

JOBSCOPE®

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



Shop Floor Control

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Jobscope's Shop Floor Control module is the location where the work is performed. This module consists of Production Orders, Labor Collection and Reporting, DATACAP, and Shipping.



Production Orders

Efficient and effective production is extremely important in Engineer-to-Order manufacturing and Modification, Repair and Overhaul environments. JOBSCOPE's Production Orders Subsystem encompasses a world-class feature/function set designed to optimize the disposition of all production requirements encountered by contract-oriented businesses.

The Production Orders Subsystem maintains information related to work centers, production releases and work orders. Online functions available through this subsystem include the creation, deletion and printing of work (shop) orders, operation reporting, and the online display or printing of an array of reports that provide real-time information concerning the performance and status of all jobs, contracts and production processes.

Features

- Both automatic and manual creation of production work (shop) orders
- Ability to modify job-specific work orders created automatically from Item Master records and Routing files
- Production bill-of-material may be maintained separately from the Engineering bill of material
- Ability to create work orders for single-level assemblies from within the Order Entry function
- Utility programs provided to delete jobs, production releases and/or work orders
- Work Orders are capable of fully describing any manufacturing, warranty, repair, or other service activity
- Part Numbers are not required to construct Work Orders and their associated bills of material
- Capability to print and reprint user-defined Work Orders on demand
- Work Center availability and bottleneck reporting
- Non-standard operation processing features
- Automatic printing of time cards used for labor collection or barcoded labor collection with barcodes printed directly on the Work Orders
- Extensive "User Text" capabilities within Work Orders to provide for full descriptions of complex operations and unique materials

Work Centers

A Work Center may be any definable production resource. A Work Center may also be any resource that must be scheduled and monitored because it has a limited capacity to produce. For example, in a manufacturing environment, a work center might be a

machine or group of machines that perform a single type of operation. In the project management or engineering arena, a work center may be a group of people, a department, or a subcontractor. The Work Center Master record is used to maintain information that is used by the costing system

to properly compute and accumulate job costs when labor is reported against that work center. Fields are provided to maintain hourly overhead and direct labor rates, as well as a designated rate that is used only by the Estimating and Quoting Subsystem. Fields are also provided for entering the General Ledger Account Numbers for manufacturing overhead, labor rate variance and efficiency variance. As labor is reported against each work center, appropriate dollar amounts are automatically applied to these accounts based upon the duration and efficiency of the operation for which labor is being reported.



Work Centers maintain areas of operation for the purpose of scheduling.

The Finite Percent field is also an important field because it provides the user a tremendous amount of flexibility in defining a work center's ability to produce. Let's suppose that a work center is currently running at less than rated capacity due to one machine tool being temporarily out of service. During the time that repairs are taking place, the user can increase the value in the Finite Percent field and reschedule all work currently scheduled prior to the out-of-service machine tool being returned to active duty. The scheduling program now knows that less work can be performed at that particular work center than usual. The Scheduling program calculates the time required for each operation by multiplying the operation's standard run time by the percentage in the Finite Percent field. When the machine tool is repaired, the user can once again access the work center master record and readjust the Finite Percent field back to 100. When the scheduling program is run again, the standard amount of work will once again be scheduled in that work center.

The same principles also apply in reverse if the Finite Percent field is set to less than 100. For work centers with variable production capacity, this allows the work center to be scheduled above its normal capacity, which is especially helpful in short run over-load situations. In addition, a percentage of 0 gives the work center an infinite capacity to produce, which means that all work

assigned to that work center will be scheduled according to its requirement date, and all capacity constraints will therefore be disregarded.

Production Release

Sometimes it is necessary to ship portions of a job in a different configuration from how it was manufactured. In this case, a shipping release may be created to define all the work required to ship one lot (possibly a truckload) of a product to a customer or to define how an item or items are broken down for loading and shipping.



Production Releases allow you to divide a job into activities or stages.

Work Orders

Work Orders are known by many names-Shop Orders, Process Sheets, Routing Cards, etc. Regardless of name, JOBSCOPE's Work Orders are unique because they contain both the bill of material and routing within a single on-line display or printed document. In addition, manual work orders may be created in JOBSCOPE to define any manufacturing or service activity without the prior creation of an item master record or bill of material.

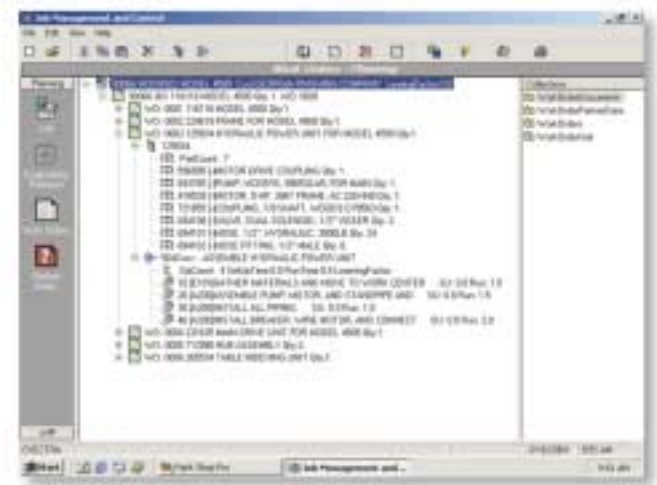
Work Orders are created, maintained, prioritized and printed by the Job Management and Control Subsystem. The work orders may be automatically created from the Bill of Materials files complete with all information required by the manufacturing floor.

Part numbers, part descriptions, specific dimensions and material classifications for stock, manufactured and purchased items are included. After creation, changes may be made to any work order without having to make changes or additions to the Part Master File. This capability extends to routing definitions as well as bills of material. In relation to routings, each operation may be scheduled and monitored by the Scheduling subsystem with costs collected for each operation performed. As labor is charged to each work order, burden/overhead amounts, hours worked and productivity statistics for the current period and year-to-date are calculated and maintained by the work center.

The actual work order document is divided into three sections. The work order header displays, among other things, the product and description, quantities, associated drawing number and customer information. The operations or routing section details each

production step and includes for each step the associated work center, set-up and run times, description of the operation and crew size. The item-specific bill of material section lists all parts and subassemblies required to produce the assembly. Each bill of material item is designated as Stock, Purchase-for-Job, or Manufactured. This designation provides significant input to the overall Material Planning Subsystem.

Sometimes it is desirable to create work orders and hold them in an planning state because the work is not ready to be released to the plant floor. In some cases, the operations and/or bills of material on the work orders must be changed in order to accurately reflect the job's requirements, JOBSCOPE supports these pre-production activities and prohibits the collection of hourly labor transactions to unreleased work orders. This feature allows a user to fully define work well into the future without fear of labor transactions being incorrectly charged to an unreleased job.



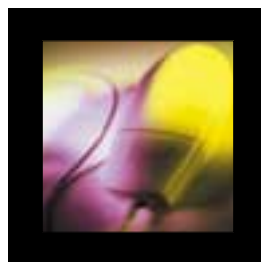
Work Orders define the labor and materials needed to accomplish a task.

Labor Planning & Reporting

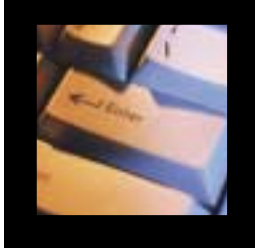
Order-Driven businesses usually require labor collection systems that provide for the accurate charging of hours and dollars to appropriate contracts or orders at the time labor is reported. It is of critical importance that the Labor information be available on-line and viewable in real time. The charging to jobs of costs resulting from both hourly and salaried operations must be supported because substantial amounts of both types of labor may be utilized on any given contract. JOBSCOPE provides comprehensive labor collection and charging routines to handle the hybrid hourly/salaried labor reporting requirements that exist in the order-driven manufacturing and service environments.

Features

- Automatically charges appropriate labor costs to contracts at the time of labor reporting
- Journals transactions for posting to general ledger (including work-in-



process), accrued payroll, work center burden, rate variance, and efficiency variance accounts

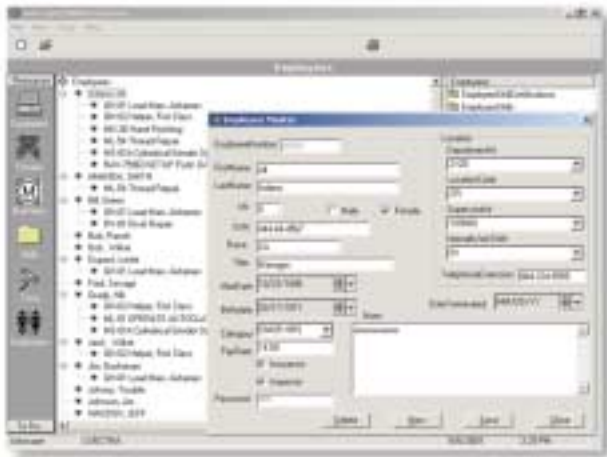


- Allows the entry of “Quantity Complete” at time of labor collection or automatically assigns a quantity complete based upon time reported
- Updates the scheduling system
- Allows the identification of component items and assemblies to be scrapped, as well as those to be moved ahead to subsequent operations
- Supports both hourly and salaried employees
- Collects labor into meaningful, user-defined labor categories
- Provides for up to nineteen (19) methods of costing labor

Employee Records

All employee information is maintained in the Employee master file. Each employee is assigned an employee number and a Location Code; the two-character Location Code identifies the primary company location to which the employee is assigned. The employee’s actual pay rate may also be entered on this screen. For hourly employees, this is each person’s assigned hourly pay rate, while for salaried employees this field may be left blank or a value may be input which is equal to the employee’s annual compensation divided by the number of annual work hours budgeted.

The Pay Type field is utilized to identify which employees are hourly and which are salaried. An “H” in this field denotes an hourly employee, while an “S” designates salaried personnel. The “charging rate” for each salaried employee is entered and maintained in a specific table.



The Employees screen allows you to enter and modify employee records.

Each rate in the table is associated with a Level Code. The appropriate Level Code indicating an employee’s hourly job-charging rate is then input into the

employee master record in the Level Field.

Each level code may have two rates associated with it. The first rate is the employee’s direct hourly charging rate, and the second rate is the amount of hourly burden or overhead to be charged to a job on which this salaried person reports time worked.

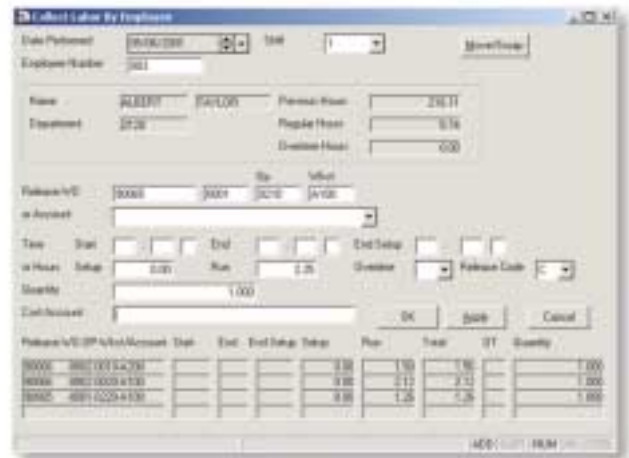
The JOBSCOPE Startup program allows the System Manager to define a default method of costing labor to each job. The default may be overridden at Order Entry if security authority has been granted.

Based on the method of labor costing selected, the system will retrieve appropriate labor rates from the employee master records, the Level Table, or the Work Center Master records. All labor costs are charged on-line to the job at time of labor collection.

Hourly Employee Labor Collection

All hourly employee labor transactions are collected via the Collect Labor option on the Labor Collection menu.

The most efficient scheme for entering labor transactions is usually one in which the person performing the data entry retrieves a labor collection screen relating to a single employee and enters all work performed by that employee, whether it be on a single job or across multiple jobs. However, some companies prefer to utilize a system in which a labor collection screen relating to a specific job is used to enter labor transactions relating to multiple employees. JOBSCOPE provides for both methods of labor collection.



Labor collection by employee allows you to record several operations for the same employee.

If labor collection by release (contract, job, or sub-job) is desired, the user accesses the By Release screen. The release number, work order number and the operation number may be entered, or the user may simply enter the release number and any valid work center. This latter procedure is useful when work has been performed that is not associated with a particular operation, but should still be charged to the job or contract.

The Labor Collection By Release screen accepts labor entries for up to six employees within a single transaction. The person reporting the labor is provided useful information directly on the Labor Collection

screen to help facilitate the labor collection process. The part number of the item being produced, the total quantity to be produced (per the item's work order), the quantity reported "Complete" prior to this entry, and the quantity remaining to be completed are displayed to the person performing the entry of labor.

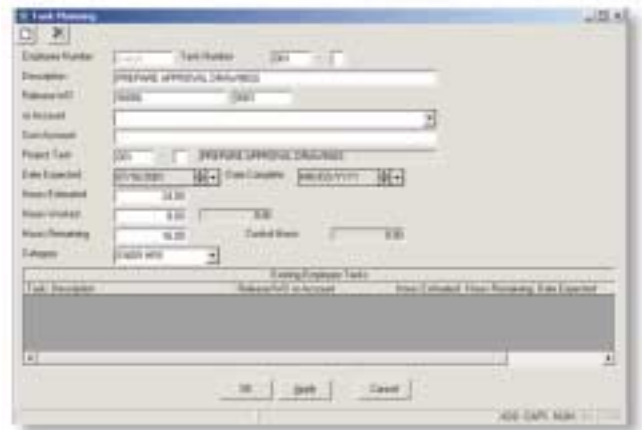
JOBSCOPE Labor Collection programs automatically calculate the Qty Complete based upon the amount of time reported. The user may continue to manually enter the Qty Complete, or if JOBSCOPE's Startup program has been so instructed, the system will calculate and display the appropriate Qty Complete by comparing the total time reported with the standard run time per piece. If this option is selected, the system ceases to calculate and display Quantity when Qty Complete is equal to or greater than 95% of the Quantity Required. From that point forward, the user must report the balance as "Complete" for the system to recognize the operation as being finished. When Qty Complete is equal to or greater than the Quantity Required, a "C" is automatically entered in the Release Code field designating that this operation is now complete. If the Quantity Complete is less than the Quantity Required, but a decision has been made that no more are going to be completed, the user may manually enter a "C" in the Release Code field to indicate completion of the operation.

The most popular method of labor collection is Labor Collection By Employee. Once the screen has been accessed, a valid employee number must be entered. The employee's name and total hours worked this period (segregated by regular and overtime hours) is displayed. As with Labor Collection By Release, time worked may be reported to the operation level and a quantity complete may be entered or automatically calculated by the system. Time reported may be divided between setup and run time if desired, but this procedure is not mandatory. Also, if internal procedures require that actual "Start" and "End" times ("clock" times) be entered for each labor transaction, JOBSCOPE supports the entry of labor in this manner.

If this option is utilized, the system automatically computes the actual time worked on each contract, job, or operation. The user can easily keep track of where he/she is in the labor reporting process because all entries processed during the present session display at the bottom of the Labor Collection screen.

Task Planning

Task Planning allows labor for salaried employees to be planned, organized, collected, and costed. Task planning provides an excellent means of planning and monitoring the progress of critical tasks, such as design and production engineering, assigned to salaried individuals. The timely completion of these operations is critical to maintaining material, production, and delivery schedules.



Task Planning is used to plan employee tasks and report their progress.

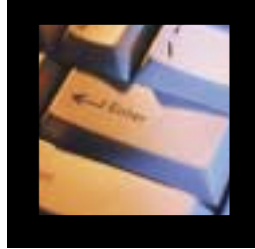
Two types of tasks, Project and Employee may be defined:

A Project Task is usually a significant project milestone that must be accomplished by a specific date in order for the entire project to remain on schedule. Project tasks may be associated with specific work orders on a job. A "predecessor" task may be associated with each project task, providing the user a way to create a "chain" of critical operations that must be completed in a specific sequence.



Project Planning breaks the actions into tasks.

An Employee Task may also be associated with a release and work order, or if not related to a specific contract, a general ledger account. An Employee Task may also be created to assign elements of a Project Task to specific individuals. Therefore, each individual task that must be accomplished by salaried personnel toward the completion of any phase of a contract may be completely defined and monitored.



PCs to collect shop floor data. In addition, WinCAP;s large, graphical buttons provide the options of navigating through DATACAP via touch screens instead of a mouse.

The Task Planning/Reporting screen is used to plan and report progress on employee tasks. This screen facilitates the association of employee tasks with project tasks, displays estimated hours and projected completion dates, and keeps track of hours reported and remaining on each task. A complete listing of all employee tasks associated with each job, contract, or work order may be displayed or printed.

If the requirement does not exist to collect salaried personnel's time to specific tasks, their time may still be collected and charged to jobs and work orders or general ledger accounts through the Task Planning Labor Collection screen. This screen may also be used to report progress against a project task.

DATACAP

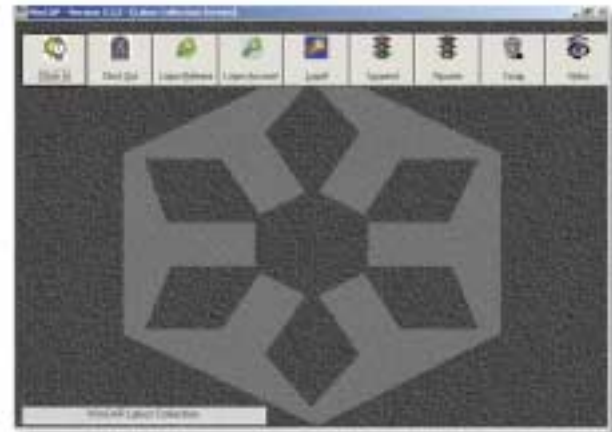
DATACAP is JOBSCOPE's plant floor data collection system for labor collection and time and attendance tracking. Using DATACAP, employees on the plant floor follow simple prompts to scan barcoded information that is used to create transactions, which are uploaded to JOBSCOPE. This greatly reduces the burden of data entry, provides more timely information for management, and enhances accuracy through DATACAP's use of barcoding and extensive verification procedures. Employees use DATACAP by scanning barcoded work orders and employee badges into Intermec devices or PCs. This data is sent over a network to a PC server running DATACAP. Here, the system tracks the time spent on jobs, performs calculations, and organizes the data into records. The process is completed when these records are uploaded to JOBSCOPE.

Features

- Reduces data entry errors
- Provides current availability of data
- Provides exact distribution of labor charges
- Verifies data online
- Allows automatic breaks
- Provides flexible overtime

WinCAP

WinCAP is a graphical user interface for DATACAP. Resident on a shop floor personal computer, WinCAP eliminates the need for special data collection hardware. Bar code readers may, however, be attached to these



WinCAP incorporates large user-friendly icons for touch screen entry where harsh industrial environments do not suit a mouse.

WinCAP supplies the plant floor personnel with the ability to interact with DATACAP through a user-friendly, Windows interface. As with any Windows-based application, screens are easy to manipulate and data is easy to read; a necessity when verifying the correctness of information prior to sending the data to DATACAP for processing.

A functional highlight of WinCAP is its ability to bring multi-media applications to the shop floor. While the specific applications are as varied as the companies who used them, typical uses of multi-media would include:

- Memos, notes, CAD drawings, instructions or other written, scanned or created images from anywhere in the company which carry information useful or critical to the manufacturing floor.
- Visual instructions on the performance of a particular operation. These could be in the form of a drawing, a photograph or a video of the operation complete with voiceover.



WinCAP's logon screen allows the user to logon to a release or release-work order-operation through manual or bar-coded data entry.

- Training of new operators or reinforcement for seasoned operators. Video clips along with sound provide a tireless source of training instructions that can be referenced time and time again.

Shipping

JOBSCOPE's Shipping subsystem provides an effective means of identifying and shipping items ready for delivery to customers or outside processors. Shipments may be created as each Line Item on an order is completed, or all the shipment items on an order may be "kitted" and shipped in a single procedure. All necessary documentation required to support a shipment is automatically generated and printed by the system. These documents include master lists of items ready for shipment, shipment packing lists and shipping labels.

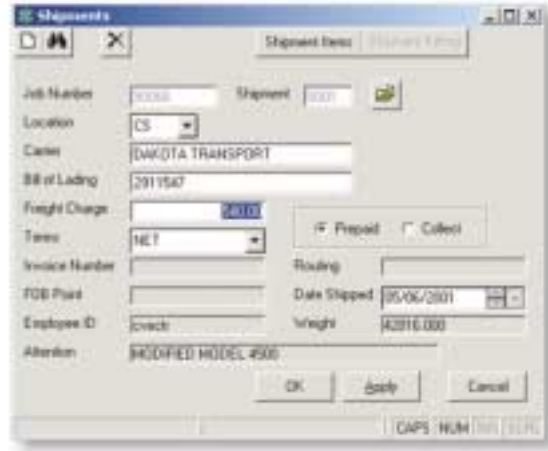
If desired, customer orders for stock items or spare parts may be designated as "available for immediate shipment" directly on the Order Entry Line Items screen. The user need only enter the quantity to be shipped and input an "S" in the Issue Code field; a picking list is automatically generated and a shipping record created that requires only the entry of the freight carriers name to be complete.

As a safeguard against the possibility of shipping a product without ever creating its associated invoice, all shipment records provide direct input to a program that automatically generates invoices for shipped items. Called "Create Invoices From Shipments," this program checks all shipping records for a special date range and creates invoices for those shipments having no related invoice.

Features

- Interfaces with production shop orders
- Automatic generation of master shipping records
- Ability to recreate an estimate from shipping records
- Prints shipping labels on request
- Shipping and back order tracking
- Provides direct input to automatic invoice creation function

A shipment is entered on two screens; the header information for the shipment is entered on the Shipments screen, and information about each item included in the shipment is entered on the Shipment Items screen. The information entered on the Shipments screen provides for complete traceability should there be a question regarding carrier, routing, shipment date, etc. Shipments may be designated as either prepaid or collect.



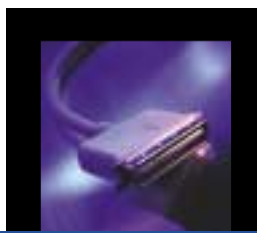
The shipments screen is where you enter general data related to the shipment.

Individual shipping items are entered on the Shipment Items screen. The user need only enter the order line item number; the part number, description and quantity ordered will automatically display. The user only has to enter the Quantity Shipped to ship this item. The "Complete" field will display a "C" when the quantity shipped equals the order quantity. In addition, the user may manually enter a "C" in this field indicating no more of this item is to be shipped and it is to be considered "shipped complete," even if the shipment quantity does not equal the order quantity.

If "Weight" is maintained in the item's master record, the system will display the individual weight of each shipment line item and its extended total when quantities are considered. Weights may also be manually entered at this time. This is especially helpful in calculating the proper amount of freight applicable to the shipment.



The Shipment Items screen allows you to define the line items included in the shipment.





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