

**JOBSCOPE®**

**Jobscope**, the most comprehensive job costing and integrated manufacturing information system for your order-driven company, balances critical requirements, function, and technology while offering the comfort and confidence necessary to overcome your unique manufacturing challenges.



***Job Control***

## Order Entry

Contract manufacturers and service firms must deal with two unique types of product orders. The first type of order typically generates the greatest share of company revenues; it is the customer order for equipment or product that must be manufactured, processed, assembled, or repaired. These orders may include items for which standard bills-of-material and routings exist in the engineering database, or they may be engineer-to-order or configure-to-order items that have never before been manufactured. This scenario usually presents a significant order entry problem for traditional MRP II systems because many of these systems cannot accept an order for any item not having a valid part number and item master record. JOBSCOPE, however, provides for the entry of any order entry item, identified in any manner acceptable to the user, and provides for up to 999 pages of text describing the item. The system also supports the detail design and further documentation of the item as the order progresses.

The second type of order processed by contract manufacturing and service firms is the spare parts order. Since the majority of orders handled by contract manufacturers may be spare parts orders, these orders can consume a major portion of the personnel resources in the order entry department. In fact, many manufacturers and service firms staff two order entry departments one for contract order entry and one for spare parts. Because spare parts order entry requires a speedy order entry process, the order entry personnel must have immediate access to information concerning the availability of each item required to fill the order. This involves complete visibility into current on-hand balances, existing obligations, and expected replenishments for each stock item. Without this type of information at the order entry clerks' fingertips, many orders which could have been filled may be rejected or lost.

## Features

- On-line order entry, modification, tracking, and inquiry
- Multiple jobs on one contract
- Multiple releases on one job
- Manual/automatic assignment of job numbers
- Credit check at order entry
- Sales analysis based on orders won, lost, inactive, etc.
- Interface with Bill of Materials, Accounts Receivable and Job Cost
- Commission splits among multiple salespeople
- Unique payment terms assignable to each job/order
- On-line order scheduling directly from the Order Entry screen

## Customer Master File

The Customer Master File contains important information about each customer with whom the user plans to do business. The information in the customer master record is used extensively when an order, job, or contract is entered. In fact, most of this information is automatically transferred to the Job Master screen from the Customer Master record at order entry time. A Browse feature is included on the Customers screen to locate customers previously entered on the system. The Customers screen provides for the entry of



work-in-process and accounts receivable/cash accounts that will be impacted when orders are processed for each customer. In addition, each customer may have multiple tax codes and rates that may be applied to work performed for that particular customer.

*The Customer Master record provides important customer data that is automatically copied to any orders opened for each customer.*

Many customers may have multiple locations to which products must be shipped or invoices sent. Because of that requirement, JOBSCOPE supports the entry of multiple sites associated with a single customer number. The Bill/Ship field on the Customer Site screen provides for the entry of billing addresses ("B" code), shipping addresses ("S" code), or addresses that can be used for both (a blank entry). More than 500 sites may be entered for each customer.

*Each customer may have more than 500 billing and/or shipping addresses.*

In addition to the Customer Sites screen, detailed Customer Credit History and Customer Contacts information is maintained by the system for each customer. The customer's credit limit may be changed only on the Customer Credit History screen. The Credit Used field on this screen not only takes into account outstanding accounts receivable invoices, but also customer-related work-in-process for which invoices have not yet been created. A handy feature of this screen is the display of the average number of days it takes each customer to pay an invoice. The system may be configured to

use this figure rather than standard terms to determine which invoices to include on the Late Receivables reports. This feature helps deter accounts receivable clerks from calling and irritating good customers who pay their invoices consistently, but usually pay a few days late. In addition, JOBSCOPE's "A/R Invoices by Date Expected" report provides cash flow projections based upon each customer's "average days to pay" rather than standard terms; this provides more realistic projections of expected cash receipts.

The Customer Contacts screen allows up to 9,999 contact names, titles, and phone numbers for each customer. The JOBSCOPE Accounts Receivable aging reports print the name and phone number of each contact name with an "AP" (Accounts Payable contact) in the associated Position field. This makes the job of accounts receivable personnel a little easier because they have at their disposal the name and phone number of the person to contact regarding outstanding receivables.

## Contract Order Entry

All orders entered into the JOBSCOPE system are entered as jobs. Whether the order is a customer order for items yet to be manufactured, a spare parts order, or an order to manufacture make-to-stock subassemblies or finished goods to be placed in inventory, it is always entered as a job. If the Customer Master record has been properly completed, the only fields requiring entry to open a job are the eight-character Job Number field and the Customer Number. The job number field accepts alphanumeric characters; the job number may be assigned by the user, or the system may assign sequential job numbers. The completion of the Customer Number field and subsequent pressing of the <ENTER> key accomplishes the task of filling in the Job Master screen with the rest of the information it needs. If the customer number is not known at order entry time, or if you are searching for a job previously entered, both Customer Browse and Job Browse functions are available by clicking the designated icons. Selection of an existing customer or job returns the user to the Job Master screen with the information associated with the selected job displayed in the proper fields. A simple press of the <ENTER> key fills in the remainder of the screen.

*Only the job number and customer number need be entered to fully complete the initial order entry screen.*

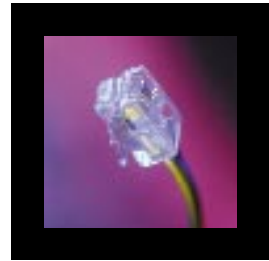
JOBSCOPE's Estimating subsystem, whether it is being utilized to configure one-of-a-kind items or provide updated

cost figures for items already stored in the BOM catalog, provides direct input to the order entry process. The user only needs to assign a job number (or let the system perform this function) on the initial order entry screen and enter the appropriate estimate number in the Estimate field at the bottom right hand corner of the screen. A press of the <ENTER> key will fill in the remainder of the screen,

*The Estimates screen allows you to enter and maintain estimates, and you can link estimates to jobs.*

including all the relevant information about the customer for whom the estimate was created. If the estimate was originally associated with no customer, a valid customer number may be entered at this time. If desired, the Job Budgets screen will also be updated to include all cost information from the estimate.

The Line Items screen will allow the entry of any item on an order. The catalogue number field will accept up to twenty alphanumeric characters and does not require that a valid part number or item master exist for the item being entered. This is extremely helpful in a contract manufacturing environment where the item being ordered may never have been ordered. The customer or order entry person may apply a descriptive part number to the item to facilitate the entry of the item into the system. Additional text may be entered so that all interested parties know all presently available information about the item(s) being ordered.



*The Line Items screen details each item the customer is ordering.*

An order of this type may require additional design or manufacturing engineering steps and/or subsequent segmentation into smaller, manageable units of work. Although the order may originally be entered with a limited amount of descriptive information and a single delivery date, the JOBSCOPE system provides for the subdivision of this line item into multiple Releases. Releases associated with an order may define various subassemblies or structures that are to be engineered and worked on separately prior to being assembled in the production facility or at the customer's site into a single end item, or divisions of the total order quantity into groups of lesser quantities, with each group having a unique delivery date.

Prices for the item master files and discounts from the Customer Master records and Price Agreements tables are automatically applied where appropriate. Prices and any required discounts or markups for items without item master records may be automatically transferred from the estimate or entered directly on the order entry Line Item screen. If a delivery date is requested by the customer, this may also be entered, along with the promised delivery date. A Master Drawing number may be entered if a related drawing presently exists in the JOBSCOPE Drawing File; the latest revision level will automatically be displayed on the screen.

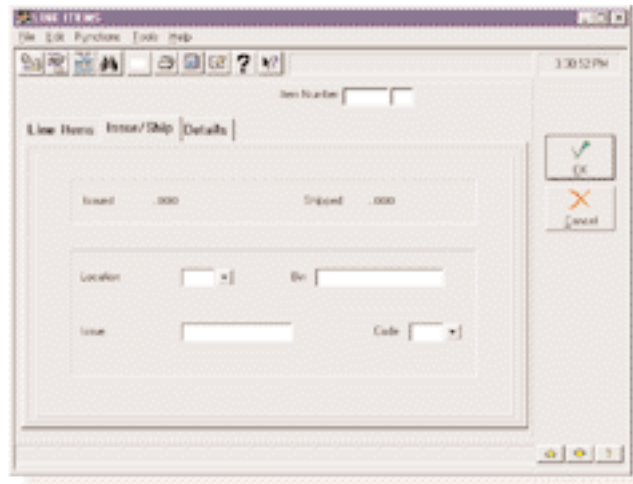
When the Catalogue Number being entered is an item for which an item master record exists, the user need only enter the Part Number and the required quantity and press <ENTER>; the remainder of the information fields on the screen will be filled in except for the date fields relating to delivery. The PSM code at the top right of the screen will inform the user if this item is normally Manufactured (M) only when required on an order, Purchased (P) only when required on an order, or kept in Stock (S) inventory. All orders for "S" and "P" items impact JOBSCOPE's job-oriented Material Requirements Planning (MRP)

module and display on the proper material requirements report when the projected balance is outside the user-defined reorder parameters. If the item is an "S" (Stock Inventory) item, the ON HAND, OBLIGATED, and ON ORDER fields in the middle right-hand-side of the screen will display current balances. For items of all types, customer requirements dates and promised delivery dates may be entered at this time.

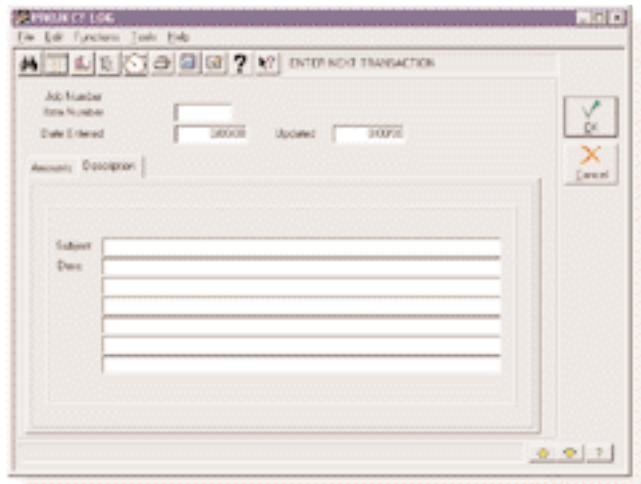
If the item being entered has a valid part number, is an item requiring Assembly, Processing, or Manufacturing ("M" item), and is comprised of a single-level bill-of-material, the work order (shop order, process sheet, etc.) and its associated production schedule may be automatically created at this time. The user need simply enter a date in the Requested field if a delivery date is requested by the customer (or Production Control, if an internal manufacturing order), in which case the system will backward schedule the item, or leave the Requested field blank if the system is to forward schedule. When the Route/Schedule icon is clicked, the work order will be automatically created and the work will be scheduled in the plant based on the Requested date or job priority.

Additional screens relating to each job include the Job Budgets screen and the Project Log screen. The Project Log is used to record any changes to the job, whether initiated by customer request or by internal directive. In effect, the Project Log provides a record of all Change Orders on the job and reflects the financial impact of each change. Each Project Log entry that impacts a budget figure may be related to its corresponding budget change entry on the Job Budgets screen. The entire Project (Change) Log may be displayed or printed at any time for any job.

After the order is entered, the order acknowledgement may be printed or displayed by pressing the appropriate function key at the bottom of the Line Items screen.



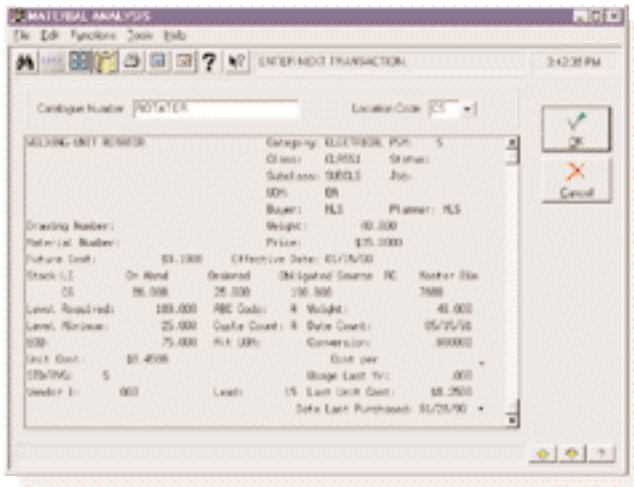
*The Issue/Ship tab on the Line Items screen allows you to issue and ship for locations.*



*A complete change order may be printed for each job.*

## Spare Parts Order Entry

Spare parts order entry is similar to contract order entry in that the same Job Master screen is utilized to open the order. However, the JOBSCOPE system provides additional functionality when the order being entered is for a stock item. First, if the customer cannot provide a valid part number, a Material Browse program is available via an icon. This function identifies items based on their Category, Class, and/or Subclass — descriptive information found in each item's master record. If that does not identify the required part, the system can perform a "wild card" search based on any valid string of characters in the part's number or description. Once the correct part is identified, the selected part number is then transferred back to the primary Line Items screen to allow completion of the order entry process.



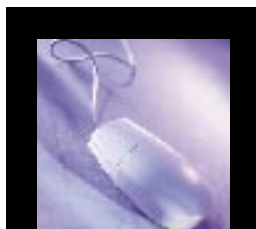
Detailed information about any part number is available via the Material Analysis function directly from the Line Items screen.

As mentioned earlier, the entry of any “Stock Part” (code “S” in the PSM field) on the Line Items screen displays current inventory information about that part in the middle, right-hand portion of the screen. If more detailed, date-sensitive information is desired about the part, icons provide access to the part’s Material Analysis and MRP Net Detail screens. These screens display all available information about the part — vendors, costs, lead time, on-hand balances, obligations against other orders, expected replenishments from outstanding purchase orders, etc. If the user has the proper system authority, he may display part availability information in company locations other than his own and issue parts from such locations if so authorized.

If the ordered parts are on-hand and available to be issued or shipped, the quantity being issued from Inventory is entered in the Issue field and an appropriate “Issue Code” entered in the Code field. If an “I” is entered, material control is sent a pick list that provides instructions to pull the item(s) from stock and prepare them for shipment. If an “S” is placed in the Code field, the same instructions are produced, but in addition to the above items, the shipping papers are prepared automatically. All the user must do is enter the “Carrier” for the packing list and shipping instructions to be produced. A batch program, Create Invoices From Shipments, that typically is run after hours on a regular basis, automatically creates invoices for those items that have been shipped. This feature greatly reduces the opportunity to ship an item to a customer without creating its associated invoice.

## Reports

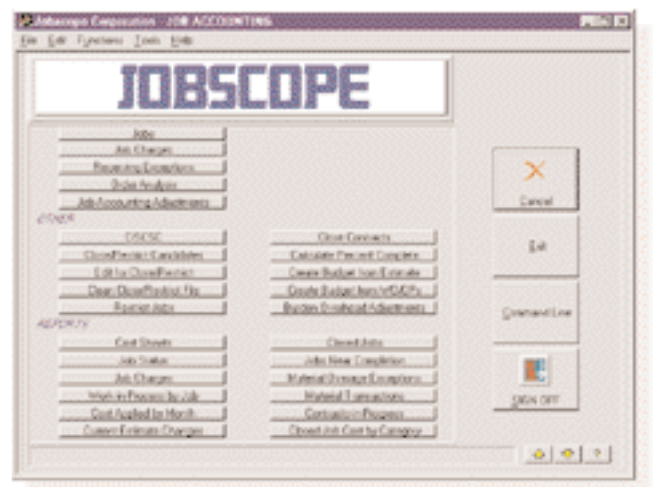
- Customers — Displays or prints information about all or selected customers.
- Customer Contacts — Displays or prints all contacts for selected customers.
- Address List — Displays or prints the address for each customer and lists each customer’s contacts.
- Customer Sites — Displays or prints all sites for selected customers.
- Sales Acknowledgements — Prints order acknowledgements on multi-part forms for line items ordered on each customer order (job).
- Sales Reports — By date range, displays contracts and jobs by salesperson and/or sales group.



- Late Orders — Displays or prints all order line items not marked complete as of a specified cutoff date.
- Open Orders — Displays or prints order line items that are not complete.
- Monthly Orders/Shipments — Displays or prints a summary of orders by product line for the current month.

## Job Accounting

Controlling job cost requires that up-to-date financial information be available for every job at any given time. The Job Accounting subsystem effectively meets this requirement by allowing management to enter and maintain original projections and ongoing updates to those projections (budgets), while at the same time automatically accumulating actual costs-to-date and computer-projected Estimates-At-Completion (EAC). Comparison among all budgets and actuals may be viewed on-line within a single screen.



The Job Accounting menu allows you to access options for maintaining jobs and job cost.

## Features

- Automatic updating of job cost from transactions entered throughout the system
- Classification of job charges by user-defined categories to differentiate various types of costs
- Ability to enter and maintain original and current budget figures for each cost category
- Retrieval of cost categories from various areas of the system
- Budget overrun feature alerts when actual costs exceed estimated values
- Audit trail of budget changes
- Actual versus estimated cost comparisons
- Various formulas for calculating percentage completion
- Functions for calculating and applying cost-of-sales and earned revenue
- Capability to require a special password to charge costs to selected jobs
  - “Close Jobs” option to automatically make all necessary accounting entries for job completion
  - Reporting of estimated and actual costs during all phases of the job
  - Options for moving closed jobs to a historical database

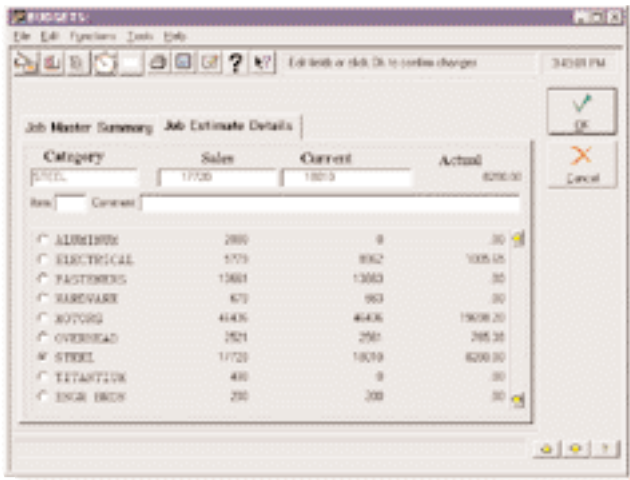


reflect up-to-date cost estimates. These budgets are entered and displayed on the Budgets screen, which is accessed from the Job Master screen through an icon.

Whenever a budget amount is changed, a text entry must be made that explains the change. This explanation may be entered in the Comment field directly on the Job Budgets screen, or the entry can be made on the Project Log screen if more detail is required. The Project Log might be thought of as a "diary" that contains a detailed clarification of each budget change.

In addition to manually entering budgets, JOBSCOPE furnishes two methods for automatically creating budgets for a job. The first is the Create Budgets from Estimates function. This option calculates budget amounts based on the line items for a specified estimate. The budgets for material categories are defined according to the lowest level bill-of-material structure for each line item on the estimate. The budgets for labor categories are derived from the operations required to produce each estimate line item.

The second function to automatically calculate budgets is Create Budgets from Work Orders/Operations. This option uses the bill-of-material structures and operations on a job's existing work orders to calculate budgets for the job.

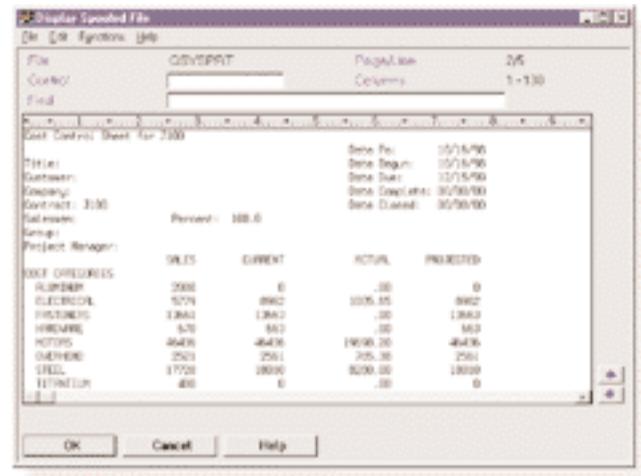


*The Budget screen allows you to maintain budgets for each job in cost categories.*

JOBSCOPE provides a facility to check for budget overruns on job charges. Whether or not this feature is activated is determined by the user's responses to specific questions in the Startup program. If the budget overrun feature is used, the user may specify either a percentage value or a monetary amount overage to be allowed. When the charges to a certain category for a job become greater than the category's current budget estimate plus the allowable overrun percentage or dollar value, no additional charges can be entered for that cost category on the job. The overrun percentage provides a foolproof method of keeping abreast of charges that exceed budgeted amounts. For example, the overrun percentage may be defined as 5% in Startup. The budget for a certain material category is \$100. When the actual charges to the material category reach \$105 (calculated as the \$100 budget amount plus the 5% overrun percentage), no additional charges for the category will be allowed to the job. Any additional materials issued to the job must belong to another material category, or the budget for the material category must be increased, with an accompanying explanation entered to support the change.

## Job Cost Sheet

The Cost Sheet details all financial information applicable to a specified job. The Cost Sheet may be displayed on-line through the Budgets screen, or it may be printed through the Cost Sheets option. Each cost category used on a particular job is listed, along with its sales budget and current budget.



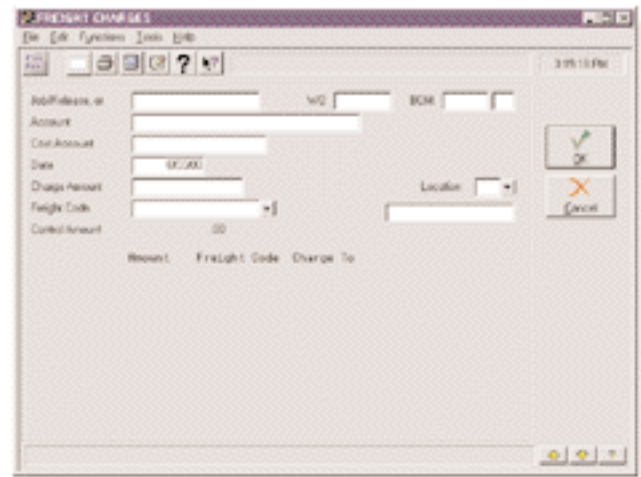
*The Job Cost Sheet prints sales, current, actual, and projected budgets for the cost categories associated with the job.*

The total of all charges to each cost category, based on material issues and labor charges, is also shown. On the printed Cost Sheet, a projected Estimate-at-Completion, which includes committed labor and materials, is calculated for each category.

The Cost Sheet also provides pricing information for the job. The estimated price is displayed; the estimated price may be manually entered on the Budgets screen, or it may optionally be calculated as the sum of the prices of individual line items on the job. In addition, all accounts receivable billings to date are presented.

A listing of the transactions that resulted in the displayed costs can optionally be appended to the printed version of the Cost Sheet. Reviewing these transactions can be a valuable step toward reducing job costs.

## Job Charges



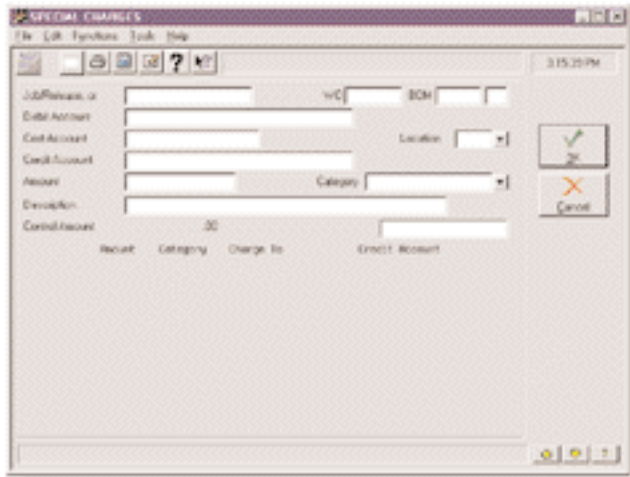
*The Freight Charges screen allows you to Charge Freight costs to a job or an account.*



Job costs that are not captured through the labor collection or material issues functions can be entered through the Job Charges function. Two options exist: one for entering miscellaneous charges (such as travel expenses), and one for entering freight charges.

On the Freight Charges screen, freight may be charged to a job or to an expense account. The charge is associated with a Freight Code, which, through table entries previously defined to the system, specifies the account that is credited for the charge. Freight charges use a special FREIGHT category.

The Special Charges screen allows charges to a specified job or an expense account and contains a Credit Account field where the user specifies the General Ledger account credited by the charge. The Category field allows a cost category to be entered. Each charge that is entered displays on the bottom portion of the screen so that it may be verified before being processed and written to the database through the [Process Records] function. Thus, erroneous entries can be corrected before they impact actual job cost data.



*The Special Charges screen allows you to enter job charges that are not collected through material issues, labor collection, or freight charges.*

Two functions that are useful for monitoring and modifying the above values are Job Accounting Adjustments and Calculate Percent Complete.

The Job Accounting Adjustments screen displays percent complete, earned revenue, and applied cost for the job that is entered in the Job Number field. Percentage completion can be modified by selecting a different formula to be used for the calculation. Several fields outline date for earned revenue.

## Cost Applied Can Be Updated In Four Ways

Manual entries made on the JOB ACCOUNTING ADJUSTMENTS screen

Through the CALCULATE PERCENT COMPLETE function based on the following calculation:  

$$[(\% \text{ complete} \times \text{current estimated costs}) - \text{cost applied booked for the job}]$$

Manual entry of A/R BILLINGS or automatic creation of billings through CREATE A/R INVOICES FROM SHIPMENTS

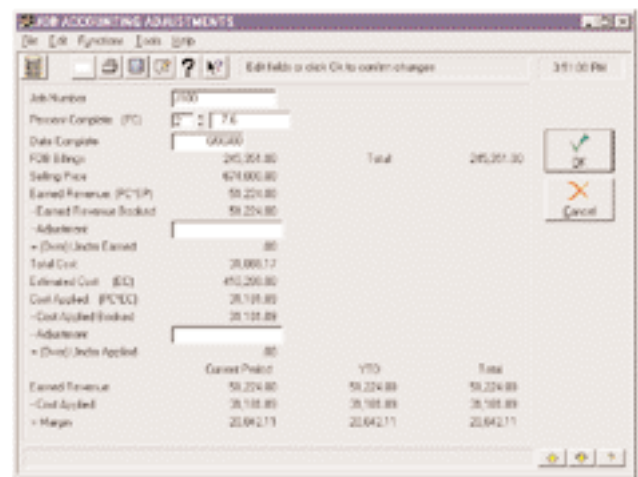
Automatic entries made by CLOSE JOBS to move any dollars in the work-in-process account to the cost-of-sales account

## Job Accounting Adjustments

In addition to budget and actual amounts for cost categories, JOBSCOPE maintains other informative values for each job. These supplementary figures include percentage complete, earned revenue, and applied cost.

- Percentage complete measures the progress of the job according to one of six formulas selected by the user. For example, percentage complete might be calculated as cumulative actual costs/estimated costs, or as labor hours worked/total estimated labor hours. The user may also elect to manually enter the percentage complete for any given job.
- Earned revenue represents the amount of money that has been moved from the job's deferred-income account to its sales account.
- Applied cost indicates how much of the job's costs have been moved from the work-in-process account to the cost-of-sales account. When labor is charged or materials are issued to the job, they impact the work-in-process account for the job. When these costs are later moved to the cost-of-sales account, they are "applied."

- The Earned Revenue field displays how much revenue "should" be earned for the job based on its percentage completion and estimated selling price.
- The Earned Revenue Booked field displays how much revenue has actually earned (moved from deferred income to sales).
- The Adjustment field allows the user to increase or decrease the "booked" value through a positive or negative entry.
- The Over (Under) Earned field is calculated as Earned Revenue - Earned Revenue Booked - Adjustment.



*The Job Accounting Adjustments screen allows you to adjust the percent and date complete, earned revenue, and cost applied values for a job.*

The Cost Applied, Cost Applied Booked, Adjustment, and Over (Under) Applied fields display similar information pertaining to costs. An example of using the Job Accounting Adjustments screen for modifying applied cost is shown in the following example.

Percentage complete for job (calculated as actual costs/estimated costs)	<b>50%</b>
Total estimated costs for job (Displayed in the Estimated Cost field)	<b>\$100,000</b>
Amount of cost that should be applied (\$100,000 x 50%) (Displayed in Cost Applied field)	<b>\$50,000</b>
Amount of cost that has actually been applied or booked through Job Accounting Adjustments, Calculate Percent Complete, or A/R Billings (Displayed in the Cost Applied Booked field)	<b>\$45,000</b>
Adjustment made on Job Accounting Adjustments screen (Entered in Adjustment field)	<b>\$5,000</b>
Over (Under) Applied	<b>\$0</b>

Calculate Percent Complete can be used to update earned revenue and cost-of-sales according to the job's percentage complete. Where the adjustment is manually entered on the Job Accounting Adjustments screen, it is automatically calculated and entered if the Calculate Percent Complete function is utilized. The function prints a report showing the updated values.

## Restricting and Costing Jobs

JOBSCOPE provides two functions to limit the transactions that may be posted to a job. The first is restriction; this means that some charges, such as the issuance of materials, may be entered against a restricted job, a special late charge password is required. Restriction can apply to single job on a contract or to an entire contract. Often, individual jobs on a contract are restricted as they are completed, and the entire contract is closed when all associated jobs are complete.

The second way to limit activity is by closing a job. Only contract jobs can be closed; all jobs associated with a contract are closed when the contract is closed. The function for closing jobs performs a number of transactions: 1) any amounts remaining in the job's work-in-process account are moved to its cost-of-sales account; 2) any amounts remaining in the job's deferred income account are moved to its sales account; and 3) all work orders for the job are marked complete.

## Reports

- Job Status — Prints cost information for all jobs that are not closed.
- Job Charges — Prints labor and material transactions charged to jobs within a specified date range. Four reports are produced to sort the transactions in the following ways: labor charges grouped by debit account, labor charges grouped by credit account, material charges grouped by debit account, and material charges grouped by credit account.
- Work-in-Process by Job — Prints cost for jobs meeting user-specified criteria. For each selected job, the costs are sorted by cost category.
- Cost Applied by Month — Prints monetary transfers made from the work-in-process account to the cost-of-sales account for selected jobs.

- Current Estimate Changes — Prints a detailed listing of changes made to job budgets.
- Material Overage Exceptions — Prints purchase order items that have receipts in excess of quantity ordered. Various criteria, including an allowable overage percentage, can be specified by the user to determine which purchase order items are included on the report.
- Material Transactions — Prints or displays data for materials issued to user-specified jobs within a certain time period.
- Contracts in Progress — Calculates the percentage complete for selected jobs according to user-specified formulas and prints reports showing costs and other financial data for the jobs.
- Jobs Near Completion — Prints information for jobs that have a percentage complete falling within a user-specified range. For each job, the report provides both estimated and actual values for labor and material costs, as well as outstanding material purchases and labor transactions. Therefore, this report presents both accumulated and anticipated costs for each job.
- Closed Jobs — Prints cost and financial information for jobs closed within a user-specified date range.
- Closed Job Cost by Category — Prints charges (by category) made to jobs closed within a specified date range.





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