

E2 Shop System

Summary

The E2 Shop System enables shop owners to effectively control all aspects of shop activity, while simultaneously and effectively managing profitability. Whether it's your front office or shop floor that you're concerned about, the fully integrated E2 Shop System takes the uncertainty out of shop management.

Development of the E2 Shop System dates back to 1984. This shop specific software was developed from actual shop experience. Both shop owners and shop users participated in its creation.. Today, shop owners and shop users continue to play a vital role in transforming suggestions into product enhancements.

The system is totally integrated with the base shop floor control system being the core. The additional modules can be added are Advanced Scheduling, Quality, Fully integrated Accounting, Bar Code Data Collection, Pocketview and Webview. Concurrent users can also be added for network users of E2. A Quickbooks accounting interface is available for shops wanting to stay on Quickbooks.

The core shop floor control system includes all of the Estimating/Quoting, Order Entry, Shipments, Purchasing/Inventory, Job schedules, Job costing, Performance Analysis and Time Tracking.

Pros

- Solid product for straightforward custom shops, excellent integration with QuickBooks
- Strong in aerospace, electronics, metals fabrication,
- Easy to use
- E2 Shop System's quality management system (QMS) supports the ISO/TS 16949 standard for automotive suppliers to its ISO Implementation Program. There is an additional cost for the QMS application.

Cons

- E2 does capacity planning by machine, but not for labor/employee
- Inventory only relieved when order is shipped,
- lacks integration with Outlook
- No cycle accounting or reconciliation to book inventory,
- Quality application is additional cost
- Financial accounting is not as good as the manufacturing
- archaic inconsistent user interface
- system has not materially changed for 10+ years

Estimating & Quoting Accuracy is the key element in ensuring your profitability. E2 Shop System utilizes pre-set rates for Burden Rates, Labor Rates, Quantity Breaks (up to 8), Set-up Time (Up to 10 Different Rates Available), Run/Cycle Time (Up to 10 Different Rates Available), Outside Services and Sales Commissions. This allows different billing rates for Setup than for Cycle. It's nice for production shops that have a higher paid employee setting machines up while a lower paid employee is just pushing buttons.

Each work center can have its own unique efficiency rate specified when routing a part. This is useful on difficult and unique jobs. Each work center step may have its own scrap percentage specified. Therefore, correct starting quantities are factored in order to yield the correct order quantity

The system can also handle multiple level BOM's. They can be purchased items as well as manufactured components. You can go down as many levels as needed, and when the estimate is turned into an order, the system will create jobs for the items you need to make and populate the purchasing requirements for items that

need to be purchased (but not time phased).

You can also attach drawings, inspections documents, digital pictures to the estimate. The viewing software that E2 integrates with is Autovue by Cymmetry. Autovue can handle more than 200 different file formats.

Once you've entered your part specific information into the system, the system will: compute the cost to produce the part; compute prices for multiple quantity breaks per part and allow you to adjust profit margins at each quantity break.

Quote to shop order

Now you have to get the order into the system and out to your shop floor. The E2 Shop System allows you to turn a quote into an order without having to re-enter any information. Any job documents required for the job will be printed automatically. Extensive note or memo fields are available for job specific notes and part descriptions

Blanket orders can be entered into the system along with their release schedule for the year. Customized routing sheets that were created in estimating automatically come over. If no estimate was created, you can enter one from scratch right in order entry. You also have the ability to copy full or partial routing sheets from previous jobs.

Job Traveler forms that give part numbers, notes, delivery dates, quantities, part history and bar coding are printed automatically.

Job Numbers are automatically incremented with each line item on an order. This saves time and prevents overwriting a job and losing it within the system. You can also use the "Free form" method of job numbering which allows the user to use their own methodology.

When you process the order, the system looks at inventory for finished goods first, then drops down and looks at the raw material availability. Materials may be allocated to the job during order entry or posted as it is used. Sub-jobs are created for items that need to be manufactured. There is a master job number on the sub jobs to link them back to their parent part.

You can also "Un process" an order and make any changes after the fact. The one constant in a job shop is changing due dates and changing quantities. The system will allow the user to make any necessary changes even after the job has been started but will not reschedule jobs.

Inventory & Purchasing

Whether you need raw materials or finished goods, the E2 Shop System handles inventory and purchasing very well. Each part or material number can be stored alpha, numeric, or with special characters. In addition, each inventoried item can be stored in multiple bin or lot locations. When inventoried items are allocated to a job or finished goods are sold from inventory, the E2 Shop System stores the history of where the raw materials or finished parts were pulled from. This eliminates the guesswork when quality control becomes an issue.

You can easily generate your purchase orders from Job requirements so you know exactly what you need to buy, when you need to buy it. If you want to shop around for the best prices, you can issue an RFQ to a variety of vendors to determine your best price.

The E2 inventory can handle LIFO, FFO, Standard and Average costing. You can setup re-order levels on all items along with economic re-order quantities.

E2 Quality System

E2 Quality is a fully integrated quality system that manages specific areas of engineering and supply-chain activities for the sole purpose of improving business performance and profitability. E2 Quality addresses quality assurance and activities with regard to customers, vendors, employees, work centers, tooling and document

numbering and control.

Effective quality management supports business growth and improves customer satisfaction through lean manufacturing and consistent performance. The system allows you to easily collect, control and analyze quality data. You can reduce production costs by identifying quality problems earlier in the production process.

The E2 RDS (Rapid Documentation System) allows you to complete your ISO implementation in weeks rather than months. All of your ISO documents can be printed through E2.

- Quality Manual
- Procedure for Control of Documents
- Procedure for Control of Records
- Procedure for Internal Audits
- Procedure for Control of nonconforming Product
- Procedure for Control of Corrective Actions
- Procedure for Control of Preventative Actions
- Production Process Maps
- Internal Audit Program, Plan, Forms and Report

It allows you to maintain consistent workflow from engineering through final delivery to the customer. Identify and control possible problems before they affect due dates or quality ratings. E2 Quality cuts down on rework, returns and complaints. You can also schedule and track all preventative maintenance.

Scheduling & Tracking

The Scheduling Whiteboard allows you to view your shop floor capacity by machine availability and also by Man hour (Labor) capacity. On-line, real-time monitoring capabilities give you up to the minute status of which machines are occupied or idle. You can drag or drop jobs from one machine to the other. The E2 Scheduling also gives the user the ability to “Prioritize jobs” based on due date, dollar volume, estimated time left as well as a host of other criteria. The system will give you the best “What-if” scenario that you can save at your convenience. None of the changes are permanent until you say so.

The scheduling whiteboard can be set to finite, infinite and backward or forward. There is also a Gantt chart for those users familiar with Microsoft Project. The only downside to that view is that it can’t be printed.

The machine’s availability can be kept on your screen while you simultaneously allocate available time to the part being produced. The Scheduling Whiteboard can also be customized to view a specific day, week or month. In addition, users may specify that “time left” calculations be based on pieces remaining using the actual time accumulated during the job. This supplies a much more accurate “percent complete” figure.

Each Workcenter can have its own days available and shifts available specified. This allows the user to selectively enable work centers for each shift and day of the week. When your customer calls wanting the status of their parts, you will be able to quickly tell them where their parts are, what remains to be completed, and the schedule for finishing the work.

The E2 Shop System also contains a variety of job related reports including: Job Schedules, Backlog Summaries, Machine Loading, Margin Summaries, Hourly Rate Summary, Order Entry Summary, Production Summary, Shipment Summary

Each report available within the system can be queried based on user specific criteria. You can look at all your jobs at once, or generate a report specific to a customer, part number, date range, due dates, etc.

Data Collection/Time & Attendance

The E2 Shop System time tracking can be done in three different ways (1) Manual data entry from timecards, (2) PC/Smart Phone data collection and (3) data collection with wall-mounted clocks.

The manual time entry is normally used by smaller shops that have their employees write down the jobs they worked on throughout the day. This is fine for shops with under 10 employees but can be cumbersome and quite time consuming for larger shops.

The PC data collection system is used with PC's that are connected via the network. The logging on/off is performed in real time with error checking. A laser gun is typically connected to the PC for bar code entry. Employees do not need to use a mouse or keyboard (except for entering quantities good/scrap). The main advantage of the PC Data Collection over the wall-mounted clocks is the ability to view attached documents and also viewing the scheduling work queue.

The data collection with wall-mounted clocks are used in shops that do not want their employees touching a PC. The clocks are also used in dirtier shops, such as foundries. A laser gun is also attached to the clock for bar code entry (although the gun is not required). The clocks give the user the same error checking and real time capability as the PC data collection. The main drawback of the clocks is the led display since the user can't view documents or work queue.

Some of the benefits are using PC data collection or wall-mounted clocks are preventing time from being posted to a job that shipped two weeks ago. Get up-to-the-minute time tracking and job costing.

The data collection system can also be set up to flag and detect overtime. When an employee's hours exceed 40 for the week or 8 hours in a day, overtime can then be charged to the job being worked.

Shipping the job out the door

The E2 Shop System is designed to display all line items that are being shipped. Furthermore, users can even cancel item quantities at the time of shipping. This eliminates the problem of having inactive open orders and is especially useful when customers have specified a +/- tolerance in shipping quantity.

The system also comes with a complete integration with UPS World Ship so users have access to UPS rates as well as sending packing slip information from E2 to UPS. UPS also sends the tracking number to E2.

E2 shipping can print Bill of Ladings, shipping labels and certificates of conformance. Any attached documents can also be printed in the shipping area.

Accounting

The E2 Shop System has a comprehensive accounting system specifically designed for job shops. Developers have ensured that all accounting functions within the system are based on Generally Accepted Accounting Practices. The accounting system includes Accounts Receivable, Accounts Payable, General Ledger Payroll Interface with Redwing software. You also have the option of integrating with Quickbooks.

The A/R functionality includes automatic billing along with finance charges. There are over 15 different accounts receivable reports.

The A/P functionality includes automatic check writing along with a complete bank reconciliation. There are over 15 different accounts payable reports.

The G/L is the only batch process in the system. Users can continue work in future months without having to post past months. You can have up to 24 months open at a time and the system also has a 13th period for making adjusting journal entries. The system also allows for reversing and recurring journal entries. Users can also post and unpost months in order to change detailed information.

Profitability

The E2 Shop System gives the user a number of different way to view profitability. The user can view profits on a job by job, by customer, by workcenter, by type of work (work code), by part number and by product code.

The user can also see profitability while the job is being run, since all of the job costing is real time. The

quickview functionality is visual and presents a number of different perspectives when viewing profitability.

There are a number of different profitability/costing reports in the system:

- Billing Rate Summary, Estimated vs. Actual Summary, Work-in-Process Summary
- Cross Reference Part Descriptions, Margin Summary, Outside Job Cost Summary

Contact Management

E2 Contact Management is an integrated tool that improves customer service through the sharing of information. Calendars are user specific and can be used for a variety of reasons. Salespeople can follow up on quotes that are about to expire, customer service reps can follow up on existing jobs in the system. Shop maintenance people can see what preventive maintenance is scheduled. The contact management events can be scheduled or triggered. The triggered events can be based on time (hours, days) or certain events, such as the number of hits on a die.

The contact management system also has built-in security for notes so the user can decide if others can view their notes or not. The user can also schedule future reminders that will be triggered when that date arrives. One of the drawbacks of the contact management is not being able to print all of the contact notes together. You are forced to print the notes separately for each contact.

PocketView

PocketView is QuickView, real-time labor reporting, Hot Spots, messaging, inventory transfers, and inventory adjustments all rolled into one. The PocketView software runs on any smart phone or tablet device. PocketView gives users the ability to walk the shop floor, yet still have access to critical business information. Since Pocketview is wireless, the shop must have a wireless network with Access points throughout the shop.

Three buttons on the PocketView main screen allow data entry: Data Collection, Inventory Adjustments and Inventory Transfers. All other buttons are view-only, just like in QuickView.

Data Collection -Time and attendance and job labor reporting is the data entry function that provides for real time reporting. The work queue allows the shop employee to see a list of which jobs to run next. The job status allows the user to view all job activities and history. The part inquiry allows the user to view part and material history.

Vendor and customer information can also be viewed through Pocketview. The user can view all contact information, orders, shipments, and accounting history. Inventory adjustment will take a real time physical inventory. Inventory Transfers is used to post raw material to jobs. The PO status button allows a view of all purchasing activity and history.

The Executive overview button shows critical business information such as cash balances, accounts receivable, and accounts payable. Hot Spots are used to view critical bottlenecks on the shop floor and global problem areas that need to be addressed. You can use the messages functionality of E2 to send or receive messages to customers, vendors and employees. E2 *triggers* are system generated reminders for users that need to be alerted or reminded of important events. Triggers can be used to automatically email customers acknowledgements of orders, or when a shipment is processed. Another example of a trigger is if an inventory part has dropped below its minimum level, the purchasing person can be alerted to order more parts.

WebView

WebView is a portal where your customers can check on quotes, jobs, shipments and all other business critical information at any time. WebView can be incorporated into your website and customized to fit your exact specifications. Webview requires a good server along with cold fusion software.

