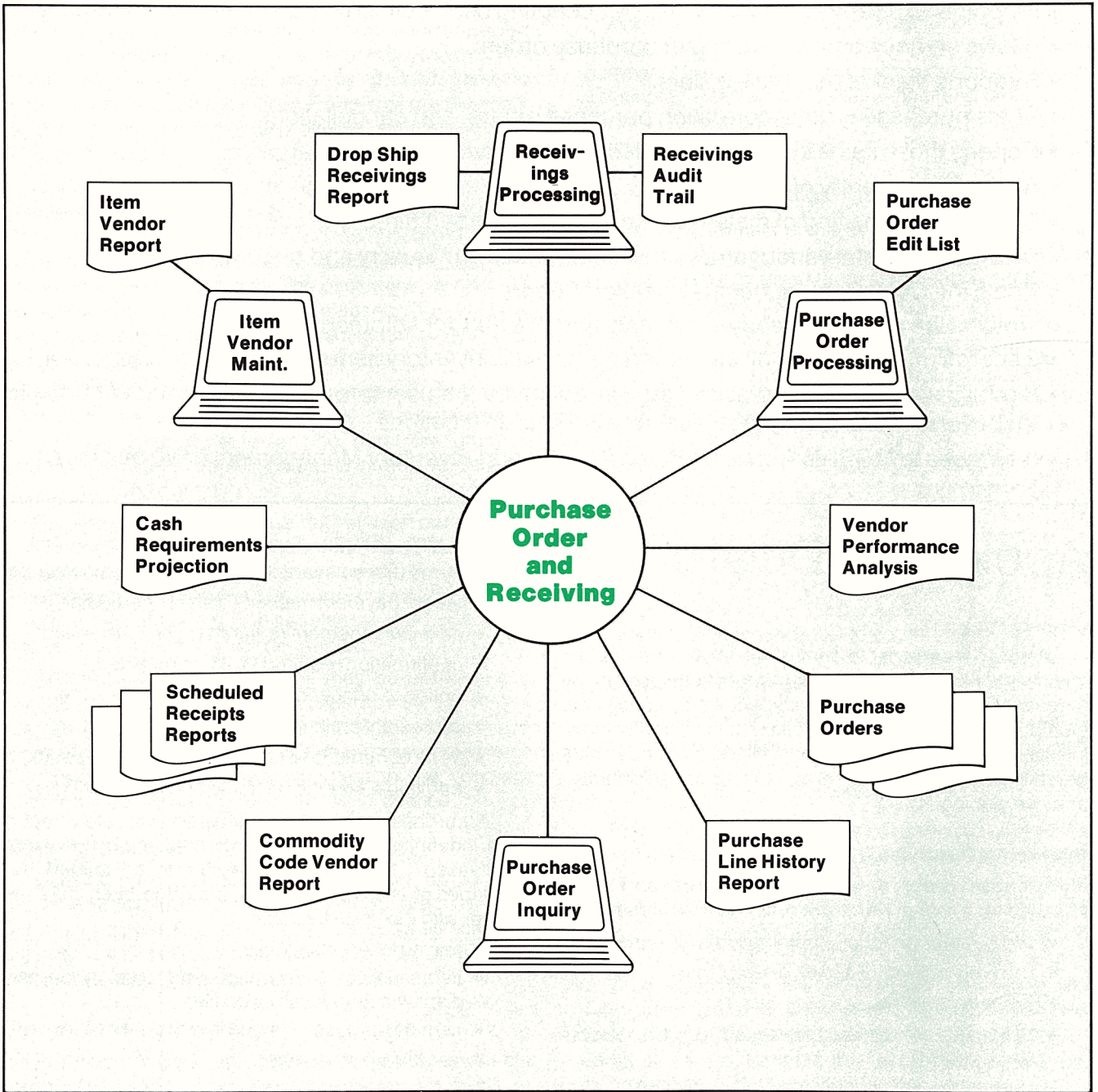


# **PURCHASE ORDER and RECEIVING** in COBOL



# Application Overview

Purchase Order and Receiving (P/O) is an efficient, time-saving tool for creating and maintaining purchasing records and ensuring the quality, accuracy, and promptness of deliveries of purchased materials. P/O's capabilities for predicting cash requirements, monitoring vendor performance, and preventing shortages of needed materials make it vital to both the manufacturing and distribution environments. The package includes the following features:

- Accesses all features through convenient menus.
- Displays function key options on the screen and allows their use to simplify processing.
- Runs most reports in the background, so the terminal is free for other use.
- Prints information displayed on the screen at the touch of a button.
- Displays all reports on the terminal for immediate inquiry.
- Pinpoints exact information desired by accepting user-defined parameters on most reports.
- Allows on-line entry and editing of purchase orders.
- Supports blanket purchase orders.
- Prints purchase orders, correction purchase orders, and cancellations.
- Reports those items that are scheduled to be received.
- Allows on-line entry of receivings.
- Supports purchasing of materials that are drop shipped directly to customers.
- Provides powerful vendor analysis showing records of quality and price variance.
- Prints the *Cash Requirements Projection Report*.
- Notifies the user when early shipments and over/under shipments occur.
- Records multiple vendors' part numbers for each inventory item.
- Simplifies data entry and allows customization by the user through maintenance of code files for buyers, comments, reject reasons, and ship-to locations.
- Interfaces to MCBA's Accounts Payable (A/P) and Inventory Management (I/M) packages.

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## Application Details

### Control Files

An easily maintainable control file allows the user to specify the next purchase order number to be used if not manually entered. Data entry is speeded by specifying default codes for ship-to location, buyer, notification initials, and move-to area. User-defined tolerances can be entered for early shipments, over/under shipments, and overpricing.

### Interactive Purchase Order Entry

Purchase order data may be entered and later released for printing. Purchase order data includes:

- p/o number (manually/automatically assigned)
- p/o type (normal, blanket, or drop ship)
- p/o entry date
- p/o status (unreleased, released, printed, closed or cancelled)
- vendor number (automatic display of name)

- buyer, ship-to, ship-via and F.O.B. codes
- terms (fifteen characters— defaults to those on file)
- freight payment method (collect or prepaid)
- acknowledgement required (Y, N, or received)
- confirmation required (Y, N, or received)
- option to print price or not on purchase order
- p/o weight (calculated automatically)
- three comments (a function key displays codes)
- additional comments (three 30-character lines)

A purchase order can be entered and safely kept on file indefinitely until its status is changed by the user to "released." It will then be eligible to be printed. Any number of line items may be added to each purchase order with the following data:

- line number (three digits)
- item number (description and quantity-on-hand display automatically if on file)
- item description (if not on inventory item file)
- vendor's item number
- G/L account number



- unit of measure (defaults to purchase unit)
- unit cost (defaults to most recent cost)
- commodity code (four alphanumeric characters)
- person to be notified (three initials)
- the area where the item goes upon receipt
- job number (six alphanumeric characters)
- blanket type (firm, estimate, maximum, or minimum)
- date delivery is required
- quantity ordered (six digits)
- two comments (a function key displays comments)
- additional comments (two 30-character lines)

The buyer decides which items and in what quantity to order using the *Reordering Advice Reports* from I/M. Vendors may be selected using the *Item Vendor Report* and the *Vendor Performance Analysis Report*. The *Purchase Order Edit List* may be printed showing summary or detailed data for any ranges of p/o numbers or entry dates. Specific or all p/o types, statuses, vendor numbers, ship-to-codes, or buyers can be selected.

During entry, the user is helped by relevant data displayed on the screen, such as the previously entered line number and item number and the quantity on hand, quantity allocated (committed), quantity on order, and the reorder level for the item. The package automatically keeps track of the quantity released (for blanket purchase orders), quantity invoiced, quantity received, and the last receipt date for each line item.

After entry, each line can be changed or cancelled. Line item statuses are automatically set to assure the appropriate data prints when the purchase order is reprinted. When a buyer secures a promised delivery date, it can be entered.

Purchase orders which have not yet been printed may be deleted. After printing, purchase orders may be modified or cancelled. For convenience in modifying purchase orders, existing line items are displayed by a function key. Changes that require vendor notification cause change orders to be printed.

Purchase order cancellations may be entered, and the cancellation process is completed by the printing of cancellation notices, after which the closed purchase order may be deleted. Cancellation by reason of vendor negligence is automatically recorded in the vendor's performance statistics when the order is deleted.

### Blanket Purchase Orders

Blanket purchase orders may be set up to take advantage of lower prices and/or assure a steady supply of items. The user may issue up to 99 releases against a blanket purchase order number, specifying which line items are to appear on the release.

### Purchase Orders Printing

Purchase orders are printed on widely available preprinted forms. The user may select the range of

purchase order numbers and/or entry dates to be printed. Printing may be limited to selected purchase order types or issue types (new, correction, cancellation). The user may optionally print duplicates, which are marked as such. After printing, the appropriate files are automatically updated.

### Three Screen Inquiries

The user may quickly and easily review all purchase orders on file for a vendor even when specific p/o numbers are not known. When a vendor number is entered, a list of all orders on file for the vendor can be displayed, showing the number, date, type, and buyer code for each purchase order. Alternatively, a function key enables the user to select a vendor by entering part of his name and picking from a displayed list.

Another way to locate a purchase order is to enter the vendor number and the item number or vendor item number. A list of all purchase orders containing the item will display with the item's line number and other details. When a vendor number and a specific purchase order number are entered, details are displayed.

### Prediction of Receivings

The three formats of the *Scheduled Receipts Report* enable the user to predict when goods that have been ordered will be received. Late shipments are flagged on the report. Scheduled receipts may be listed by vendor, by item, or by job. Reports by vendor are useful in monitoring the performance of specific vendors, while reports by item allow comparison of performances of competing vendors. Reports by job enable managers to ensure that needed items will be received on time.

The report may be printed for all or a range of vendors, items, or jobs and all or a range of promise dates. The user may select to print only those orders which are a specified number of days late. If desired, the report will include line items that have been fully received and/or lines that have been cancelled. Reports may be printed for selected buyers, notification initials, move-to locations, and ship-to codes.

### On-Line Entry of Receivings

The on-line entry of receivings automatically updates the quantity on hand and quantity on order. Easy location of the line item corresponding to a receiving is provided by use of the function keys.

Receivings may be entered in either the purchasing unit of measure or the stocking unit of measure. Warning messages are displayed for early shipments, overshipments, and overpricing. The *Receivings Audit Trail Report* may be printed for all or a range of purchase order numbers, item numbers, or receipt dates.

Drop shipments are entered as receivings when notification is received that the shipment has been made. The *Drop Ship Receivings Report* is printed for a range or all p/o numbers and/or receivings entry dates to provide for customer billing.

## Detailed History Report

The *Purchase Line History Report* prints detailed line item data from closed purchase orders that have been deleted. The report is structured to show each purchase order line item (in order by receipt date) within vendor number within item number. It compares the receipt date to the request date and promise date, the expected and actual unit prices, and the quantities ordered, received, rejected and cancelled. This information is useful in comparing vendor performance or for tracing the price paid for an item over time.

## Cash Requirements Projection

The *Cash Requirements Projection Report* enables the user to predict what his future cash requirements will be, even before he has been billed by all his vendors. As soon as commitments to vendors have been made, the report can be printed based on the expected costs and requested delivery dates of items ordered. Unpaid invoices on file in Accounts Payable are automatically added to allow complete prediction of actual cash requirements for selected periods.

## Vendor Performance Analysis

The comparison percentages provided by the *Vendor Performance Analysis Report* enable the user to gain a very clear idea of the ability of different vendors to deliver quality products on time and at expected costs.

The percentages include the percentage of purchase order line items that were late this year and last, percentage of cost variance between expected and billed prices, and percentage of delivered items rejected. Finally, the report presents the average lead time and the average days late for each vendor.

The report may be printed for any range of vendors and for one or all commodity codes. The user may choose to print only those vendors with whom he has done business since a specified cut-off date.

A powerful feature of the report is its ability to show only vendors that fall within user-specified performance ranges. In this way, the user can easily locate either his best performing vendors or those with the least satisfactory performance records.

## Cross Reference to Vendors' Item Numbers

The item vendor file keeps track of all vendors who provide each item and records each vendor's identifying number for each item with the user's item number. Item/vendor relationships may be entered manually, though they are automatically captured during the entry of line items on a purchase order. On-line inquiry is provided by pressing a function key to display appropriate data for each vendor who supplies a selected item. The *Item Vendor Report* may be printed, optionally showing all items provided by one or a range of vendors or showing all vendors that sell one or a

range of items. Appropriate performance data is printed to aid the purchasing decision.

## Special Functions

- An interactive module is used to create and define the size of the initial data files.
- A report management subsystem allows reports to be printed immediately or spooled on disk for later display or printing of one or more copies.
- As this is a multi-company package, the name of the company being processed appears in the upper right-hand corner of the screen.
- Easily understood screen help messages prompt the user through option selection and errors.
- The *Commodity Code Vendor Report* may be printed, to review all vendors who provide commodities in a selected range of codes.
- Interactive maintenance modules allow the user to enter codes for all buyers as well as frequently used purchase order comments and reject reasons. For convenience, these codes can be quickly accessed during data entry.
- The ship-to code file allows for the entry of a six-character code for each shipping destination. The user may indicate drop ship locations.
- At the end of the year, a menu selection will move figures for the current year to prior year fields for comparison and set the year-to-date fields to zero.
- Wherever a vendor or item number is needed, the user may type the first part of the vendor's name or item's description. The user may then choose the correct one from the list of possibilities displayed.

## Coding Standards and Documentation

Complete source code is provided. It is written using Warnier-Orr structured coding techniques. Extensive use is made of copy library modules to make modification easy. The paragraph and data names are descriptive, taking maximum advantage of COBOL's self-documenting feature.

The *Software Reference Manual* contains all the necessary technical information for the programmer or the installer. The easy-to-understand *User's Manual* guides the operator with both overviews and details for each function. File Load Sheets are included to expedite data entry. Each manual is provided in a neat three-ring binder with convenient thumb tabs.

## Interfaces to Other MCBA Packages

The prerequisites for MCBA's P/O are Accounts Payable (A/P) and Inventory Management (I/M). P/O updates the data such as quantity-on-order and quantity-on-hand in I/M. New A/P vouchers can be quickly created by automatically transmitting data from associated purchase orders.