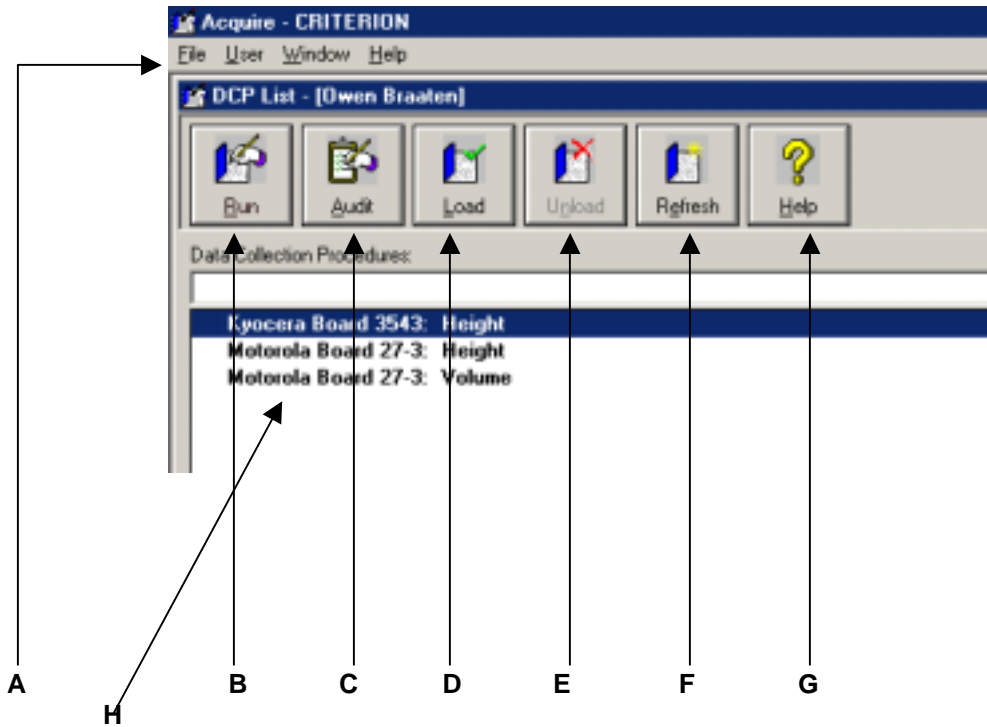


Contents

1	Introduction	3
	Collecting Data	3
2	Starting the Program	3
	Logging In and Logging Out	3
	Logging In	3
	Logging in as an Administrator	3
	Logging in as a User	4
	Logging Out (Administrator)	4
	Logging Out (User)	4
	Specifying Database Directories	4
3	Understanding Data Collection Procedures (DCP's)	9
	Starting a Data Collection Procedure	9
	Running a Data Collection Procedure	10
	Starting a Job by Running	10
	Reviewing a Subgroup data point	10
	Preloading Jobs	11
	Viewing sample charts and cp/cpk values	11
	Stopping a Job	11
	Stopping a Job at the End of Cycle	11
	Stopping a Job during the Job Cycle	11
	Unloading Jobs	11
	Refreshing the DCP List window	12
4	Entering Data	12
	Variables Data	12
	Features of the Variables Entry Window	12
	Entering Variables Data	13
	Entering Variables Sample Value Manually	13
	General Entry	13
	Operator Instructions	13
	Entering Data Tags	14
	Editing or Reviewing Subgroup or Sample Tags	14
	Warnings, Corrective Actions, and Subgroup Comments	15
5	Setting Preferences	15
	Preferences	15
	Configure Chart Colors	16

APPLICATION OVERVIEW



Key:

- A: Main Menu
- B: Run Button
- C: Audit Button
- D: Load Button
- E: Unload Button
- F: Refresh Button
- G: Help Button
- H: Data Collection Procedure List

1. INTRODUCTION

The core of an SPC program is the foundation of data used to perform analysis. This application guides a user through the collection of data as used with the VisionMaster system.

1.1 COLLECTING DATA

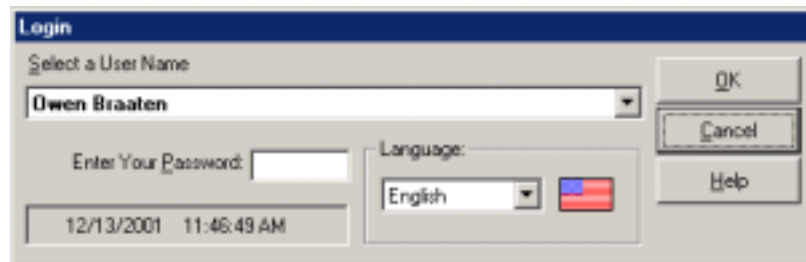
Using the CRITERION™ Acquire application is a simple procedure that involves starting a job and collecting data using the VisionMaster system. Sometimes there is also additional information (data tags, etc.) that must be provided. This manual provides detailed information about different types of data collection and how to collect all necessary information.

2. STARTING THE PROGRAM

From your Windows desktop, double click on the desktop shortcut. After login, you will see the Acquire application window with the DCP List window inside. To proceed with data collection, you must run or audit a DCP. While running or auditing jobs, you may be given online operator instructions, as well as data tags.

2.1 LOGGING IN AND LOGGING OUT

To gain access to the Acquire application, you must login. By logging in, you identify yourself so that the program can grant the correct privileges, automatically tag data with your user name, and present the appropriate DCP list for your user. There are two login types in Acquire: a user login and an administrator login. Anyone with access to the Acquire application may login as a user. Only those with administrative privileges in the Acquire application may login as an administrator.



2.2 LOGGING IN

Users login to the data collection program from the CRITERION Login window. To login, you must know the User Name and Password that is assigned to you. Follow the steps below to login to the data collection program.

1. Enter your User Name by doing one of the following:

KEYBOARD - Use the UP/DOWN keys to select your user name from the list.

MOUSE - Click on to show the list of users. Click on your assigned User Name.

2. In the white box at the bottom of the window, type your assigned password. Any combination of capital and lower-case letters are accepted. As you type, stars (*) display instead of letters.

3. Click OK or press ENTER.

4. If you enter your password incorrectly, a message warns you. You must re-enter the password only.

2.3 LOGGING IN AS AN ADMINISTRATOR

If you have access as an Acquire administrator, you may login as such. To login as the administrator, do one of the following:

KEYBOARD - Press SHIFT-F2.

MOUSE - Click the User menu then click Log Administrator.

2.4 LOGGING IN AS A USER

The program will force you to login before you may collect data. You may not login if a data collection window is open. There are two times when you may log-in:

- when you have just started the data collection program and you see the Login window.
- or-
- there is no user logged on as a user.

If you want to login but do not see the Login window, do one of the following:

KEYBOARD - Press F2.

MOUSE - Click the User menu then click Log User.

2.5 LOGGING OUT (ADMINISTRATOR)

If you are logged in as an administrator, log-out by doing one of the following:

KEYBOARD - Press SHIFT-F2.

MOUSE - Click the User menu then click Log Administrator.

2.6 LOGGING OUT (USER)

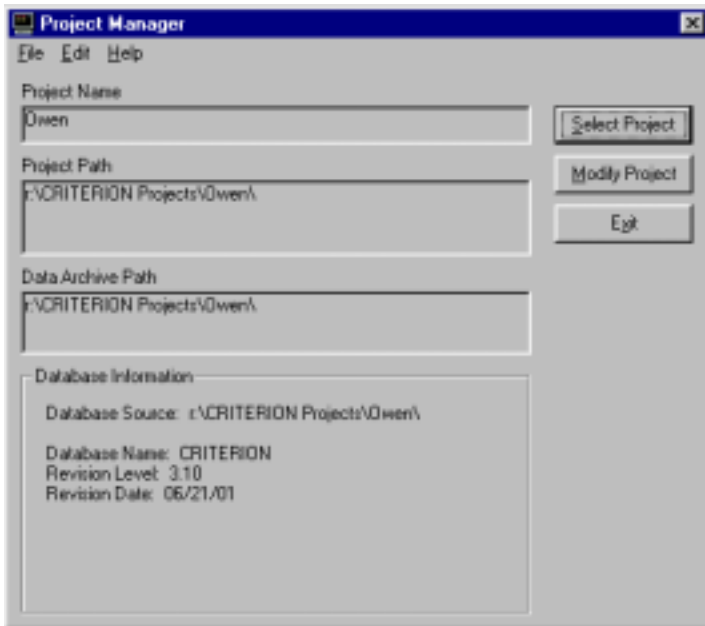
If you are logged in as a user, log-out by doing one of the following:

KEYBOARD - Press F2.

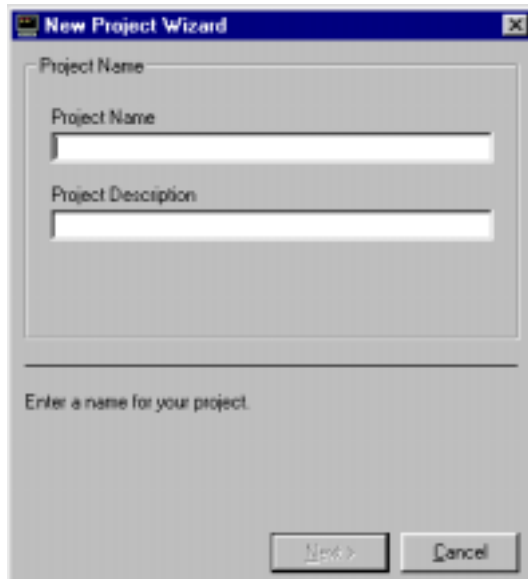
MOUSE - Click the User menu then click Log User.

2.7 SPECIFYING DATABASE DIRECTORIES

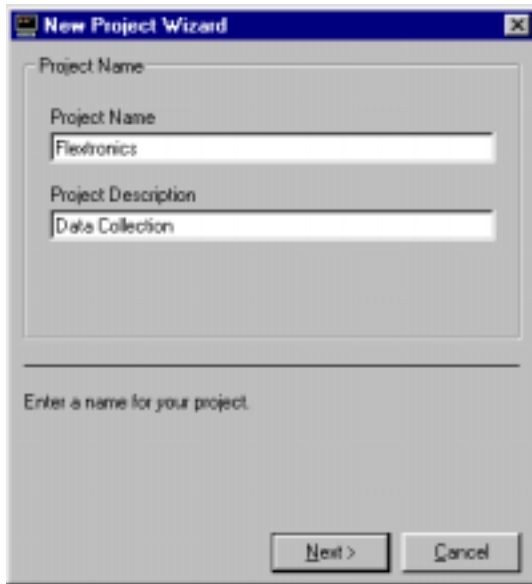
To map to a database through the network on Criterion version 3.0.1, go to <Start><Programs><Criterion><Project Manager>, and the following window will appear:



Select <File><New Project>, and the following window will appear:

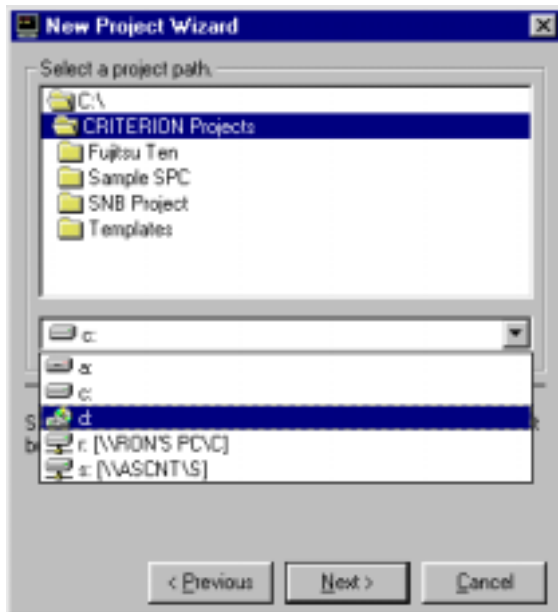


Next, enter a project name and description:



Click <Next>. Now, to map through a network, select the drive letter that you wish to use. (This drive will need to have been mapped through Windows Explorer prior to performing this operation. If you have not done this yet, please do so or contact your IT person to help you do so.)

After going to that drive, select the drive on which you wish to make your database.



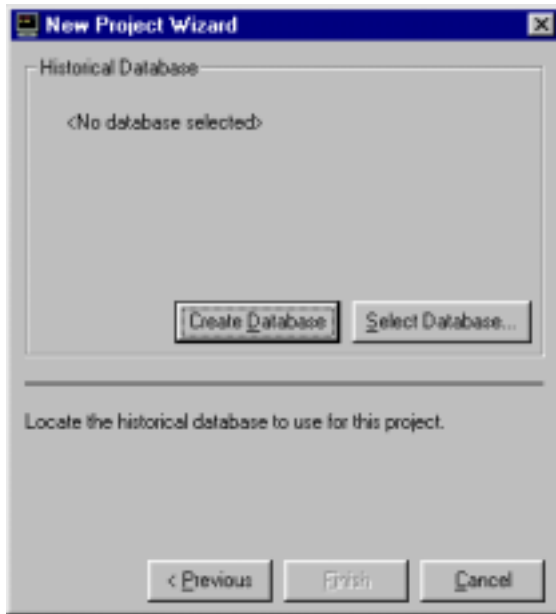
Click on <Next>, and the following window will appear:



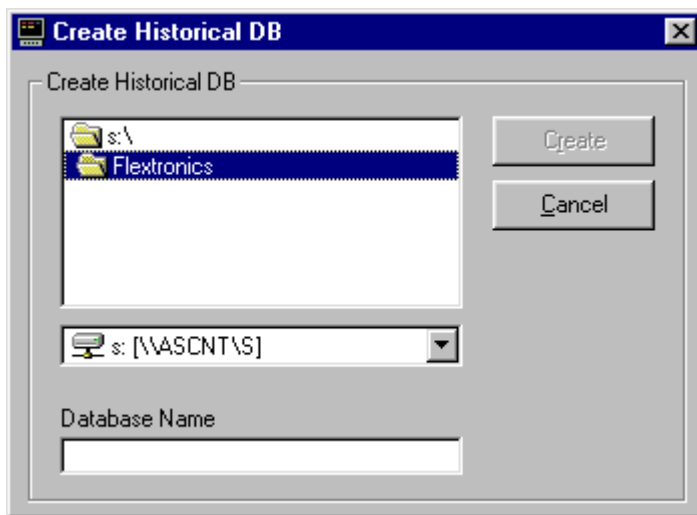
Click <Next>, and the following window will appear:



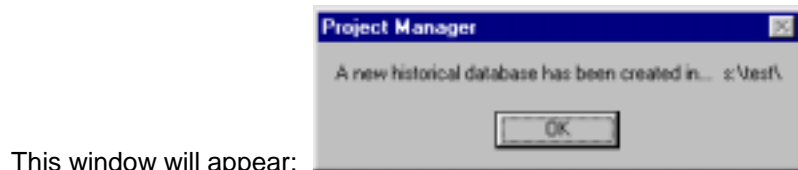
Now you may make a new folder to put your database in, or leave it in the selected folder. Click <Next> when done, and the following window will appear:



Click on <Create Database> and the following window will appear:



Type in a database name, and then click on <Create>.



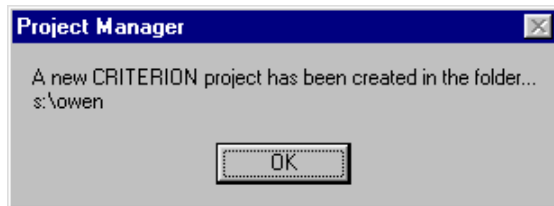
This window will appear:

Click <OK>.

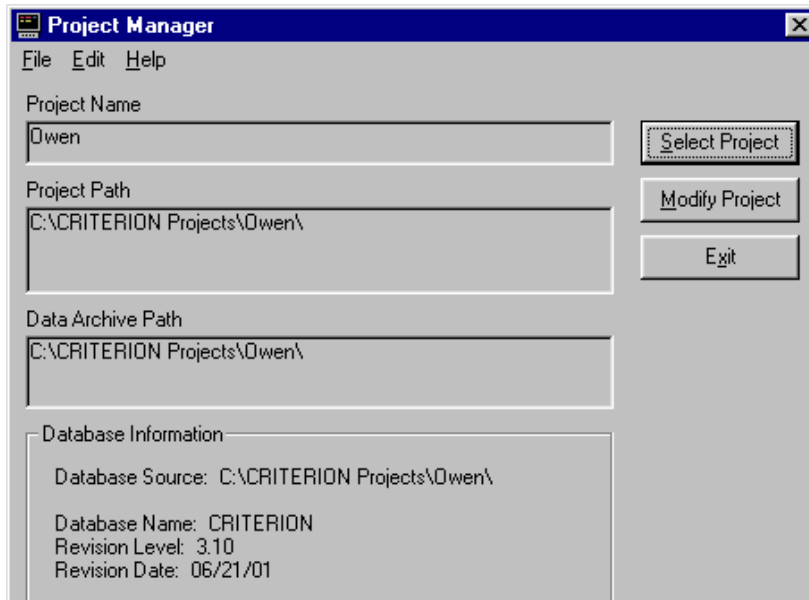
The following window will appear, showing you where your historical database was created:



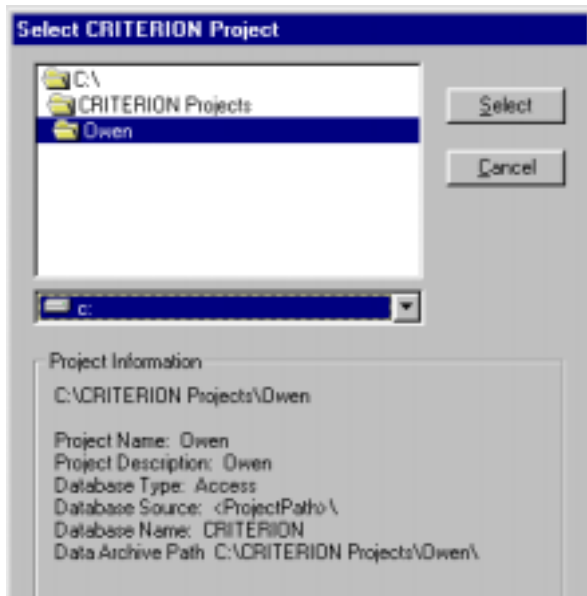
Click <Finish> and the following window will appear:



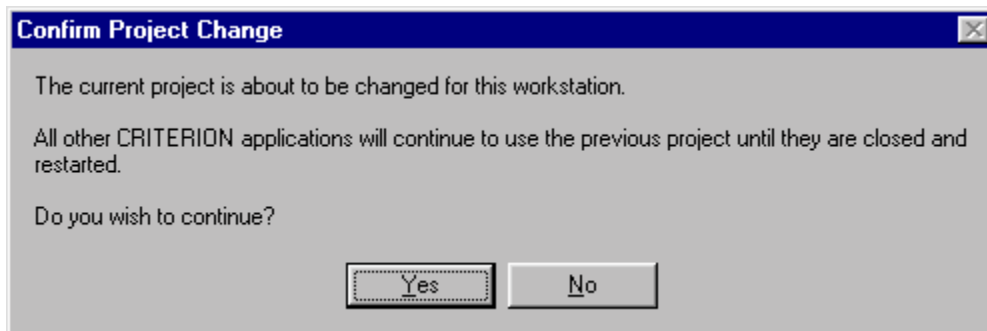
Click <OK>, and you will return to the main window:



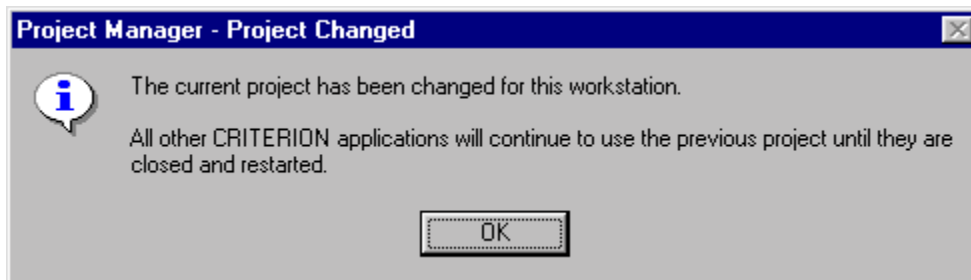
Now click on <Select Project> and this window will appear:



Change your drive specification, and map the path to the folder you just created and then click on <Select>. After doing that, this window will appear:



Click on <Yes>, and the following window will appear:



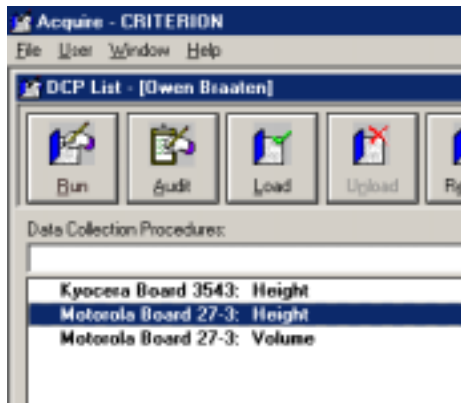
Select <OK>. You will return to the main window, and then select <Exit>.

Now when you start Criterion Administration, you will be mapped to the database you just selected on the network.

3. UNDERSTANDING DATA COLLECTION PROCEDURES

3.1 STARTING A DATA COLLECTION PROCEDURE

The Acquire application is designed for full name and character recognition. If you already know the name of your job and would like to access it quickly, simply type in the first few letters of that name. See the illustration below.



After logging into Acquire, the DCP List appears. This window displays a list of the jobs that are assigned to your user account. Jobs that are already loaded are indicated by a blue book next to the name.

3.2 RUNNING A DATA COLLECTION PROCEDURE

Every job record includes an ordered list of one or more characteristics. When you "run" a job, you are guided through the collection of data in the order specified by the job. The job might be designed to collect a complete subgroup of measurements for each characteristic within a specific collection order.

3.3 STARTING A JOB BY RUNNING

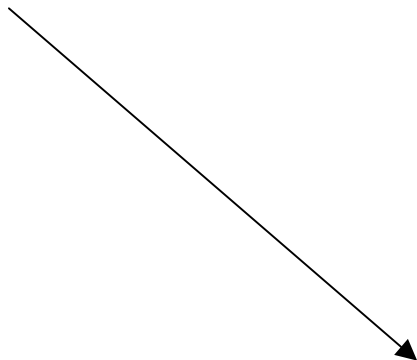
Run a particular job from the DCP List window by doing one of the following:

KEYBOARD - Use the UP and DOWN keys of the keyboard to highlight the job. Then press ENTER or ALT-R.

MOUSE - Double-click on the job you want to run or highlight the desired job and then click the Run button.

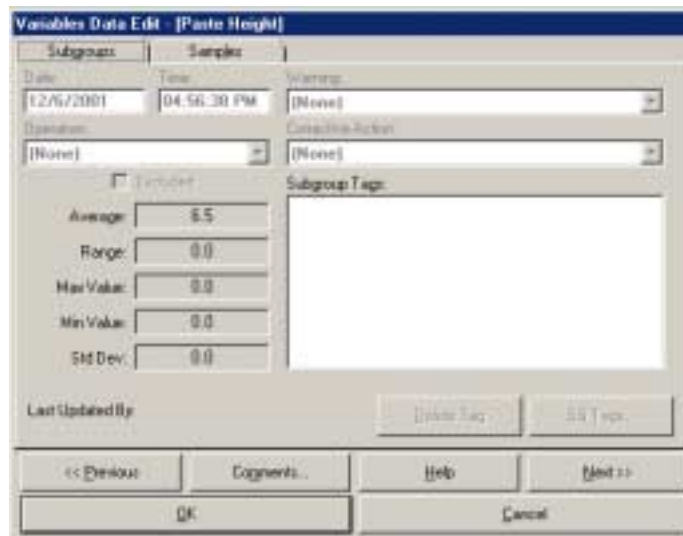
3.4 REVIEWING A SUBGROUP DATA POINT

During data collection, operators may view subgroup information from control charts. Simply click on the subgroup point of choice within a chart, shown below in the illustration.





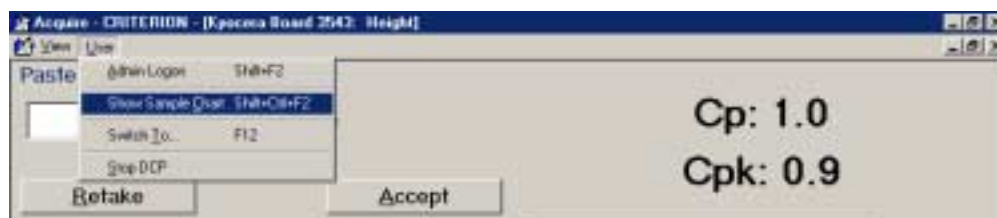
Once you click on the subgroup point, the following screen will appear showing the specific statistical details:



To access a previous subgroup, click on the PREVIOUS button. Likewise, to advance to the next subgroup, click on the NEXT button shown. **Note: data editing can only be performed within the CRITERION Admin and Analysis application. However, operators are allowed to view this information during data collection.**

3.6 VIEWING SAMPLE CHARTS AND CP/CPK VALUES

Operators may toggle back and forth between the sample chart and CP/CPK values charts within the Acquire application. If your data collection procedure is set up to view CP/CPK values, you can access the CP/CPK values simply by choosing USER option from the main menu, and then selecting SHOW SAMPLE CHART. The CP/CPK values will display in the right hand corner of the data collection window. See illustration below.



3.7 STOPPING A JOB

Jobs are most often stopped at the end of a job cycle. A job cycle is simply one subgroup of data. When a job is run, a job cycle concludes after a subgroup is collected for each characteristic in the sequence. At times there may be reasons to stop data collection before completing a job cycle. Only a person with appropriate privileges may stop a job during a job cycle. If you stop a job during a job cycle, any data or data tags for incomplete subgroups are lost.

3.8 STOPPING A JOB AT THE END OF CYCLE

The program automatically gives the option to continue or end a job at the end of a cycle under two conditions:

- You are logged in as an administrator.

-Or-

- You, logged in as a user, have the privilege as defined in the CRITERION Admin module. If neither of these conditions is met, a person must log in as an administrator to end a job. The program will then give the option to end at the conclusion of the job cycle.

3.9 STOPPING A JOB DURING THE JOB CYCLE

Stop a job during the job cycle by doing one of the following:

KEYBOARD Press CTRL-F2.

MOUSE Click Stop Job in the User menu.

Warning: If you stop a job during a job cycle, any data or data tags for incomplete subgroups are lost.

3.10 UNLOADING JOBS

All jobs that are pre-loaded are marked with a blue book icon to the left of the job name. Sometimes jobs need to be unloaded in order to decrease the software's memory requirements or if changes are being made to them by CRITERION administrators.

It is important to note that whenever a job is unloaded, all jobs are unloaded at that time.

To unload jobs

You can unload all loaded jobs at once with either the keyboard or the mouse.

KEYBOARD Press ALT-N.

MOUSE Click on the Unload button.

3.11 REFRESHING THE DCP LIST WINDOW

Sometimes changes may be made to a job setup or a new job may be added by an administrator in the Admin application while the Acquire application is open. The DCP List window may be updated to reflect these changes by using the Refresh button. You can refresh the DCP List window with either the keyboard or the mouse.

KEYBOARD Press ALT-E.

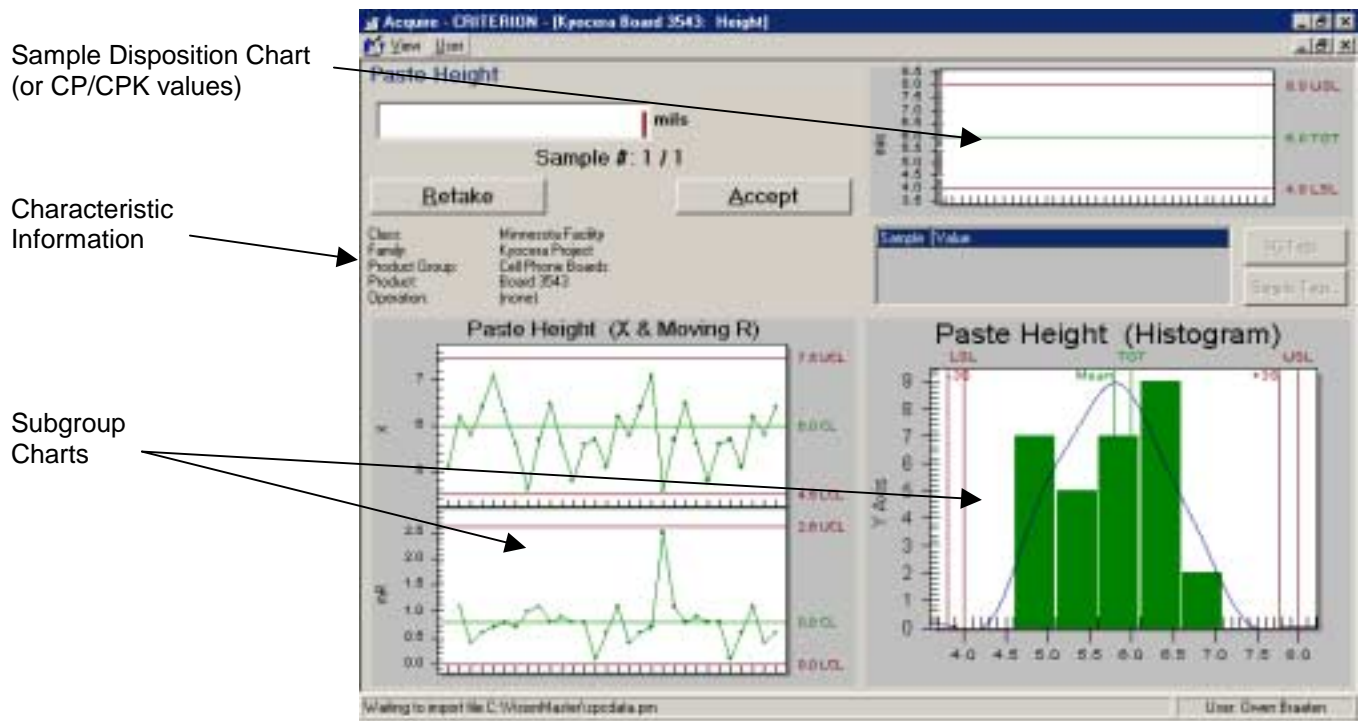
MOUSE Click on the Refresh button.

4. ENTERING DATA

The core of an SPC program is the data used to perform analysis. That is why it is so important to store data in a way that makes it accessible and useful. The configurable data collection interface gives visible feedback on the status of collection. Real-time control charts and operator instructions may be displayed during collection as well.

4.1 VARIABLES DATA

4.1.1 Features of the Variables Entry Window



The standard variables data entry window (shown above), displays valuable information about the data entered. You may view characteristic information, a sample chart, or a subgroup chart. All or part of this information is displayed during data entry if the job was designed to show it.

Characteristic information

The Information frame displays general information about the characteristic or operation. The Class, Family, Product Group, Product, and Process information describe the data you are collecting. The “product” is the part being produced. Products are organized into a product group, family, and class. The “operation” is the machine or action that produces the product.

Sample/Disposition chart

The Sample/Disposition chart is displayed on the right side of the data collection window. The sample chart plots sample values of the current subgroup against the specification limits. The colors of the points indicate whether the measurement meets specifications.

- If the value displays green, the measurement is within specification limits.
- If the value displays red, the measurement is outside of specification limits.
- If the value displays yellow, the measurement is equal to the specification limit.

Subgroup chart(s)

Up to two subgroup charts can be displayed at the bottom of the data entry window. Labels above the charts tell the characteristic or process of the data and the chart type. Subgroup chart(s) display the most recent subgroups of data collected for a characteristic and/or process. The number of subgroups displayed is based on the number of subgroups used for statistical calculations as defined in the CRITERION Admin module.

Subgroup charts may be expanded to a full screen view. To expand charts, simply double click on the chart you wish to view. **Note: subgroup charts will not display until two subgroups of data are collected.**

4.1.2 Entering Variables Data

Variables SPC data consists of measurements of products. Height and volume are both examples of variables data. This data is recorded with an instrument connected directly to the computer, such the VisionMaster system.

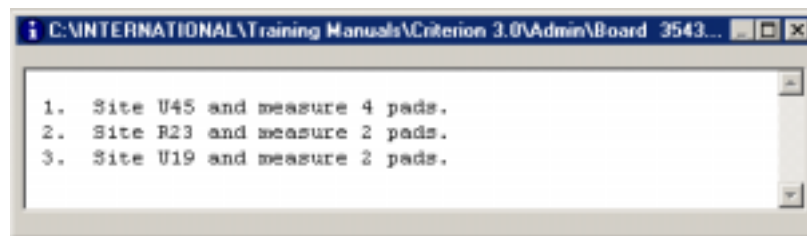
4.1.3 Entering Variables Sample Value Manually – Not Typically Used

The name of the characteristic you are measuring is displayed at the top of the window. The number of samples recorded and the subgroup size are displayed below the sample value.

1. Take a measurement.
2. Type the numerical value of the measurement. The value is displayed as you type.
 - If the value displays green, the measurement is within specification.
 - If the value displays red, the measurement is outside of specification.
 - If the value displays black, you have no color indication whether the value is within specification.
3. Press ENTER or click the Accept button to record the sample.

4.2 GENERAL ENTRY

4.2.1 Operator Instructions



Sample Operator Instruction Screen

Operator instructions provide information for users during data collection. Operator instructions might be text, graphics or other programs. Some instructions are automatically executed before data are collected for a job and some are executed after all data have been collected for the procedure. If instructions are assigned to a particular warning, instructions execute when the warning condition is violated.

Instruction files attached to characteristics may be accessed by operators during data collection. Operators may press F-8 to directly pull up drawings, documents, etc., or simply access VIEW from the main menu and select either Operator Instructions or CAD Drawing. *See the illustrations below.*

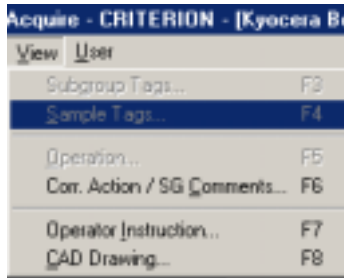
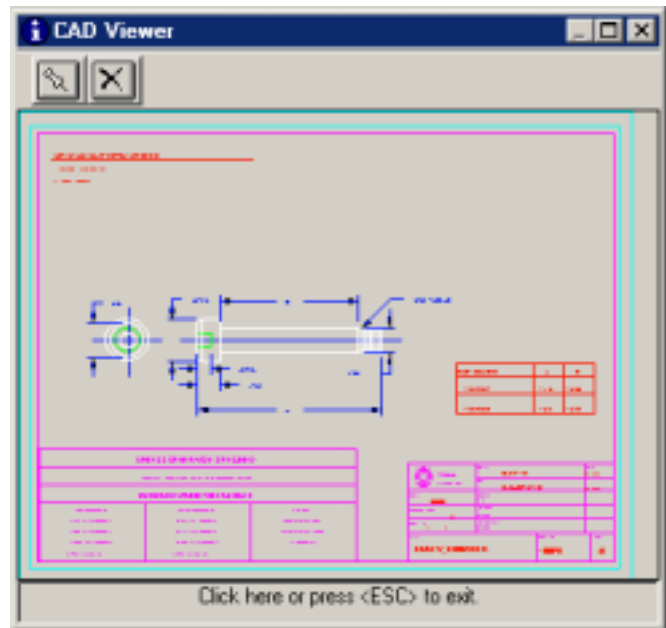


Image Viewer



Sample Image

4.2.2 Entering Data Tags

The tag entry window title tells you which type of tags you are entering: subgroup tags, sample tags or disposition tags. To assign values to the requested tags, follow the directions below.

1. Do one of the following

KEYBOARD Press ALT and use the UP/DOWN arrow keys to select a tag value from the list. Or type the tag value if it is not in the list.

- OR -

MOUSE Click the drop-down arrow and click on a specific tag value.

2. If there is more than one tag, press ENTER or the NEXT button to select the next tag. Enter a value.
3. After entering tag values, press ENTER or click OK.

Tip: When possible, values of subgroup tags and sample tags will be automatically logged to all characteristics in a data collection procedure (for users with the Automatically log tag values privilege).

To reduce the need for repetitive entry of tag values during data collection, Acquire can automatically log sample and subgroup tag values. This feature is assigned as a user privilege within the Admin module. Once assigned as a user privilege, tags are automatically logged when the same tag values will be recorded for consecutively gathered measurements in the collection sequence. When tag values are being automatically logged, the user only needs to enter the tag values at the start of the first subgroup of the data collection procedure. When a sample tag changes (for example, when a new piece becomes the focus for measurement, or if there is an unexpected change in a tag value) all subsequent information will be automatically tagged.

4.2.3 Editing or Reviewing Subgroup or Sample Tags

Subgroup tags for the current subgroup may be edited or reviewed. To edit or view subgroup tags, press F3 or click the SG Tags... button. Now enter data tags. Sample tag values of the current sample may be edited or reviewed. Press F4 or click the Sample Tags button. To edit sample tags of a previous sample of the current subgroup, highlight the sample in the Data Edit grid and click the Sample Tags button. After a subgroup of data has been collected and closed, you cannot edit the subgroup or sample tags for that subgroup in the Data Collection program.

4.2.4 Warnings, Corrective Actions, and Subgroup Comments

During the collection of data, certain criteria must be met in order to assure the quality of the items being produced. If any of these conditions are not met, a statistical “warning” is issued to indicate that the process may be out of control. In such cases, it may be necessary to change the process to correct the problem. When a warning condition is detected after the collection of a subgroup of data, the warning is displayed on the screen and you are prompted to enter a corrective action and an optional comment.

5. SETTING PREFERENCES

5.1 PREFERENCES

Data Collection preferences affect the appearance and functionality of the program and provide a way to specify the location of CRITERION databases. Defaults set in preferences affect only the Acquire application at the computer on which they are defined. Any user with administrative privileges in the Acquire application may set preferences as directed below.

To set preferences

Call the Preferences window by doing one of the following:

KEYBOARD Press ALT-F, F.

MOUSE Select Preferences... from the User menu.

Select any option by clicking on the option. To select an option using the keyboard, press TAB until the option is highlighted then press SPACEBAR. An option is selected if the box beside it shows an "x".

Color Variables Sample value based on Specification Limits

This option applies only to variables data entry. If this option is selected, the variables measurement is displayed in color to indicate whether the value is within specification limits. When the variables measurement is outside specification, the value appears red, otherwise, the value appears green. If this option is not selected, the measurement always appears black.

Default prompt to continue DCP

This text box shows the default prompt to be displayed to the operator after data collection is completed for each subgroup. However, if the administrator has specified a custom prompt for a particular job (in the DCP Setup Window), then the custom prompt will be displayed instead of the prompt shown here.

Message for subgroups with no warning or corrective action

This check box enables the positive feedback option. If it is selected, the message in the associated text box will be displayed after collecting a subgroup without warnings or corrective action. The operator must acknowledge the message before proceeding to the next subgroup. Using this option requires one additional step during data collection, but also enables the operator to retake the last sample in a subgroup.

Message for subgroups with a warning or corrective action

This check box enables the negative feedback option. If it is selected, the message in the associated text box will be displayed after collecting a subgroup which contains a warning or corrective action. The operator must acknowledge the message before proceeding to the next subgroup. Using this option requires one additional step during data collection, but also enables the operator to retake the last sample in a subgroup.

Prompt Once For Auto-Tagging

If this preference is selected, the program will display the subgroup tag list to the user during data collection, only once. This list will be shown to the user upon initial log on. Automatic tagging will continue throughout the data collection process until the user exits the application. Users can manually see this list at anytime using the F3 key.

Prompt For Historical Data – Not typically Used with VisionMaster

Filter DCP List by User Group

If this preference is selected, the DCP List window will include a special field that can be used to filter the list of jobs based on a specific user group. This option is useful if you have many data collection procedures, and do not wish for the operator to have to look through the entire list when selecting them.

Start DCP on startup – Not Use with VisionMaster

Allow users to exit CRITERION Acquire

If this preference is selected, the program gives a user the option to exit the CRITERION Acquire application. This option only applies if the current user is logged in as a user. A person logged in as an administrator has the option to exit the application any time there are no jobs open.

Load Entire DCP List Automatically – Not Used with VisionMaster

Process Capability Labels

This drop-down menu will allow the user to further define the type of process capability label that will be displayed during data collection. This label will be displayed within the upper right hand corner of the data collection screen when users have defined this option in the CRITERION Admin module.

Filter Tag List Values by Characteristic & User

This feature will define tag list values based on last value entered for the combination of characteristic and user.

Auto Logout Interval – Not Typically Used with VisionMaster

This feature will prompt the system to automatically log off the current user. Logging off will occur when the user has been idle at the data collection procedure list window for the designated minute setting.

IFF/UFF SG (Subgroup) Delay Interval – Not Used with VisionMaster

5.2 CONFIGURE CHART COLORS

The Configure Chart Colors window allows users with administrative privileges to customize the appearance of charts that are displayed during data collection. These changes only affect charts that are displayed at the data collection station that the changes are made at.

To configure chart colors

Call the Configure Chart Colors window by doing one of the following:

KEYBOARD Press ALT-F, F, R

MOUSE Select Preferences... from the File menu and then click on the Charts... button in the Preferences window.

To use the Configure Chart Colors Window

1. Select the type of chart to be customized from the Chart Type drop-down menu.
2. The options frame will then display the specific chart elements that can be modified for the selected chart type. Select the element to modify from this list.
3. The Current Color box will display the current color selection for that chart item. If applicable, the Current Line box will display the current line selection for that item.

Color Selection: To display the Color selection window click on the builder button to the right of the Current Color box. After selecting the desired color, click OK to save the new selection. This will close the Color selection window and display the newly selected color for that chart item in the Current Color box and on the preview chart. In order to reset a chart item to the default color established by the Acquire application, click on the Use Default button to the right of the Current Color box.

Line Selection: To display the Line selection window click on the builder button to the right of the Current Line box. After selecting the desired line, click OK to save the new selection. This will close the Line selection window and display the newly selected line style for that chart item in the Current Line box and on the preview chart. In order to reset a chart item to the default line style established by the Acquire application, click on the Use Default button to the right of the Current Line box.

Tip: To maximize the preview chart so that details can be seen better, simply double click anywhere in the chart.