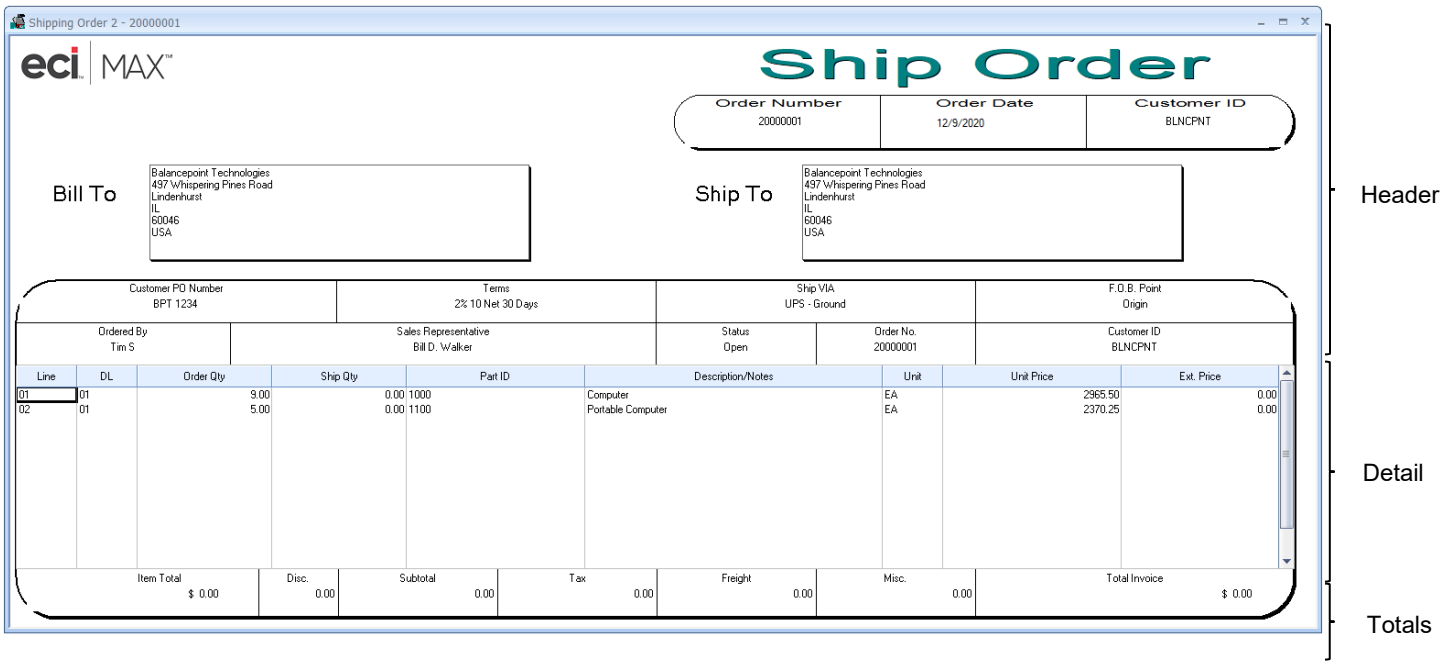
The **Inquiry** menu can be accessed by selecting it from the menu. A sub-menu will display all the available inquiries. Each inquiry can be accessed directly from the sub-menu or progressively through one another to provide a certain information flow. We will discuss that flow in Chapter 14.



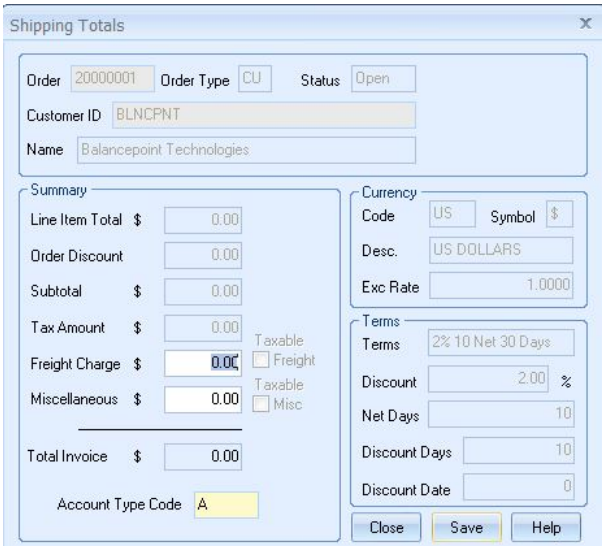
When done viewing inquiries, you may minimize your favorite inquiries so that they are always available on your desktop.

Shipping Order

To access the Shipping Order form, selecting **Shipping** from the **Activity** menu. Orders can be shipped either directly on the form or by accessing the **Ship Detail** dialogue for that order. Stock information is also available from the detail dialogue.



To access the shipping totals dialogue, double-click one of the fields the bottom of the shipping form. From here the **Freight Charge** and **Miscellaneous** charges can be maintained. They can also be maintained directly from the form.



Let us now look more closely how to enter sales orders.

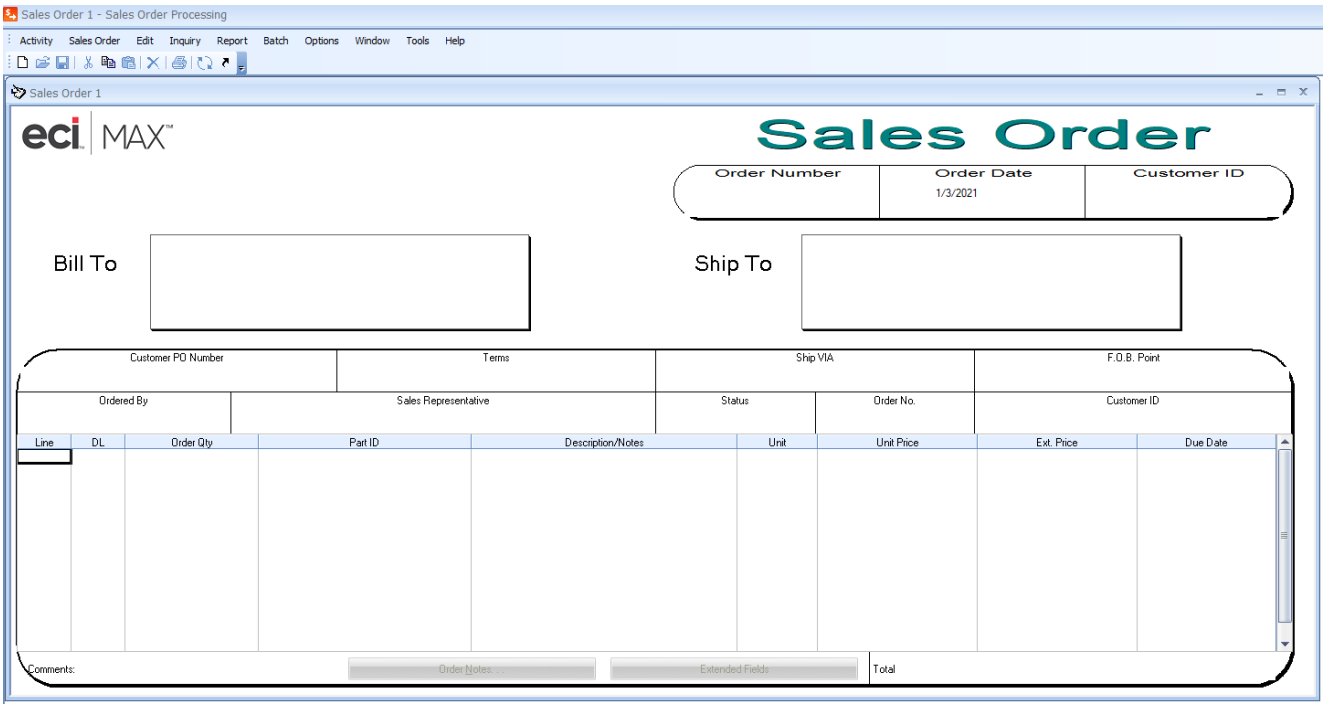
Chapter 28

Entering SOP Orders

In this section, you will walk through the process of entering a new Sales Order and accessing real-time stock information.

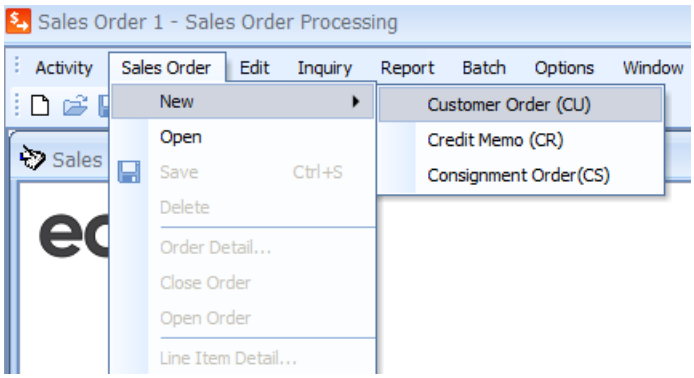
Step 1

From the **Activity** menu chose **Order Entry**. The Sales Order Entry dialogue will appear.



Step 2

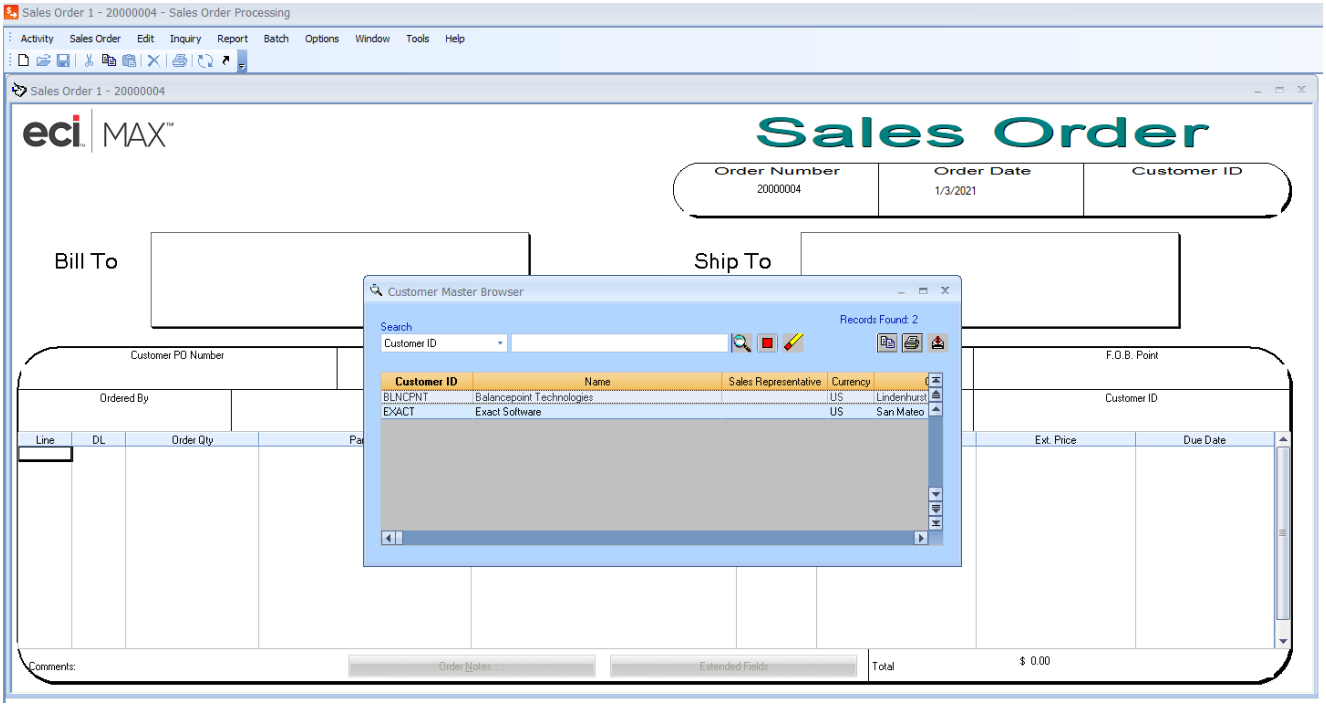
In the **Sales Order** menu choose **New**. You will be prompted to choose the Order Type, which can be a Customer Order, Credit Memo or Consignment Order.



Click on **Customer Order** (CU) and then **OK** to continue. The system will assign the next customer order number and open the Customer Master browser.

Step 3

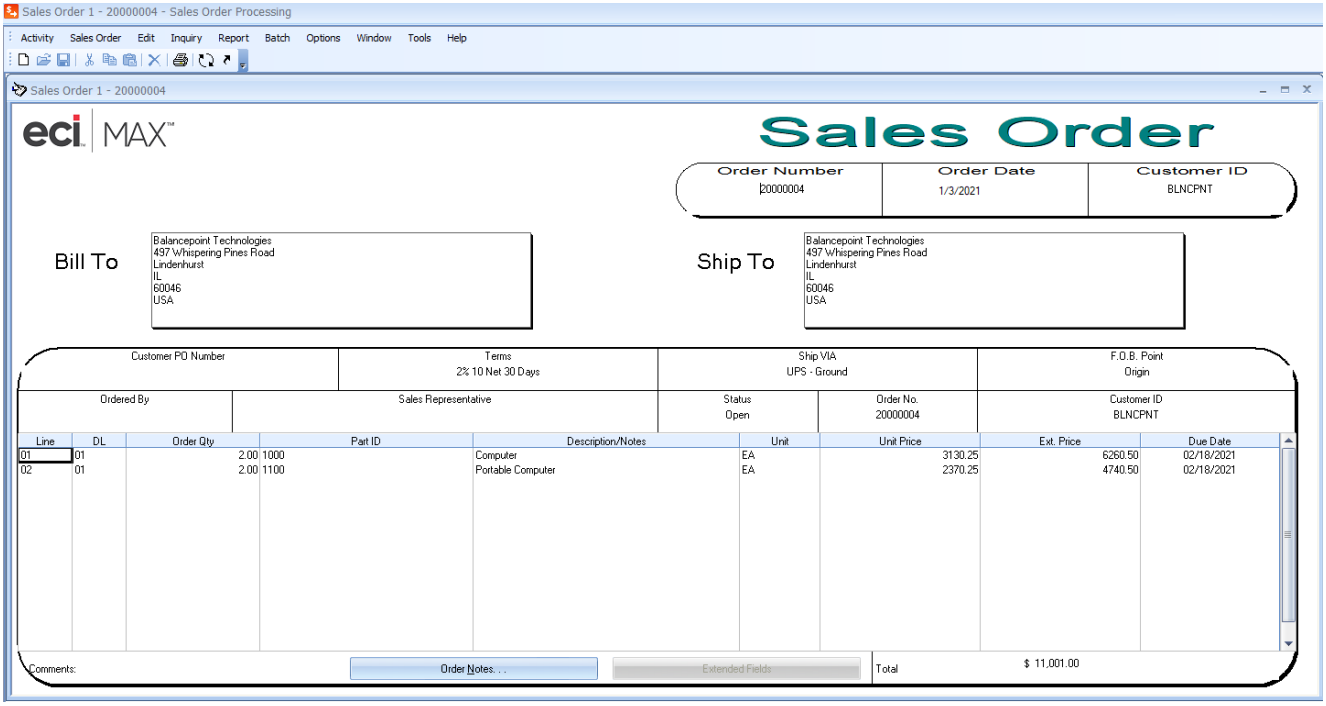
Choose Balance Point Technologies as the customer by double-clicking on the row.



The **Bill To** address will populate. The **Ship To** address defaults to the **Bill To** but may be changed by double-clicking on the **Ship To** area and adding or selecting another address.

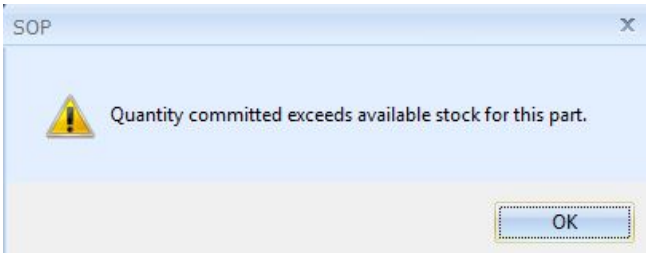
Step 4

Your cursor automatically moves to the Line-Item section of the Sales Order form. You can tab through the Sales Order to enter the two-line items shown below.



Save each line item when asked. Accept the default dates.

Note: User preferences can be set-up to automatically save line items and provide warning messages in certain conditions. If there is insufficient stock to ship the order you will see the following message. Set **Preferences** under the **Options** menu.



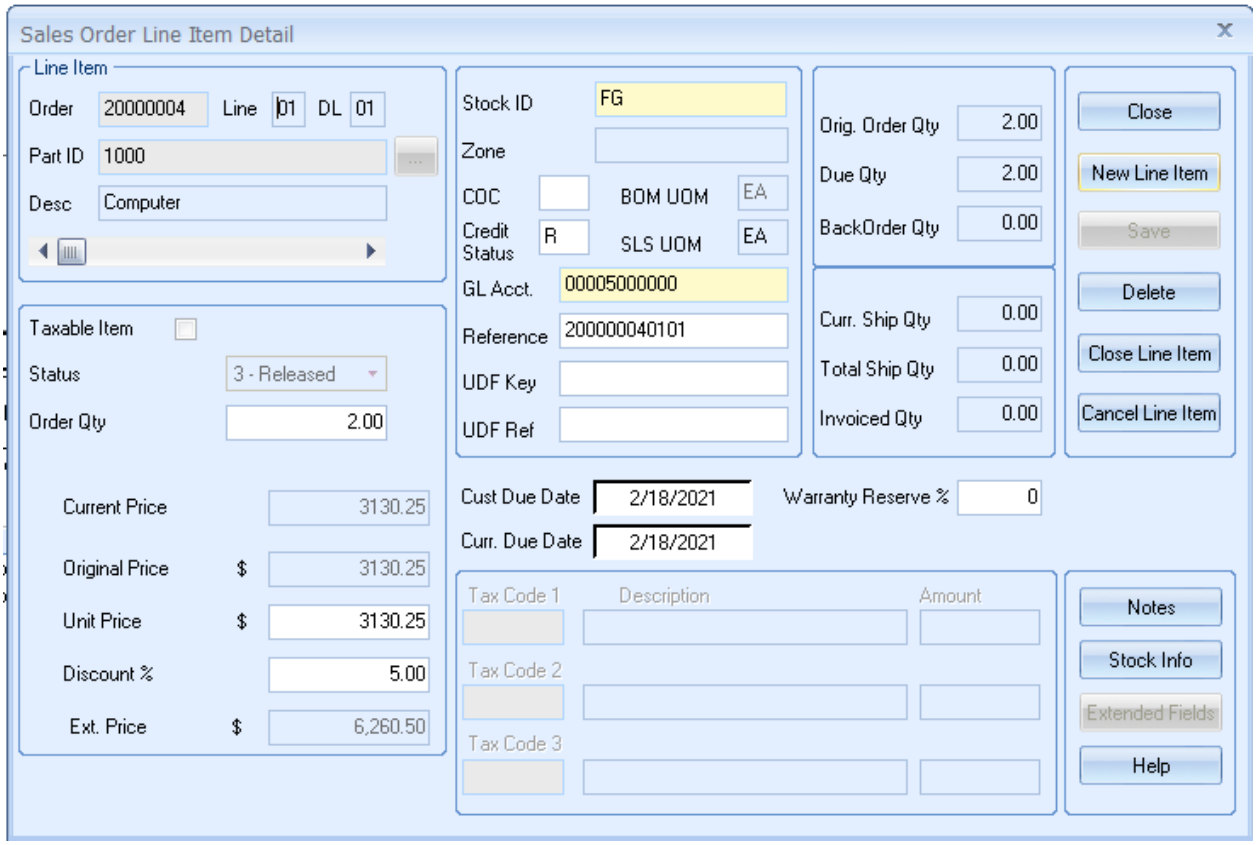
Step 5

MAX allows you to maintain Multiple Ship To locations per customer. Double-click on the Ship To box to choose the BLNCPNT as the **Shipping Code** location.

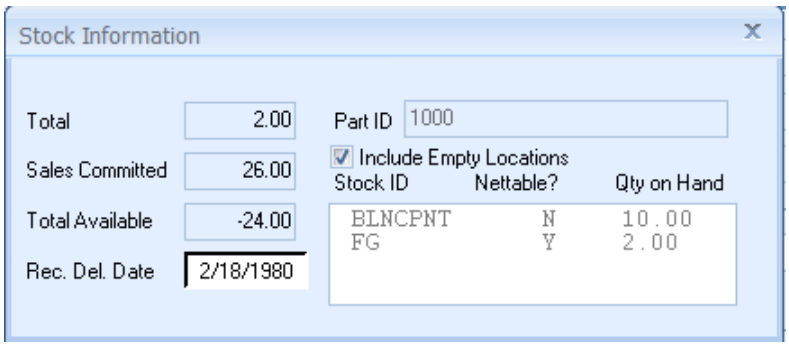
Click **OK** to continue.

Step 6

Double-click **Line** item **01** on the Sales Order form to bring up the Sales Order Line-Item Detail screen.



This screen allows you to access specific stock and credit information. Click the **Stock Info** button to view on-hand balance information.

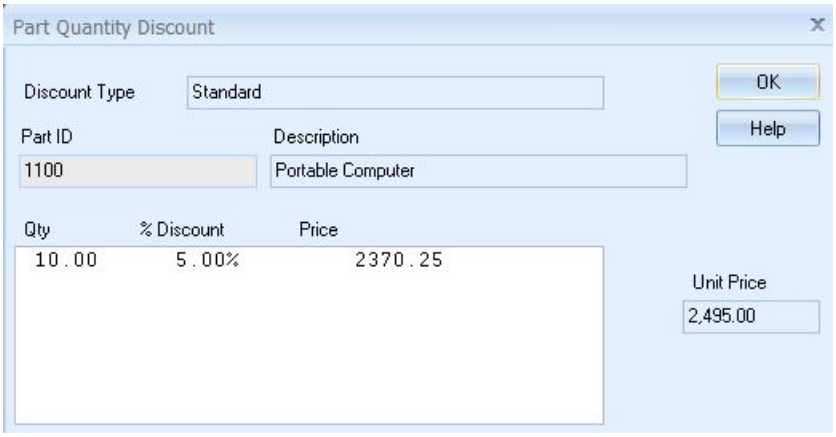


Notice 10 computers are in the BLNCPNT stock location which is non-nettable. This is a consigned stockroom; thus, it is non-nettable.

Click this screen and close the other screens until you return to the Sales Order form.

Step 7

You can also display quantity price break information for Part 1100. On the Sales Order form double-click the **Order Qty** field for **Line** item **02** to bring up the following screen.

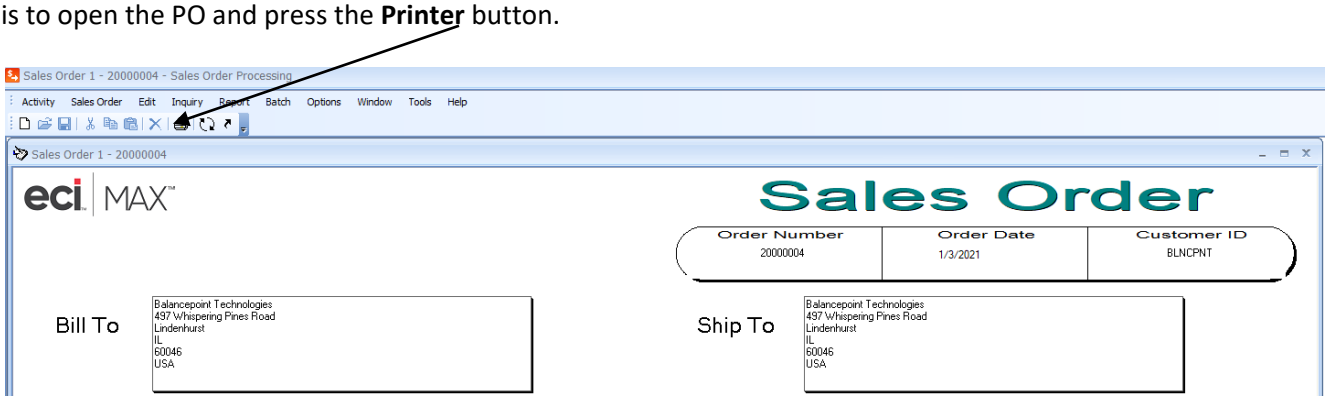


Click **OK** to continue. Save the order by selecting **Save** from the **Sales Order** menu.

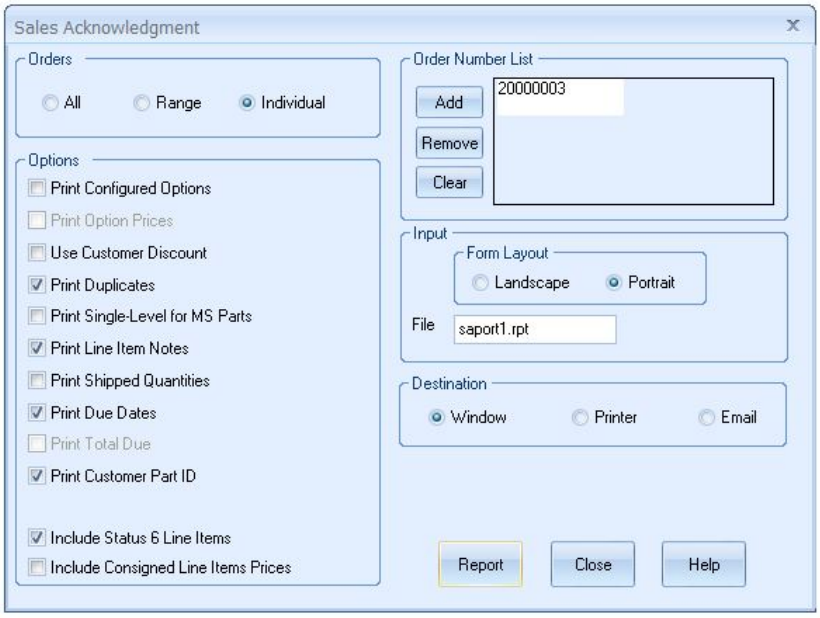
Step 8 – Printing Sales Orders and Acknowledgements

At any time after the Sales Order is entered, you may print a Sales Order and/or a Sales Acknowledgement. The main difference between the two is that the Sales Order does not show pricing, where the Sales Acknowledgement does.

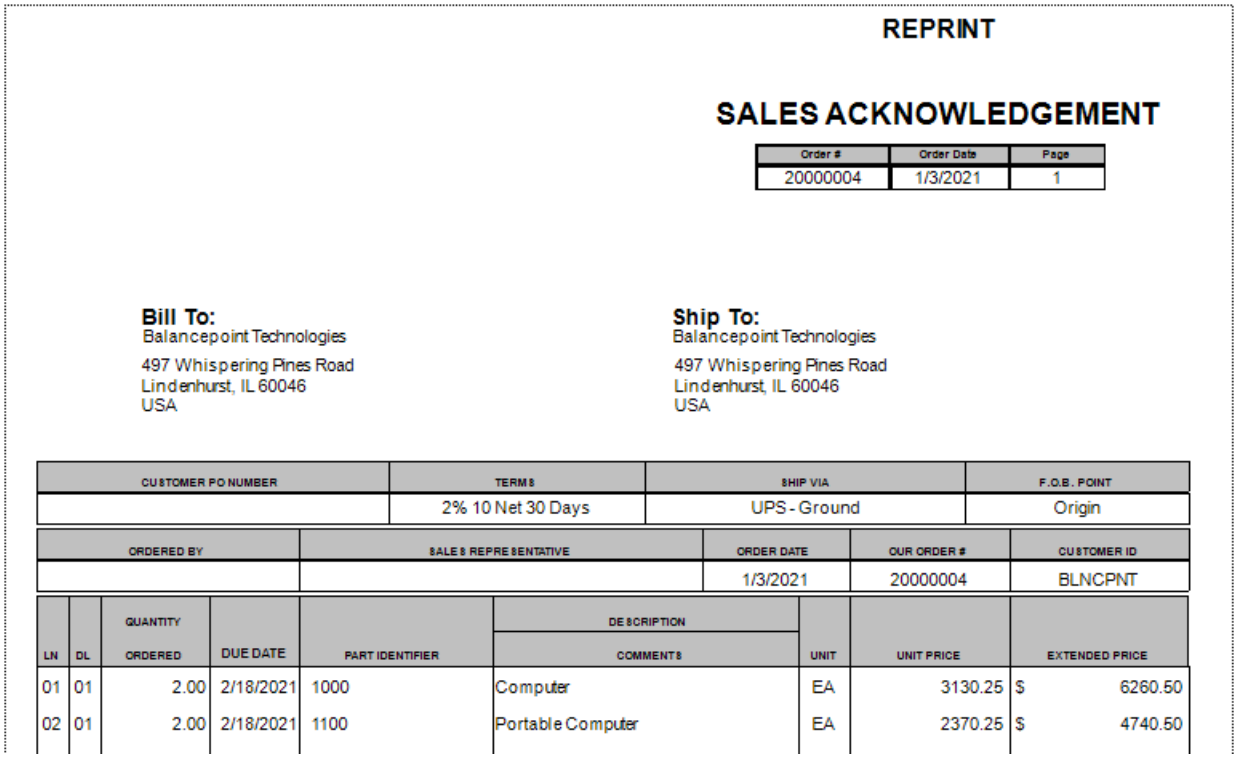
At any time after the Sales Order is entered, you may print a Sales Acknowledgment. The most direct method is to open the PO and press the **Printer** button.



The report dialog screen will open.



Enter the data that meets your needs for the acknowledgements to be printed and press **Report**. The sales acknowledgement will print to the destination selected.



REPRINT

SALES ACKNOWLEDGEMENT

Order #	Order Date	Page
20000004	1/3/2021	1

Bill To:
Balancepoint Technologies
497 Whispering Pines Road
Lindenhurst, IL 60046
USA

Ship To:
Balancepoint Technologies
497 Whispering Pines Road
Lindenhurst, IL 60046
USA

CUSTOMER PO NUMBER	TERMS	SHIP VIA	F.O.B. POINT
	2% 10 Net 30 Days	UPS - Ground	Origin

ORDERED BY	SALES REPRESENTATIVE	ORDER DATE	OUR ORDER #	CUSTOMER ID
		1/3/2021	20000004	BLNCPNT

LN	DL	QUANTITY ORDERED	DUE DATE	PART IDENTIFIER	DESCRIPTION / COMMENTS	UNIT	UNIT PRICE	EXTENDED PRICE
01	01	2.00	2/18/2021	1000	Computer	EA	3130.25	$ 6260.50
02	01	2.00	2/18/2021	1100	Portable Computer	EA	2370.25	$ 4740.50

The output of the report is the sales acknowledgement. These may be customized for your logo, local terms and conditions and signature lines using *Crystal Reports*.

Congratulations

You have completed entering a new Sales Order for a customer, including looking up stock information and Part Quantity Discounts. In the next Chapter, you will Ship and Invoice this order.

Chapter 29

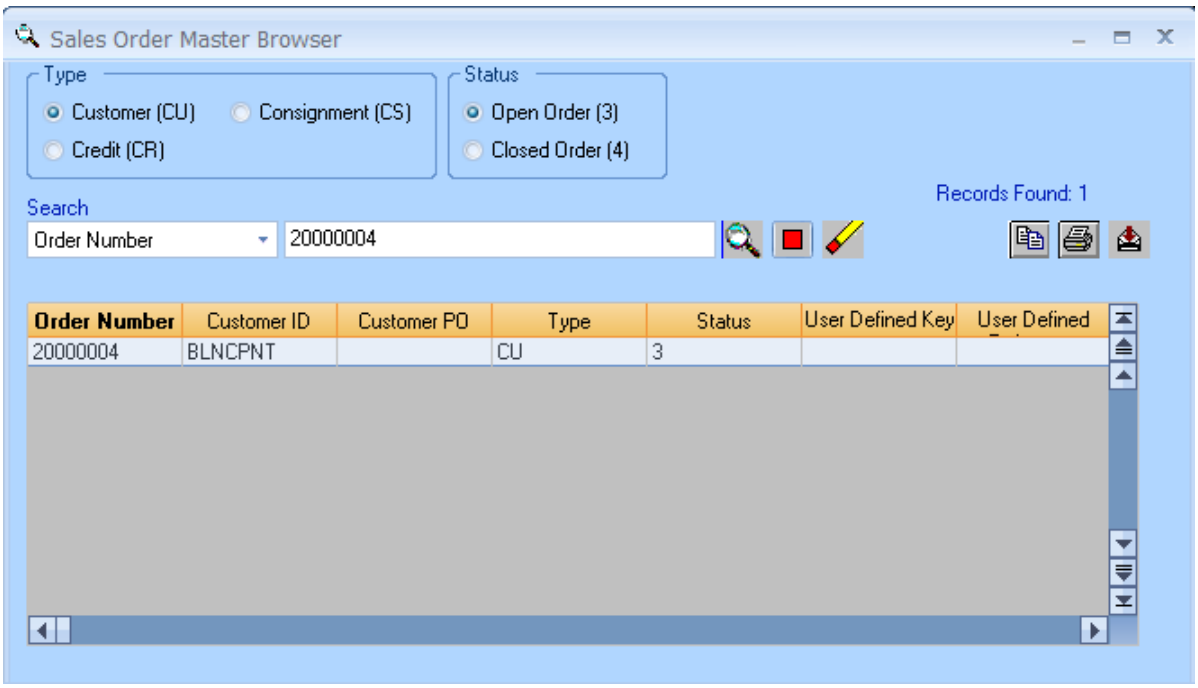
Shipping and Invoicing

In this section, you will walk through the process needed to Ship and Invoice the order you created. The Shipping Order form is very similar to the Sales Order form to facilitate ease of use and learning.

How you determine when to ship products will vary according to your organization. In make to order manufacturing environments, finished goods may be delivered directly to the shipping department signaling the packing and shipping process. In make to stock environments, an open order report by due date may be used to pick and pack items so they ship on time.

Step 1

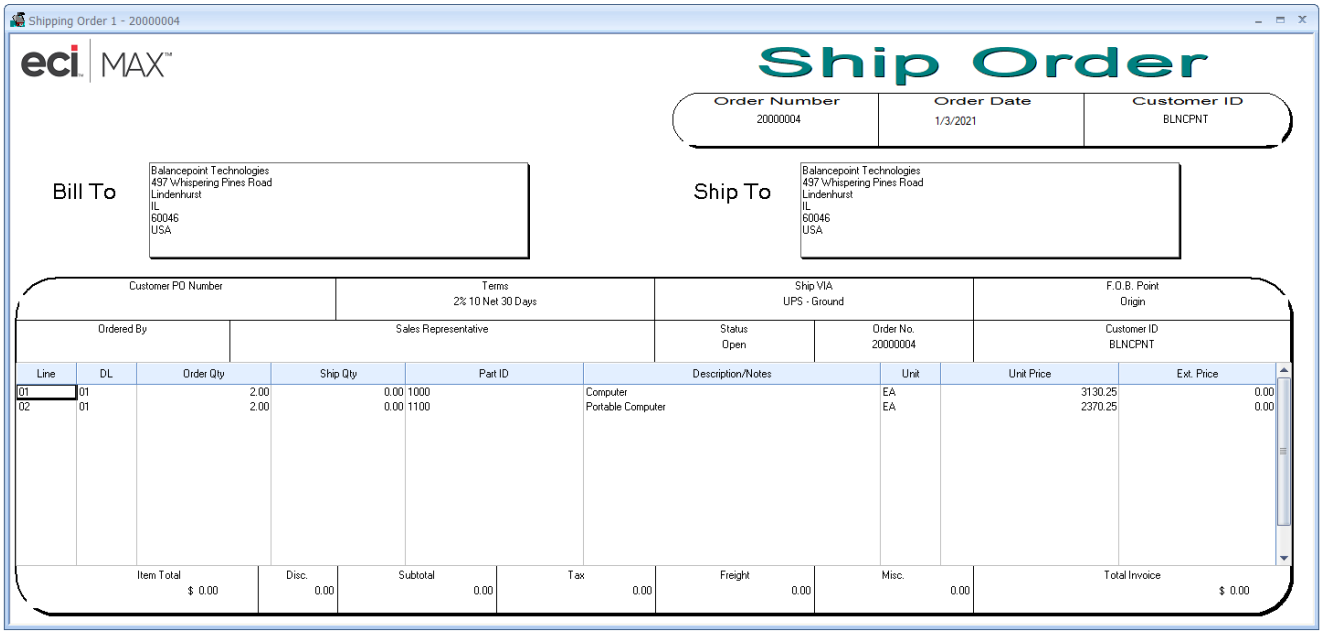
You are ready to ship order 20000003. Choose **Shipping** from the **Activity** menu. Double-click the **Order Number** field on the Sales Order form to display a list of available orders to ship. Double-click Order 2000004 to choose your order.



This will load the order into the Shipping Order form allowing you to make any changes or adjustments before you ship and invoice. Notice that the browse window has flexible section criteria so you can view orders by order **Type** and order **Status**.

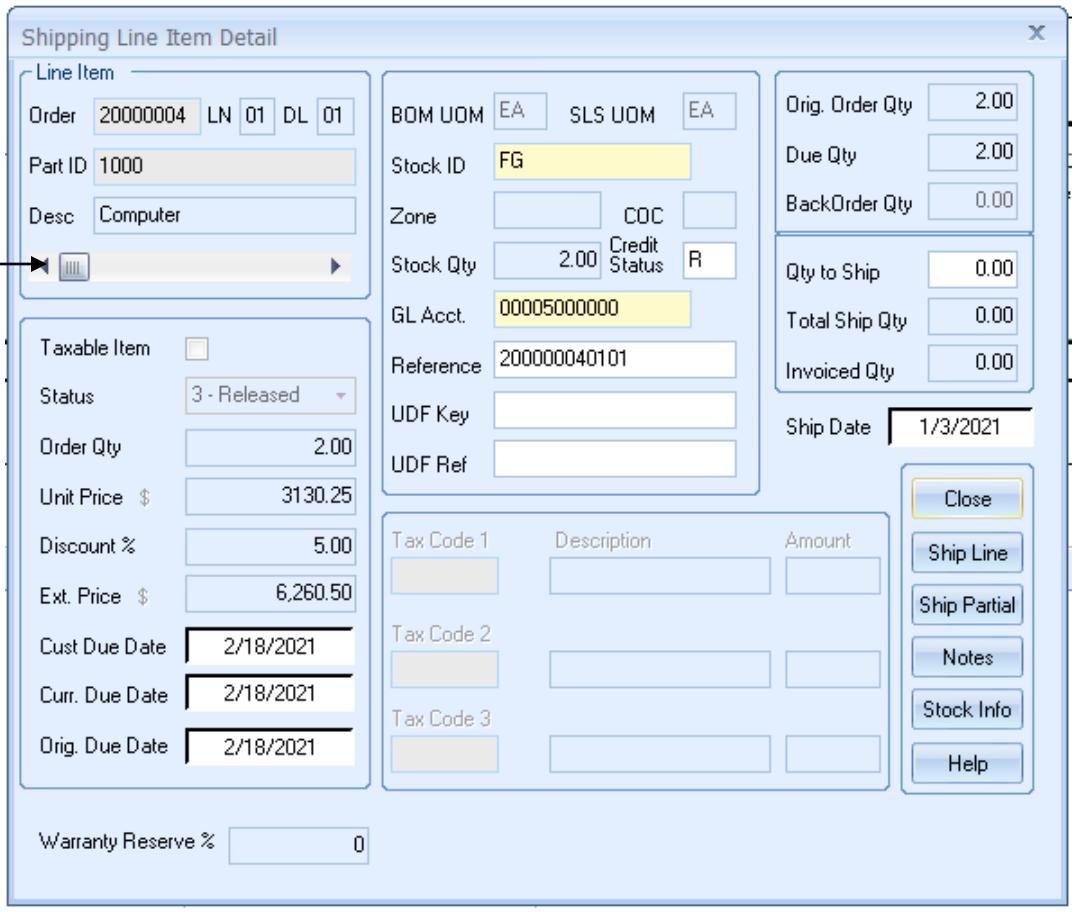
Step 2

There are multiple ways to ship the line. The most direct is to enter a **Ship Qty** directly on the Shipping Order form. For example, enter 2 in the **Ship Qty** field and click off the row. The system will prompt you to save the data. You can also click on the line you wish to ship and from the **Shipping** menu chose **Ship Line**.



Finally, you can ship from the detailed information screen for each line. Double-click on the line number, delivery, or order quantity field to open the details.

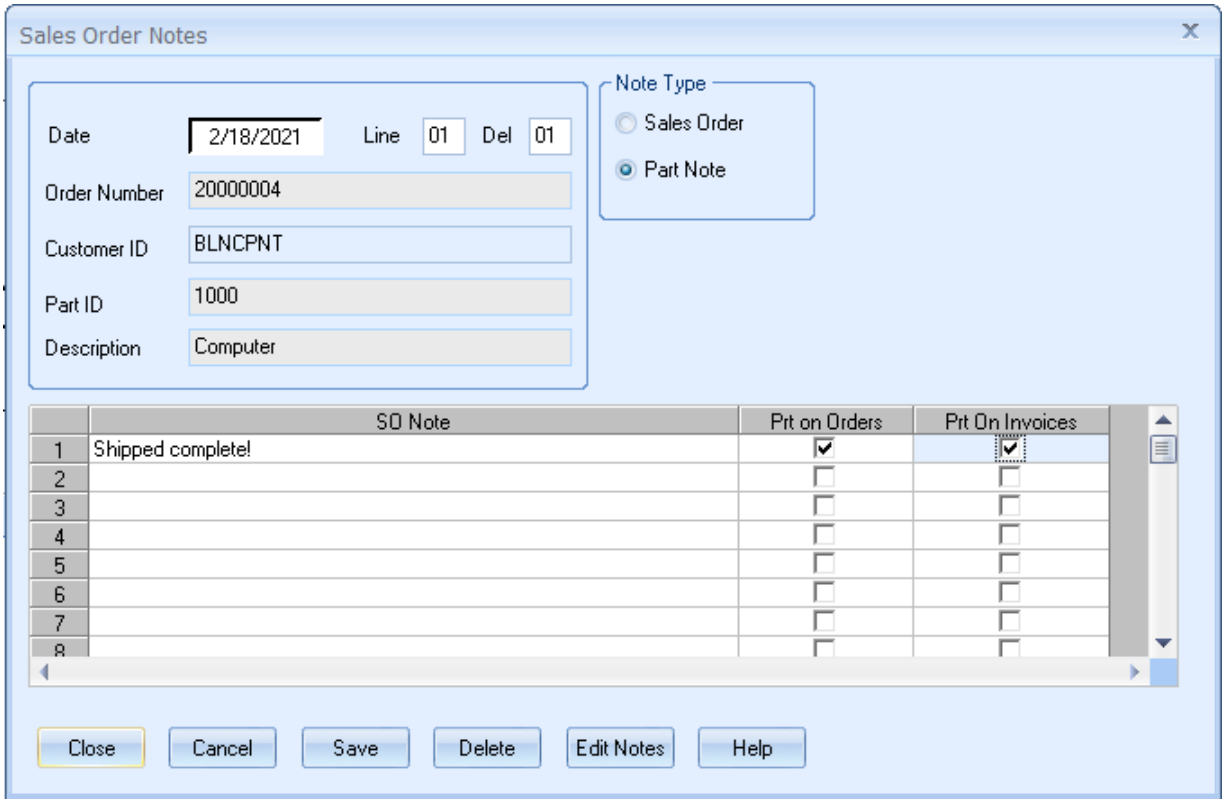
Previous Line (left)
or
Next Line (right)



For a partial shipment, enter the available quantity in the **Quantity to Ship** field and press **Ship Partial**. For a complete shipment, enter the available quantity in the **Quantity to Ship** field and press **Ship Line**.

Step 3

Press the **Notes** button, enter the note below.

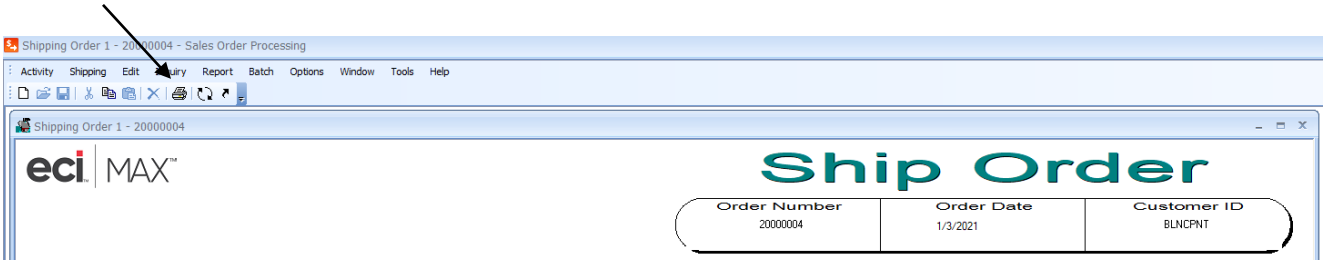


Click **Close** and answer **Yes** to save your note. Press **Close** to return to the main **Ship Order** dialogue. Line-item notes can also be entered at Order Entry.

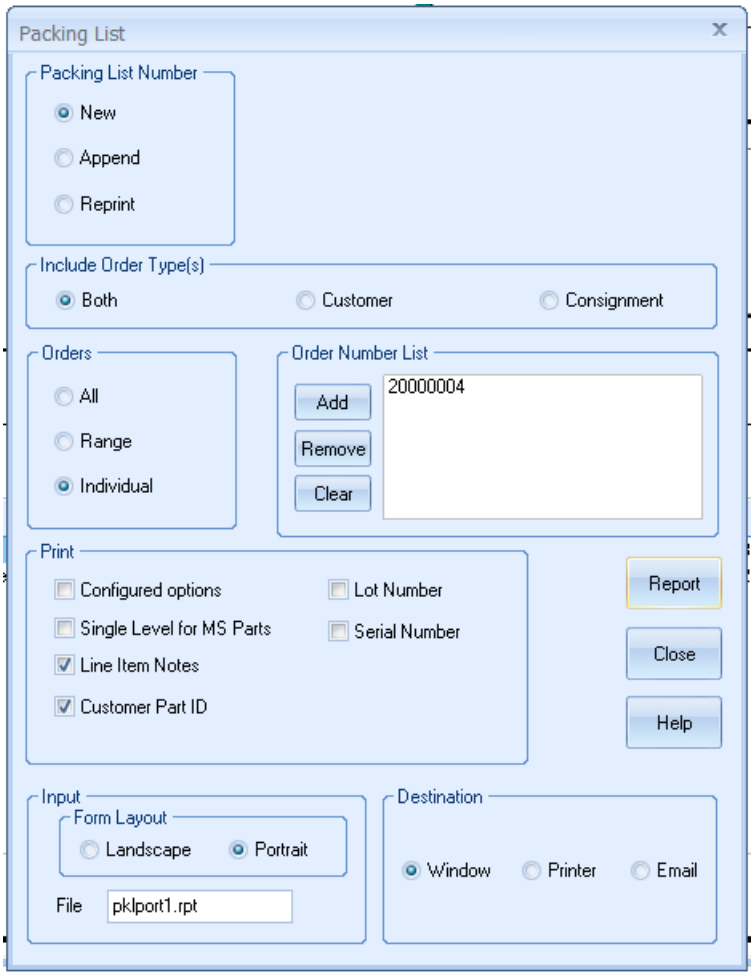
Step 4 – Printing Packing Lists

The MAX shipping process provides flexibility in when shipping documents may be processed. You can use the Sales Order as a packing list if you want to generate the paperwork prior to processing the shipment in the computer. You can use a Packing List if you ship the item in the computer and then generate the paperwork. When packing lists are use, you have the option to use a separate packing list number or not. Which method to use should be considered during your implementation planning.

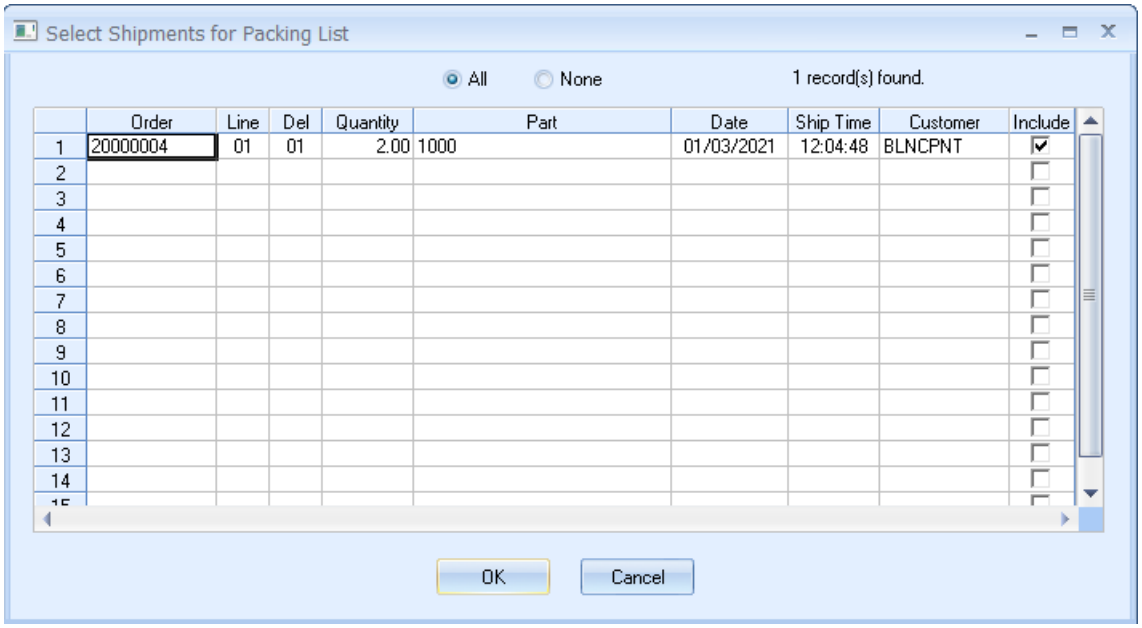
The most direct method of printing a Packing List is to ship the line on the order and then press the **Printer** button.



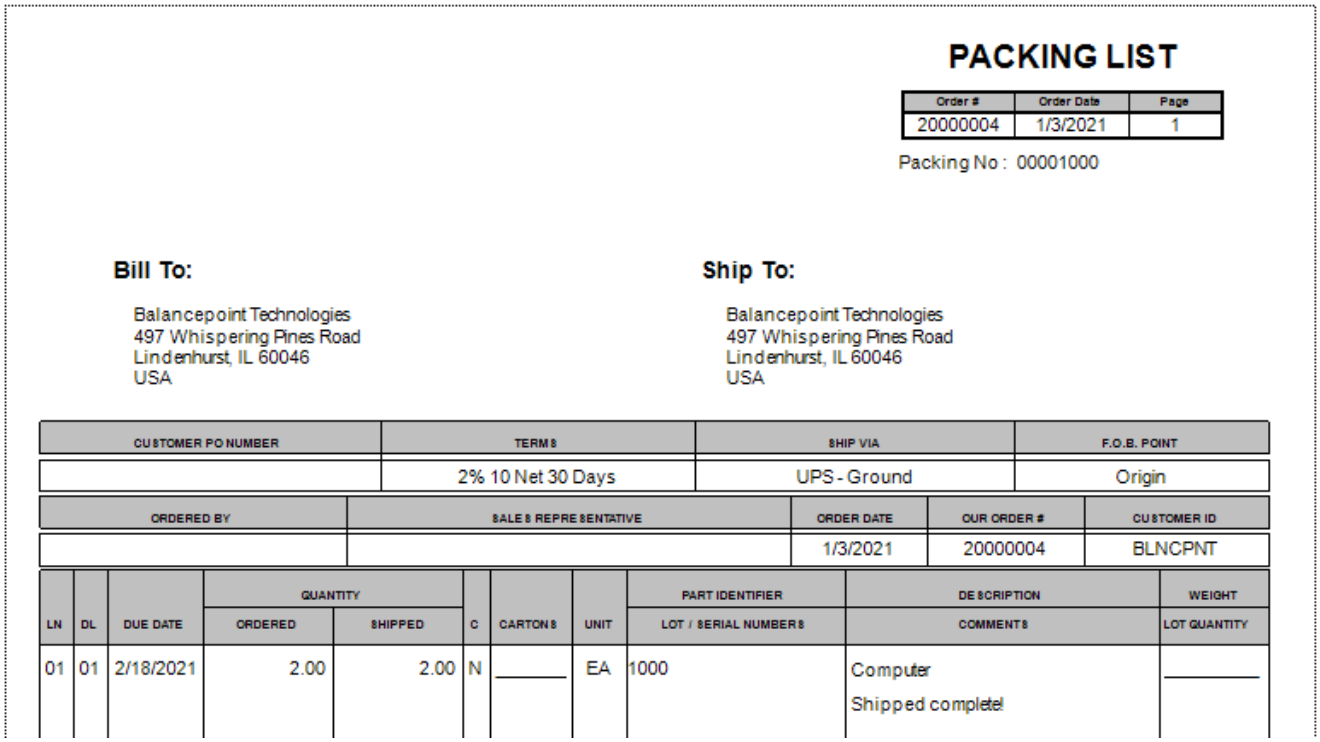
The report dialog screen will open.



Enter the data that meets your needs for the packing lists to be printed and press **Report**. The packing lists will print to the destination selected.



Press OK.



PACKING LIST

Order #	Order Date	Page
20000004	1/3/2021	1

Packing No : 00001000

Bill To:

Balancepoint Technologies
497 Whispering Pines Road
Lindenhurst, IL 60046
USA

Ship To:

Balancepoint Technologies
497 Whispering Pines Road
Lindenhurst, IL 60046
USA

CUSTOMER PO NUMBER	TERMS	SHIP VIA	F.O.B. POINT
	2% 10 Net 30 Days	UPS - Ground	Origin

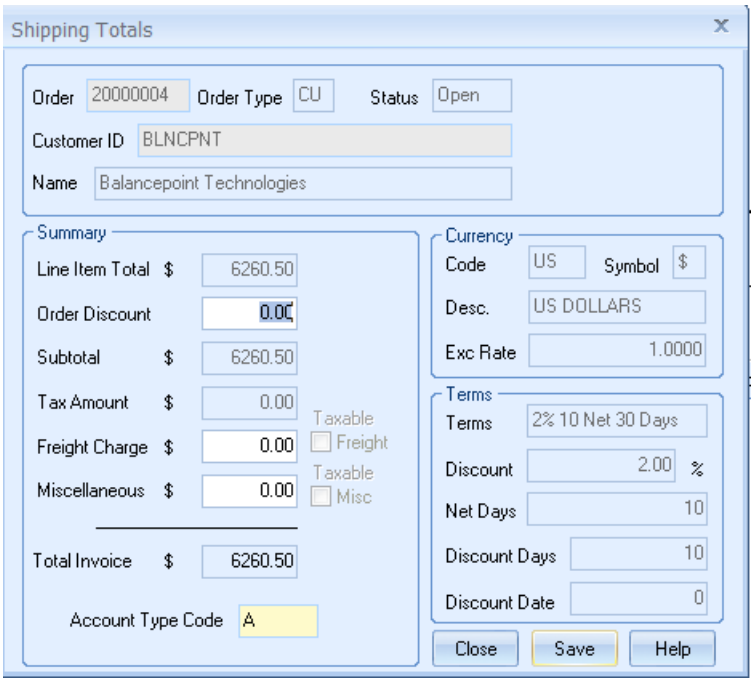
ORDERED BY	SALES REPRESENTATIVE	ORDER DATE	OUR ORDER #	CUSTOMER ID
		1/3/2021	20000004	BLNCPNT

LN	DL	DUE DATE	QUANTITY ORDERED	QUANTITY SHIPPED	C	CARTONS	UNIT	PART IDENTIFIER LOT / SERIAL NUMBERS	DESCRIPTION COMMENTS	WEIGHT LOT QUANTITY
01	01	2/18/2021	2.00	2.00	N		EA	1000	Computer Shipped complete!	

The output of the report is the packing list. These may be customized for your logo and local terms and conditions using *Crystal Reports*.

Step 5

Double-click on the bottom line of the Shipping Order form wherever you see the magnifying glass cursor to bring up the totals box. You can also access this screen by selecting **Shipping Totals** from the **Shipping** menu.



Add **Freight Charge** and **Miscellaneous** charges indicated in the Summary section of the diagram. Click **Close** and answer **Yes** to save. Shipping totals can also be added directly to the Shipping Order form, but the Shipping Totals screen provides additional information including currency, tax, and terms. It also allows an alternate Account Type Code to be used.

Congratulations

You have just completed the Shipping a Sales Order, adding freight and miscellaneous charges. For the steps to invoice those shipments, please see Chapter 32 below. Now, let us look at how convenient it is to handle Customer Inquiries on the first call.

Chapter 30

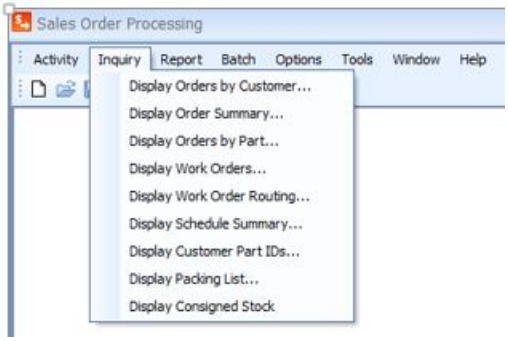
Handling Customer Inquiries

One of the design objectives for the **Sales Order Processing** module was to provide the ability to handle customer inquiries immediately, without having to call the customer back because you had to go and manually look something up. Inquiries can be accessed without losing what you were working on and can be minimized on the desktop for easy access.

In this section, we will be answering the inevitable customer question – "*What is the status of my order?*"

Step 1

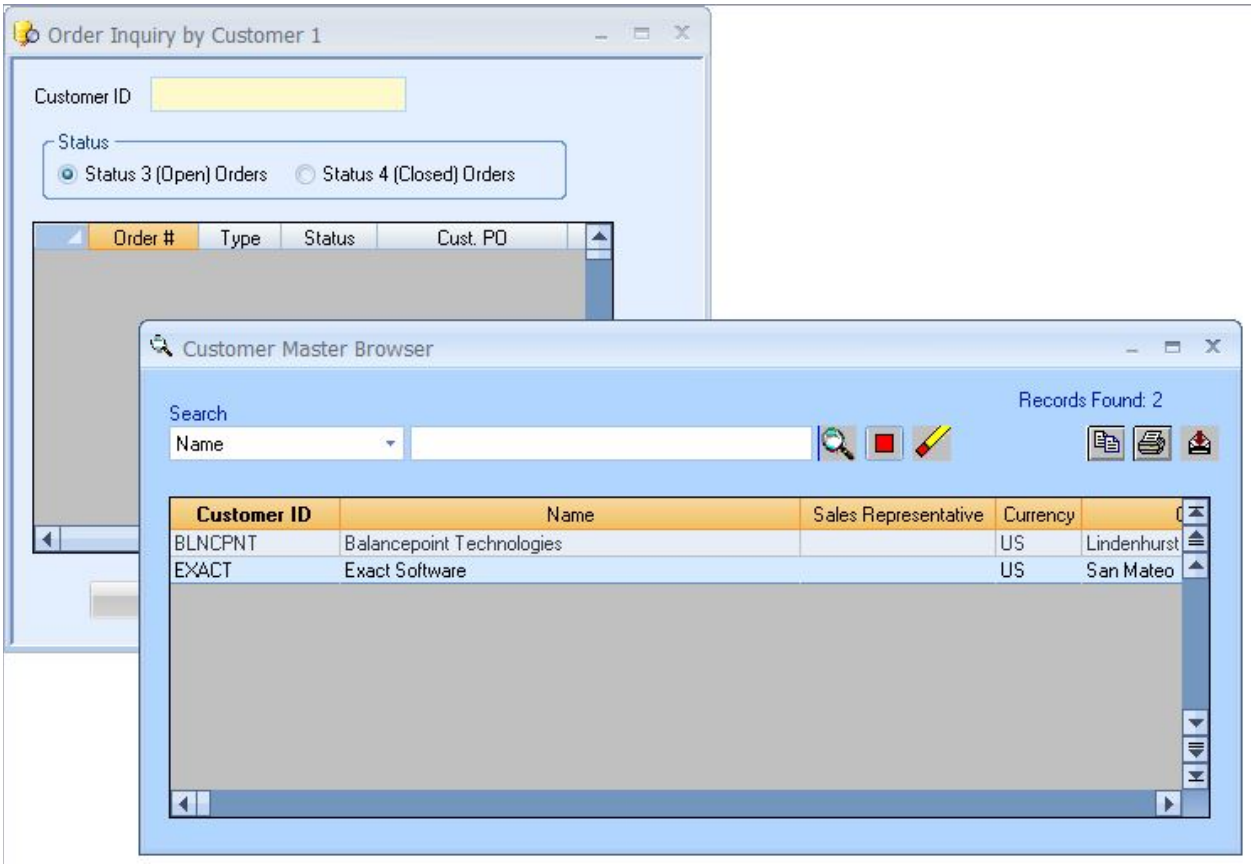
Minimize any open windows on your desktop. Choose **Inquiry** from the menu. A sub-menu with all the available Inquiries is displayed.



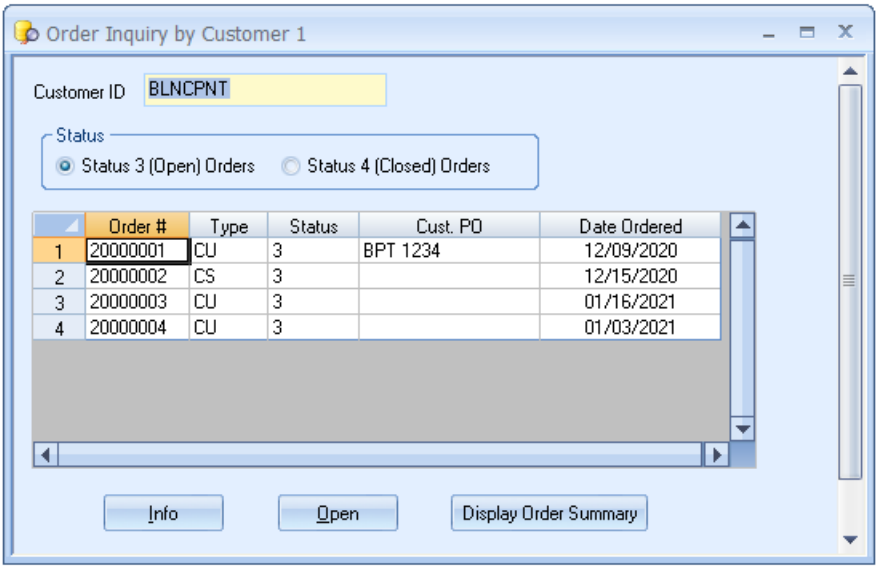
Depending on what information the customer wants to know you can access a specific inquiry directly or drill down from within an Inquiry to display additional data.

Step 2

Select **Display Order by Customer**. This is a good place to start if the customer does not have any information on their order. From here you can access all orders for a particular customer.



Double-click to open a browser and change the search to Name. This will sort the grid by the Bill to Company Name. Double-click on the customer you are looking for and it will populate the screen with the orders for that customer.

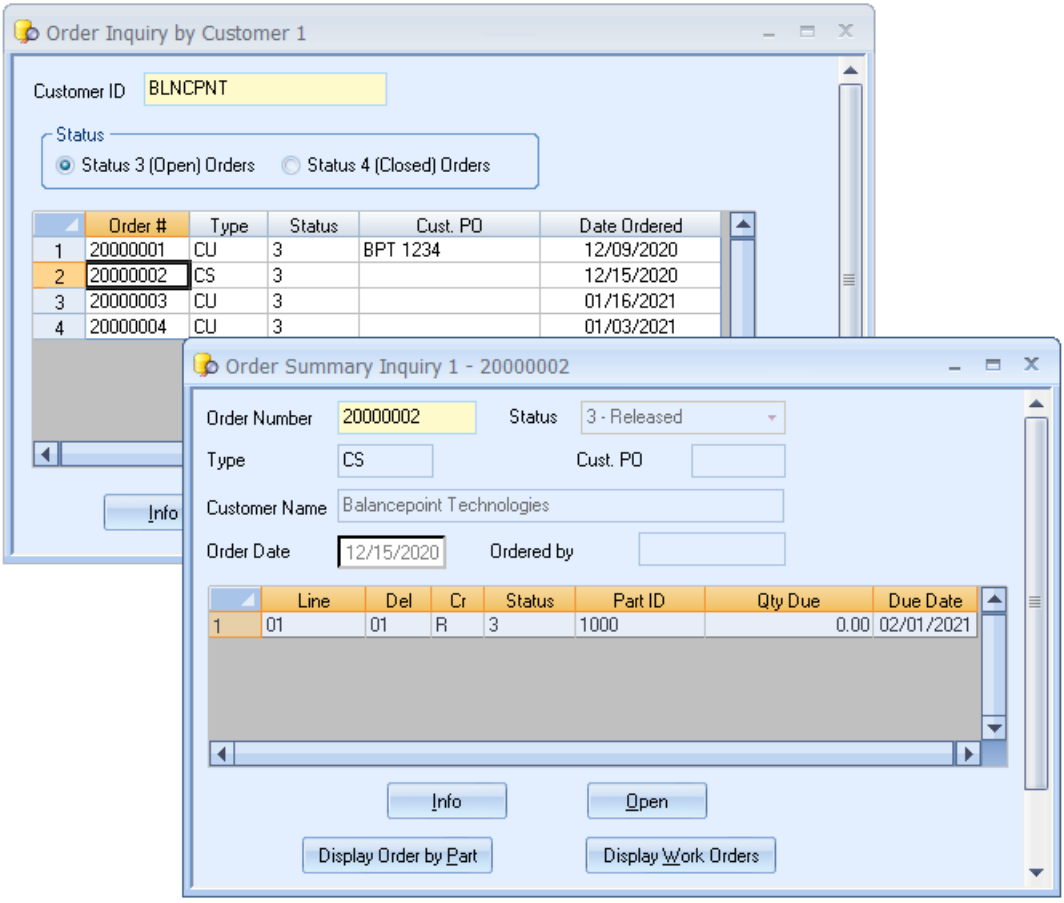


Step 3

In this example, Balance Point Technologies has three open customer orders. Only one has a Customer PO, which is not a recommended condition as the customer will be referring to their number, not ours. This situation needs to be fixed with the sales order processing people. This screen can also display closed

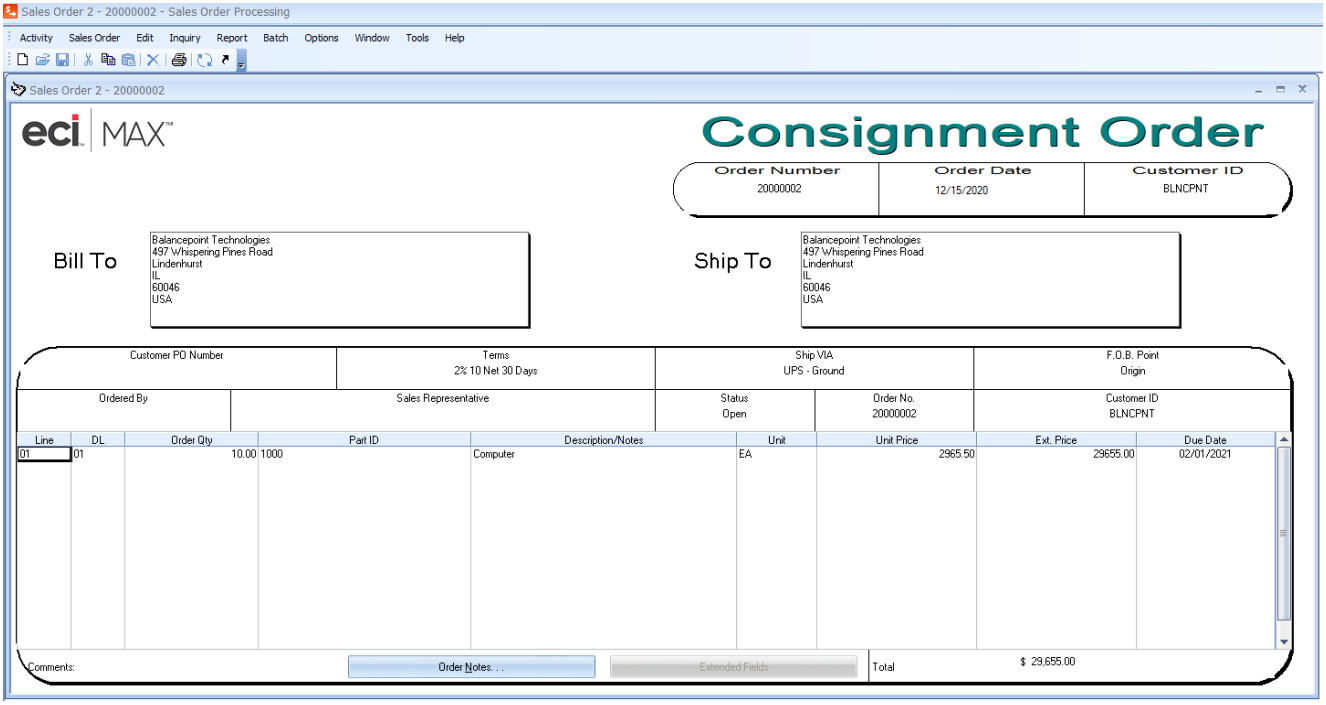
customer orders by choosing the **Status 4 (Closed) Order's** radio button. This will help determine if the order has been shipped from our facility but not yet been received at theirs.

Select a row in the table and click on the **Display Order Summary** button to open the detail for that order.



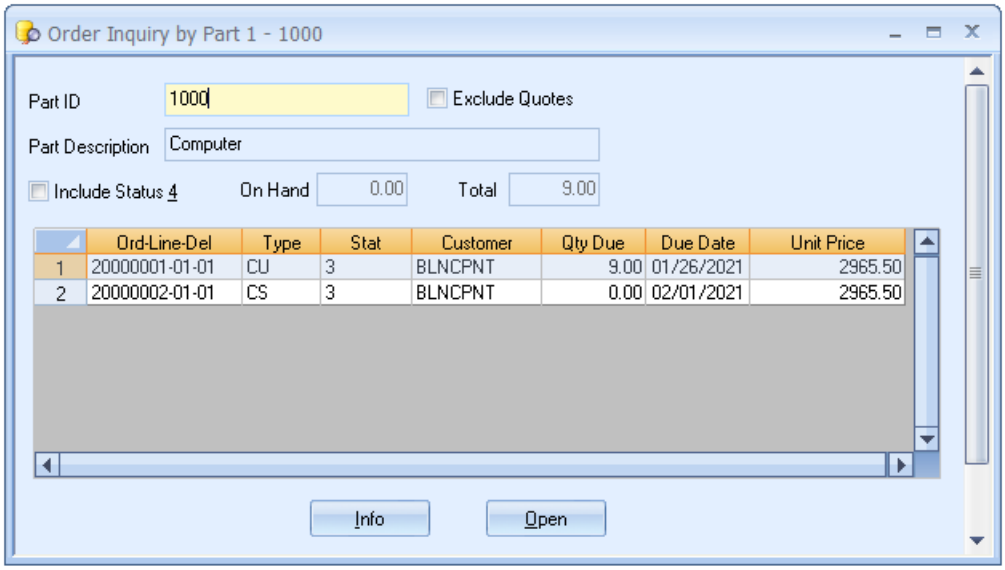
Step 4

From here you have a few options. Pressing the **Open** button will open the Sales Order selected.



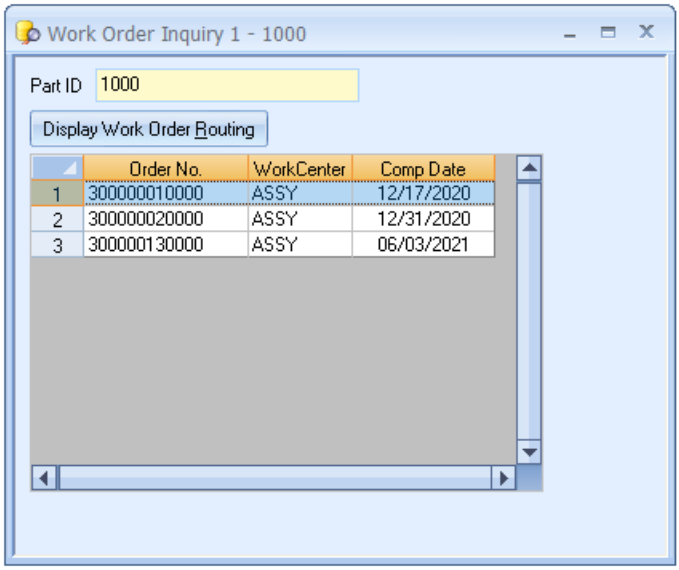
Step 5

Clicking the **Display Orders by Part** will open the inquiry to show other sales orders for the same Part ID.



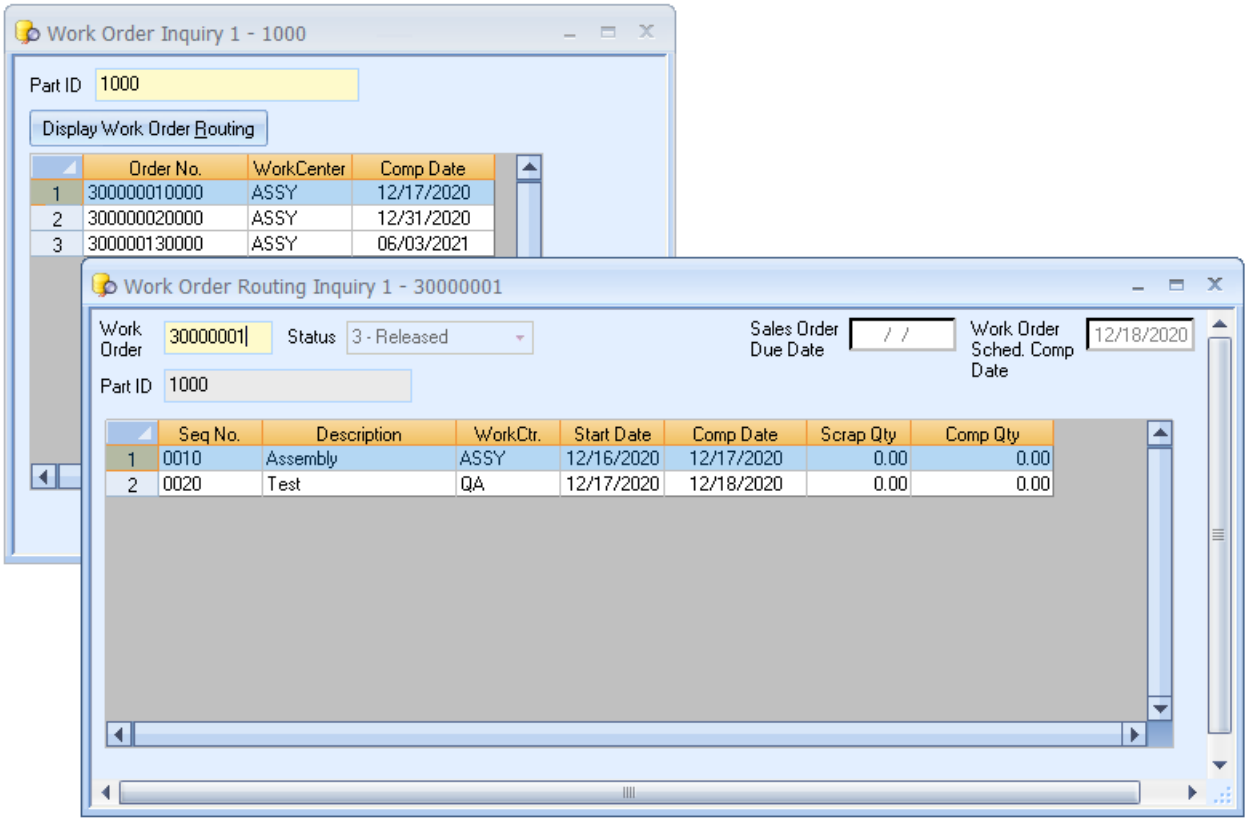
Step 6

Clicking on the **Display Work Orders** will open any shop orders for that Part ID.



Step 7

Display Work Center Routing for Order number 3000001. This screen shows routing information for the specified shop order displaying scheduled start and completion dates. This information is helpful to determine where a specific order is and if it is on schedule.



Congratulations

You have learned how to use the Inquiries in Sales Order Processing to handle a customer inquiry drilling all the way down to shop order routing information.

Stage V – Financial Integration

Part VIII (Chapters 31 through xx) represents Stage V Financial Integration portion of the Standard MAX Implementation Plan. Here, information flows to the integrated accounting system through three vertical flows; Sales Order Processing to Accounts Receivable, Purchasing Control to Accounts Payable and all other transactions to the General Ledger.

Part X: Financial Integration

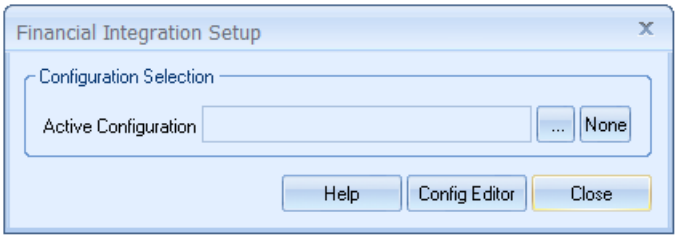
The **Financial Integration** module enables you to track and maintain inventory balances for each part that you stock, including finished goods, assemblies, component parts and raw materials. You will always know where inventory is located and how many parts are on hand. With better control and visibility, you will benefit from increased inventory turnover and improved inventory accuracy.

Chapter 31 – Financial Integration Setup

The Financial Integration Module establishes the integration to your integrated accounting system. While there are operating differences between the two integrations (i.e., Microsoft Great Plains Dynamics and Intuit QuickBooks) this document does not go into those differences.

Step 1

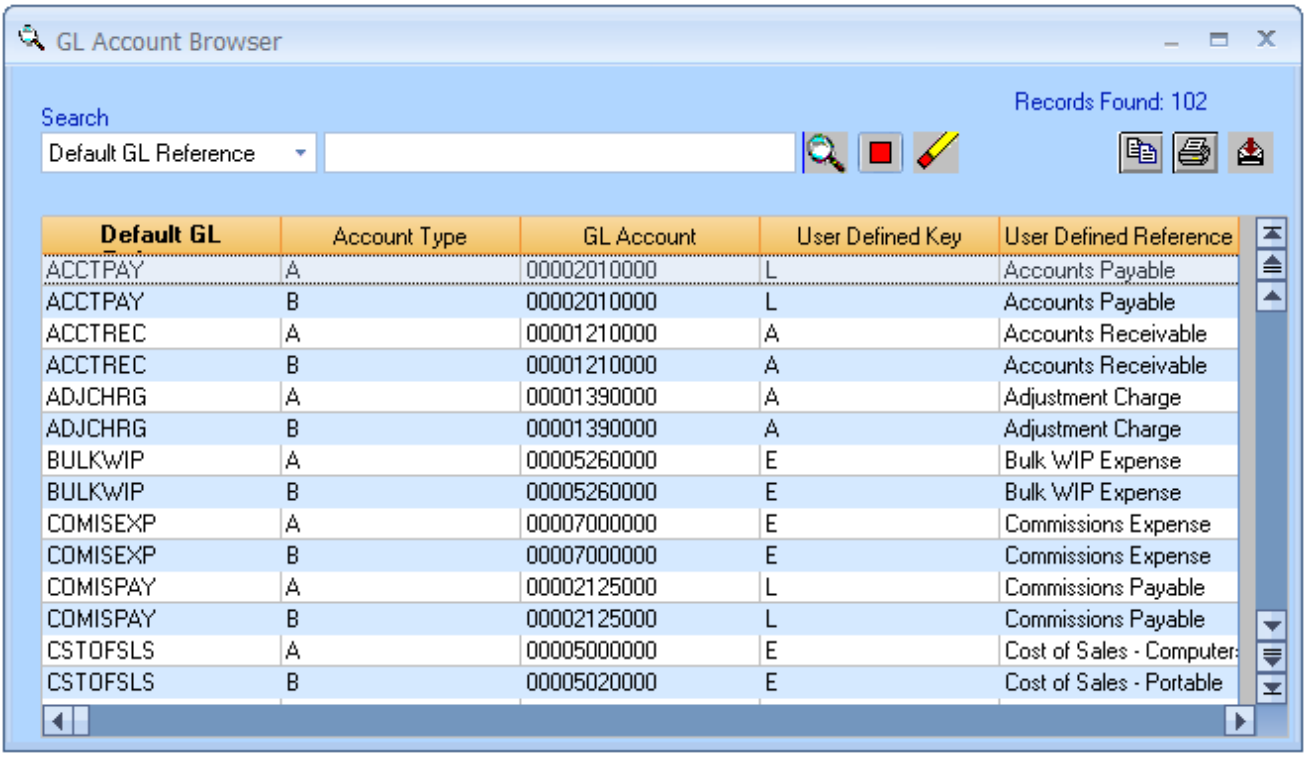
In **Financial Integration – Options – Integration Setup**, establish integration to your integrated accounting system. Open the window and select Config Editor.



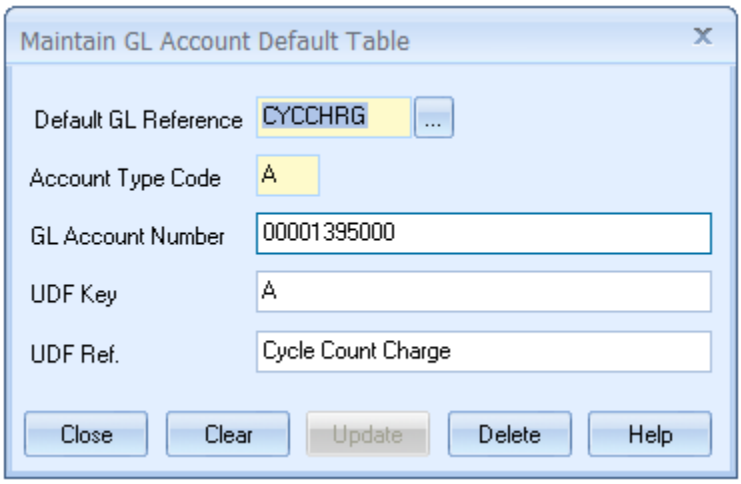
Enter a name for the configuration and the credentials to the SQL database (not Shown). The name should be descriptive as to the MAX and Great Plains versions (e.g., MAX v561 to GP v18.2).

Step 2

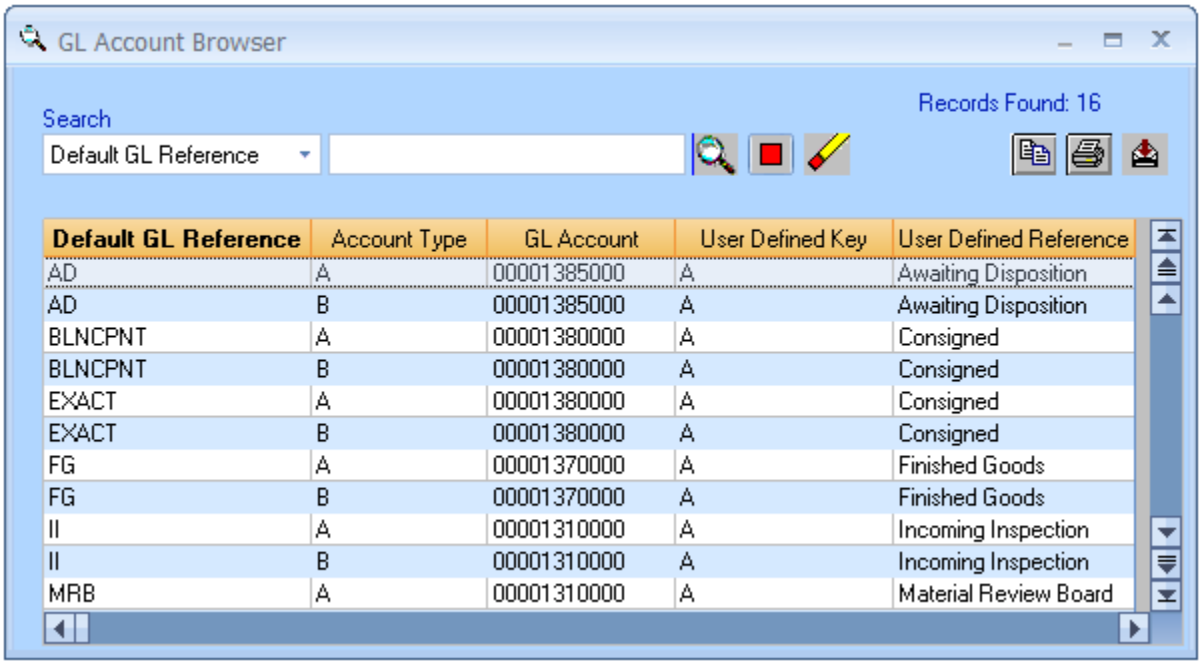
In **Financial Integration – Activity – Maintain GL Accounts – Defaults** to establish General Ledger Accounts.



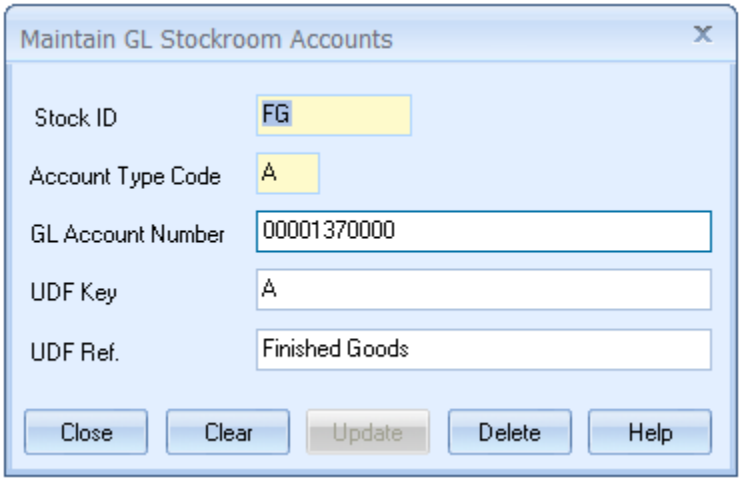
Select the CYCCHRG (Cycle Count Charge) for Account Type “A” and the following window opens.



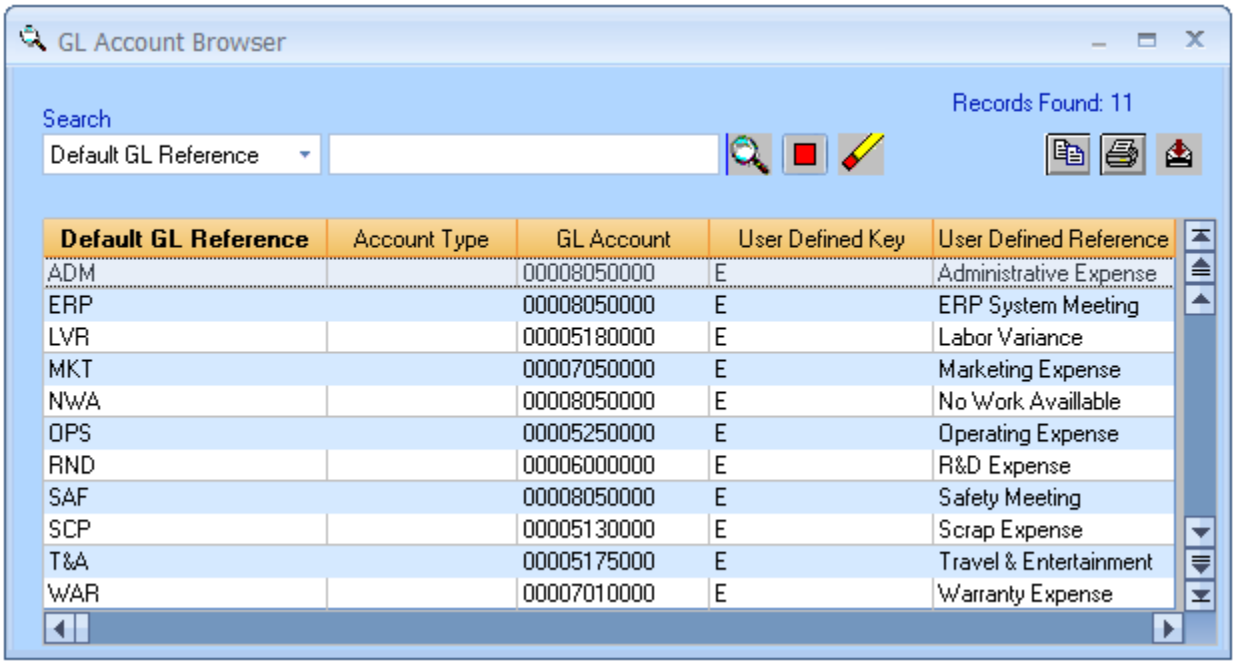
In **Financial Integration – Activity – Maintain GL Accounts – Stockrooms** to establish General Ledger Accounts



Default GL Reference	Account Type	GL Account	User Defined Key	User Defined Reference
AD	A	00001385000	A	Awaiting Disposition
AD	B	00001385000	A	Awaiting Disposition
BLNCPNT	A	00001380000	A	Consigned
BLNCPNT	B	00001380000	A	Consigned
EXACT	A	00001380000	A	Consigned
EXACT	B	00001380000	A	Consigned
FG	A	00001370000	A	Finished Goods
FG	B	00001370000	A	Finished Goods
II	A	00001310000	A	Incoming Inspection
II	B	00001310000	A	Incoming Inspection
MRB	A	00001310000	A	Material Review Board



In **Financial Integration – Activity – Maintain GL Accounts – Overrides** to establish General Ledger Accounts

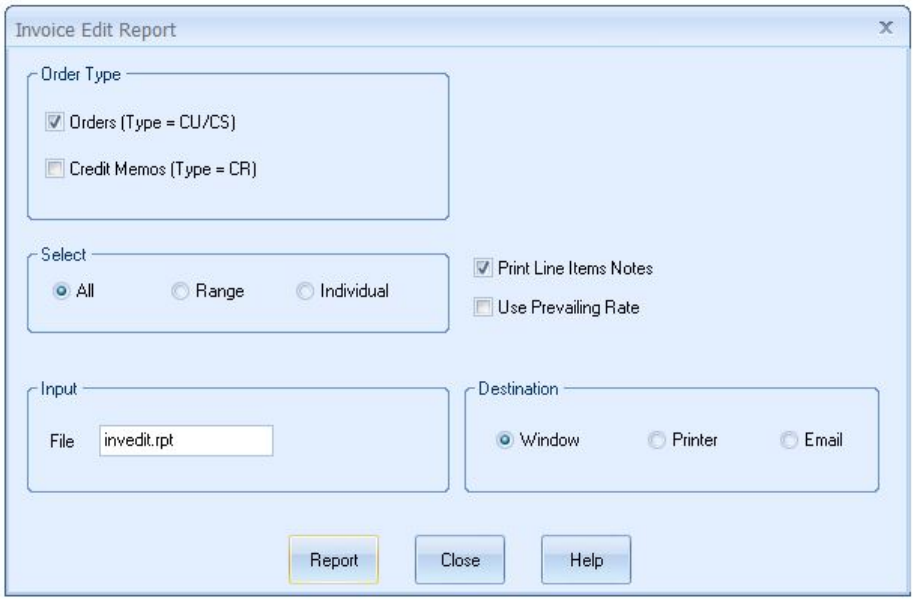


Default GL Reference	Account Type	GL Account	User Defined Key	User Defined Reference
ADM		00008050000	E	Administrative Expense
ERP		00008050000	E	ERP System Meeting
LVR		00005180000	E	Labor Variance
MKT		00007050000	E	Marketing Expense
NWA		00008050000	E	No Work Availlable
OPS		00005250000	E	Operating Expense
RND		00006000000	E	R&D Expense
SAF		00008050000	E	Safety Meeting
SCP		00005130000	E	Scrap Expense
T&A		00005175000	E	Travel & Entertainment
WAR		00007010000	E	Warranty Expense

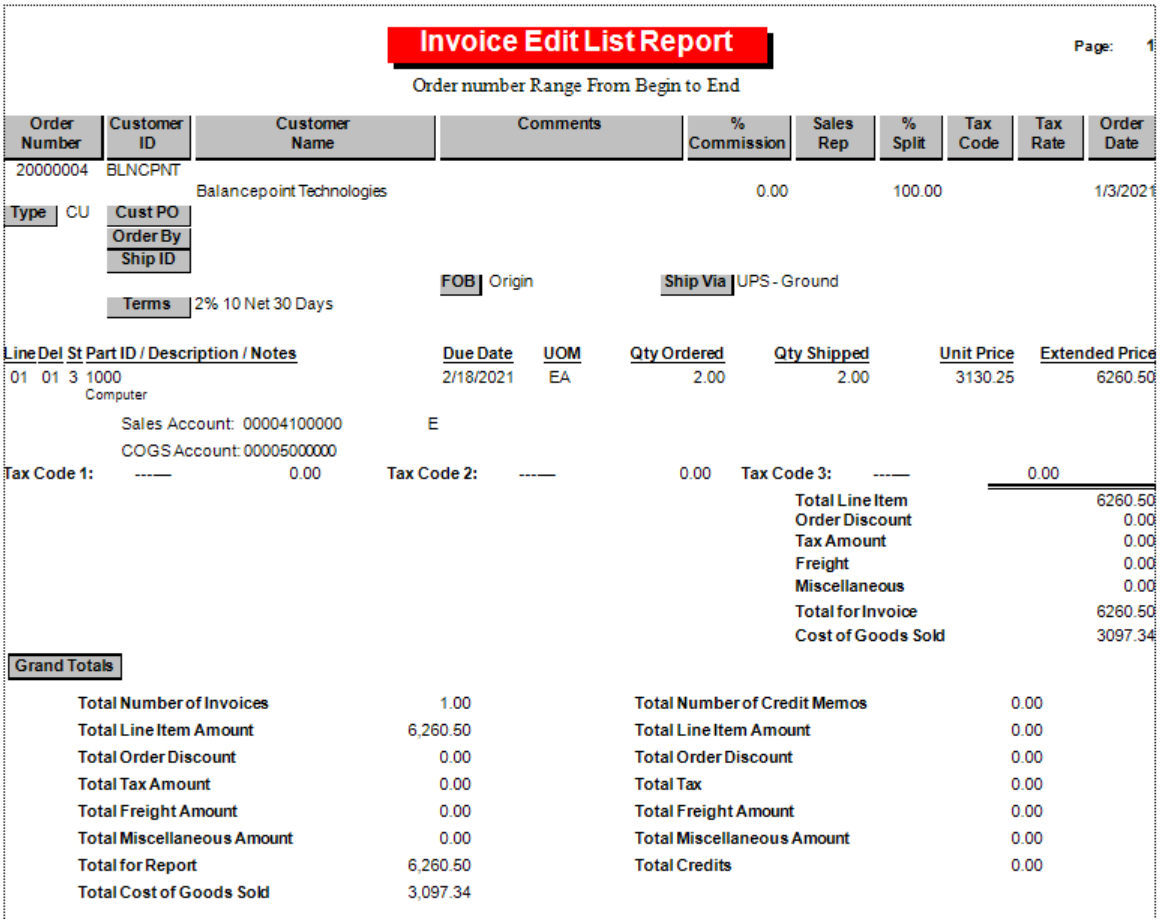
Chapter 32 – Sales Order Processing to Accounts Receivable

Step 1

After the orders have been shipped, accounting typically takes over with the invoicing. The first step is to verify that all the information from the sales order entry and shipping processes are correct. To do so run **Reports – Invoice Edit List**.



The report provides all the details for items that have been shipped, but not yet invoiced.



Invoice Edit List Report

Page: 1

Order number Range From Begin to End

Order Number	Customer ID	Customer Name	Comments	% Commission	Sales Rep	% Split	Tax Code	Tax Rate	Order Date
20000004	BLNCPNT	Balancepoint Technologies		0.00		100.00			1/3/202

Type CU | Cust PO | Order By | Ship ID

FOB Origin | Ship Via UPS - Ground

Terms 2% 10 Net 30 Days

Line	Del	St	Part ID / Description / Notes	Due Date	UOM	Qty Ordered	Qty Shipped	Unit Price	Extended Price
01	01	3	1000 Computer	2/18/2021	EA	2.00	2.00	3130.25	6260.50

Sales Account: 00004100000 E

COGS Account: 00005000000

Tax Code 1: ----- 0.00 Tax Code 2: ----- 0.00 Tax Code 3: ----- 0.00

Total Line Item	6260.50
Order Discount	0.00
Tax Amount	0.00
Freight	0.00
Miscellaneous	0.00
Total for Invoice	6260.50
Cost of Goods Sold	3097.34

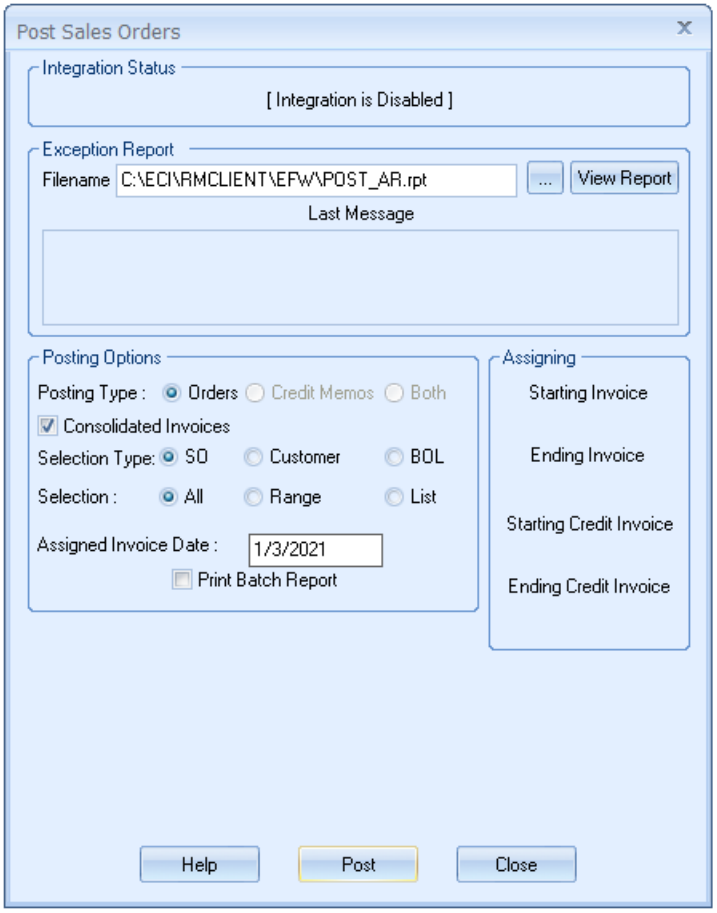
Grand Totals

Total Number of Invoices	1.00	Total Number of Credit Memos	0.00
Total Line Item Amount	6,260.50	Total Line Item Amount	0.00
Total Order Discount	0.00	Total Order Discount	0.00
Total Tax Amount	0.00	Total Tax	0.00
Total Freight Amount	0.00	Total Freight Amount	0.00
Total Miscellaneous Amount	0.00	Total Miscellaneous Amount	0.00
Total for Report	6,260.50	Total Credits	0.00
Total Cost of Goods Sold	3,097.34		

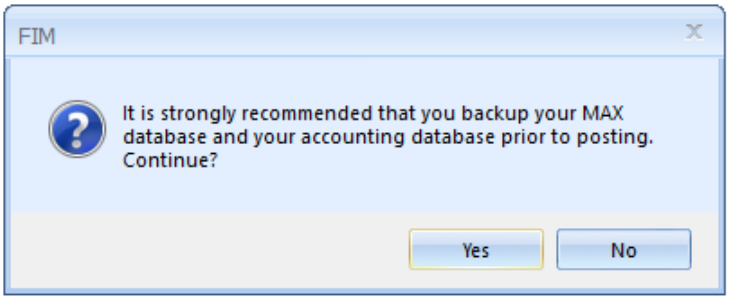
There will be a section for every sales order that needs to be invoiced. Now is the time to find errors and make corrections as that cannot be done once the sales order is posted. The Grand Total section provides totals for the batch.

Step 2

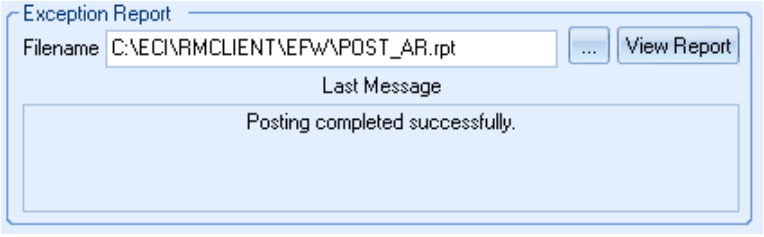
Once data is determined to be accurate, the next step is to post the sales order. This is accomplished in the **Financial Integration** module, under **Activity – Post – Sales Orders**.

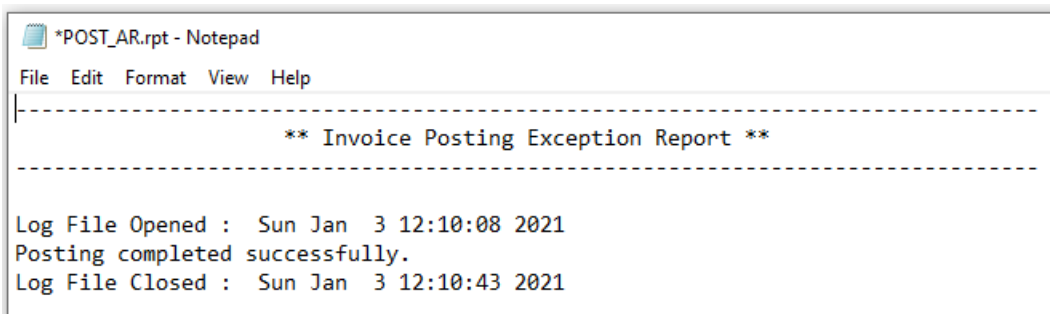


When the **Post** button is pressed, a warning that your data should be backed up is provided.



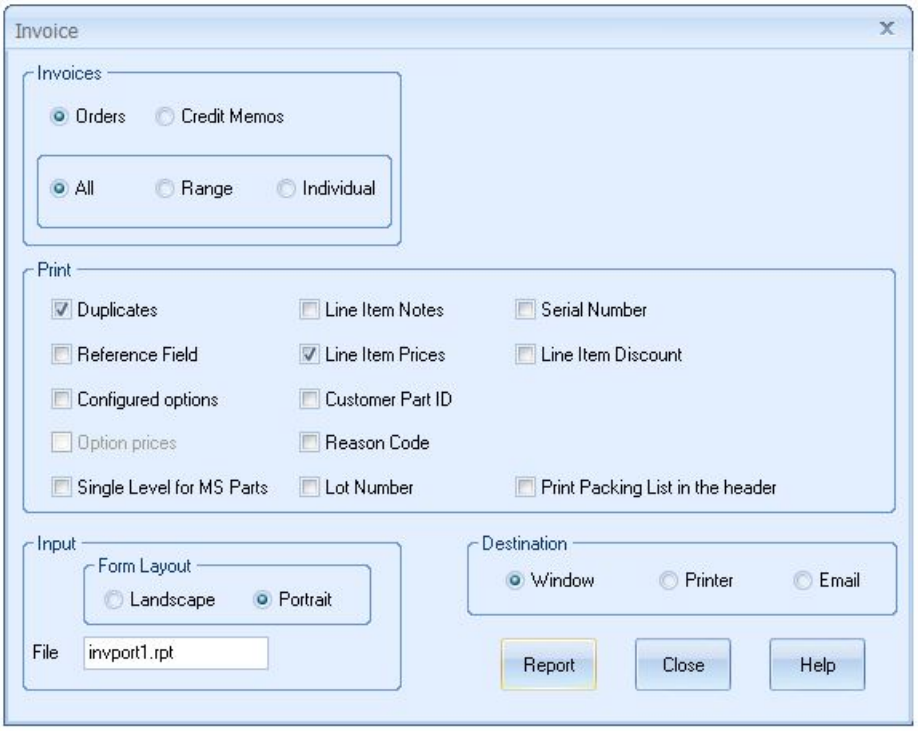
Pressing **Yes** will allow the batch to post without a backup. Select **No** if you want to stop and make a backup. After the posting completes, the status of the post is displayed. Press **View Report** to see the log files containing the results.



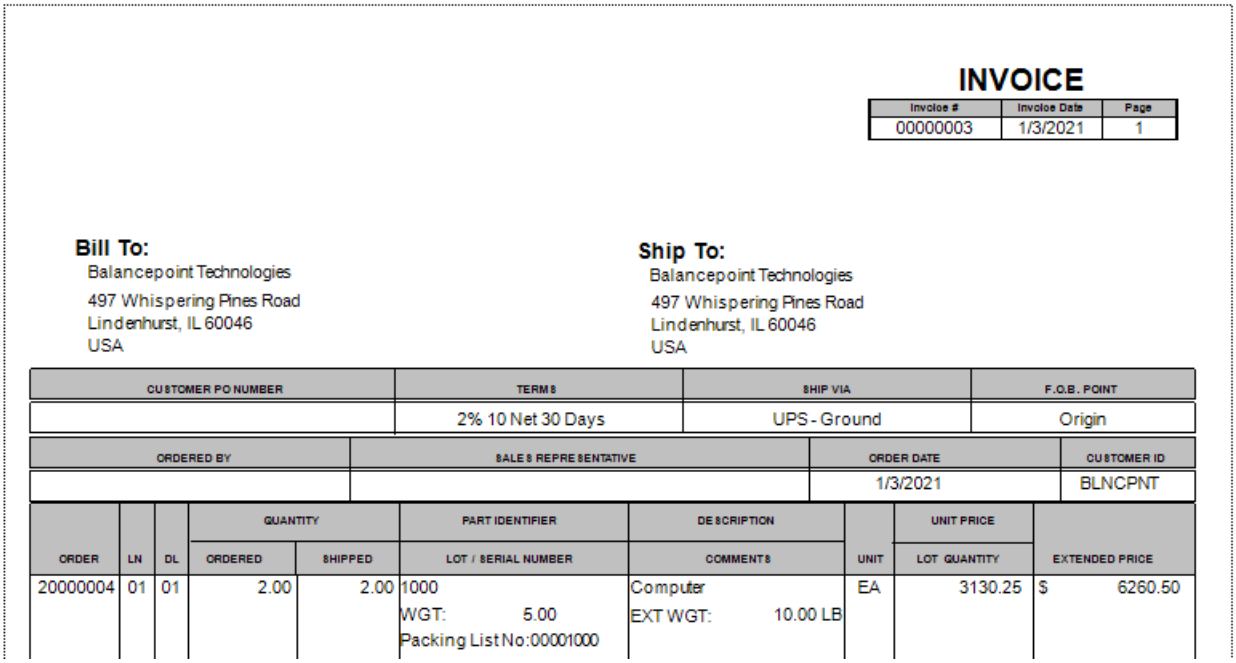


Step 3 – Printing Invoices

The last step is to print the Invoice. This is also performed in the **Financial Integration** module under **Reports – Print Invoice**.



The output of the report is the invoice. These may be customized using *Crystal Reports*.



INVOICE

Invoice #	Invoice Date	Page
00000003	1/3/2021	1

Bill To:
Balancepoint Technologies
497 Whispering Pines Road
Lindenhurst, IL 60046
USA

Ship To:
Balancepoint Technologies
497 Whispering Pines Road
Lindenhurst, IL 60046
USA

CUSTOMER PO NUMBER	TERMS	SHIP VIA	F.O.B. POINT
	2% 10 Net 30 Days	UPS - Ground	Origin

ORDERED BY	SALES REPRESENTATIVE	ORDER DATE	CUSTOMER ID
		1/3/2021	BLNCPNT

ORDER	LN	DL	QUANTITY ORDERED	QUANTITY SHIPPED	PART IDENTIFIER LOT / SERIAL NUMBER	DESCRIPTION COMMENTS	UNIT	UNIT PRICE LOT QUANTITY	EXTENDED PRICE
20000004	01	01	2.00	2.00	1000 WGT: 5.00 Packing List No:00001000	Computer EXT WGT: 10.00 LB	EA	3130.25	$ 6260.50

Congratulations

You have just completed the Invoicing portion of a Sales Order.

Chapter 33 – Purchasing to Accounts Payable

Step 1

PO has been received. Vendor invoice has been received.
Match Purchase Order Receipt to Vendor Invoice

Step 2

Match the invoice to the receipt & create voucher.

Step 3

Post Voucher

Chapter 34 – Costing (Transactions) to General Ledger

Step 1

Run the From to Charge Report & Review data

Step 2

Post the From to Charge Report

Step 3

Post the GL Batch

Part XI – Other Sources of Help

Chapter 35

MAX User Guides

Every MAX module has its own User Guide. These can be found on the System Manager Web tab where the module is opened. These manuals are compiled in Adobe PDF format and contain key word search capabilities.

Sales Order Processing, Quoting, Consignment User Guides

Chapter 36

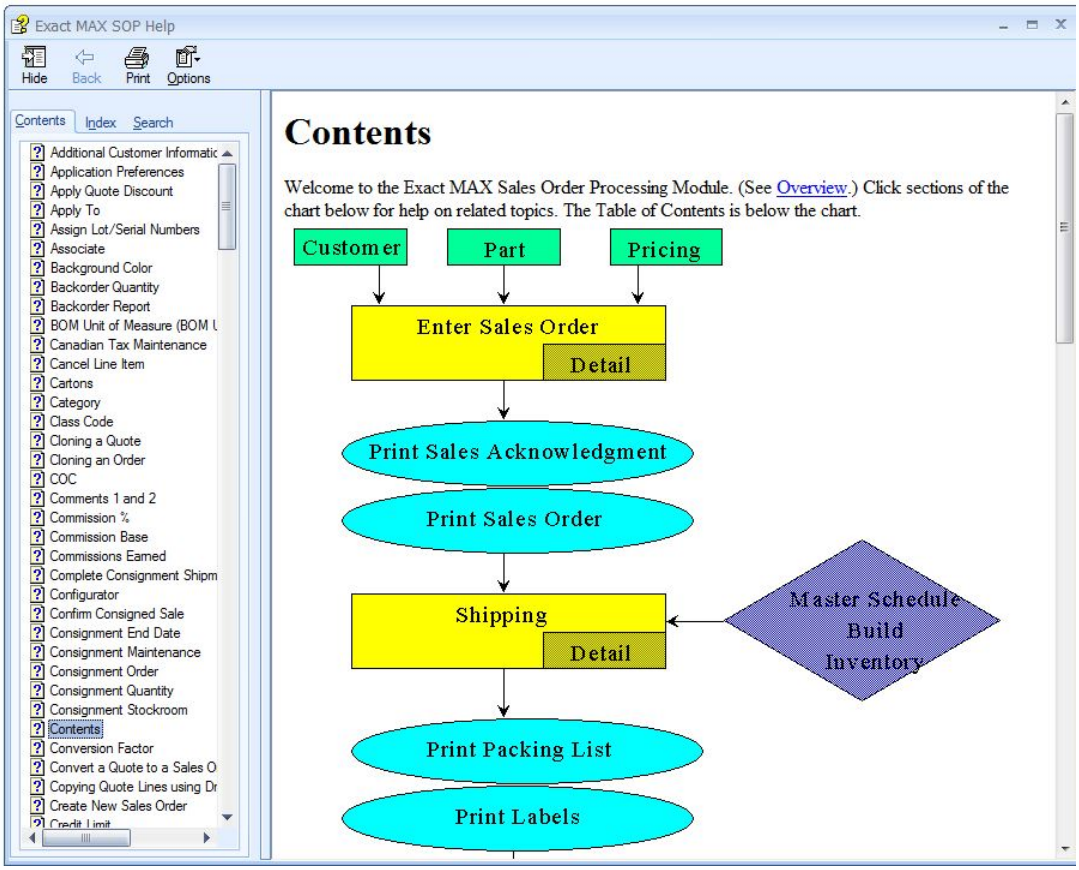
Context Sensitive Help

There are several help options available within MAX. Most windows and dialog boxes contain **Help** buttons and when pressed will bring up additional information regarding the function you are currently within.

On the major windows, like the Purchasing Schedule grid, you can click the button with the arrow/? On the toolbar. This will change your cursor to a question mark which you can then use to click on a field or area on the screen to automatically bring up Help to cover that topic.

If you want to look up information on a specific topic go to the **Help** menu and chose **Search**. Type the topic you want information on, and you will automatically be brought to that section of the help. Also, available from the **Help** menu are keyboard **Commands** and **Procedures** that are relevant for each module.

Pressing the F1 function key on your keyboard will also activate the Help system for the function you are in. Once you are within the Help System you can jump to related topics.



Chapter 37

Professional Services Help

For questions or support on this document, please contact:

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www.micromfgsys.com

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