Calibration Procedures Calibration History Calibration Detail Inventory/Purchasing

CPRO 2000 PLUS

....ISO Professional Calibration System

USER'S GUIDE

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INTRODUCTION

CPRO 2000 PLUS

The CPRO 2000 PLUS ISO Professional Calibration Program is an integrated system that is designed to provide small and large manufacturers with the ability to thoroughly define and monitor an ISO9000 qualified calibration program.The system also provides valuable management information to analyze and evaluate the effectiveness of the various programs, including the tracking and reporting of labor, material and subcontracting costs. A full featured inventory and purchasing system is included in the calibration program.

The CPRO 2000 PLUS ISO9000 Professional Calibration System is designed for any version of Windows, including Windows 98, Windows ME, XP and 2000 and Windows NT versions. The program 32 bit and is network ready.

A unique feature of the program allows use of the full features of the program for demonstration purposes (quantity of new data entry is limited, but sufficient for the user to fully evaluate the capabilities of the program). Activation simply involves the entry of a code by the user to permit unlimited data entry.

The system is provided with sample data to illustrate the functions of the various features. It is strongly suggested that the user access each module and fully understand the function of each window and control to become thoroughly familiar with all the features before beginning the entry of active company records.

ABOUT THIS MANUAL

The CPRO 2000 PLUS manual is provided to introduce the user to the extensive capabilities and features of the CPRO 2000 PLUS program. The manual is purposely brief and simple to follow so that the user will quickly be able to access and use the program. A detailed on line manual is provided through the Help selections at each menu and by pressing the “Help” button on each window of the program.

HARDWARE REQUIREMENTS

CPRO 2000 PLUS can be installed on IBM 386, 486, or Pentium true compatibles with at least 640K of RAM memory. For best performance a 486 or Pentium computer running at a minimum of 33 MHz should be used. CPRO 2000 PLUS needs most of the 640K of RAM so other memory resident (TSR’s) software should be held to a minimum. The complete program requires up to 12 megabytes of hard disk space for all the options. More disk space will be required as data is added. The program is fully network ready and will run on Windows 95, Windows98, Windows 2000or Windows NT.

INSTALLATION

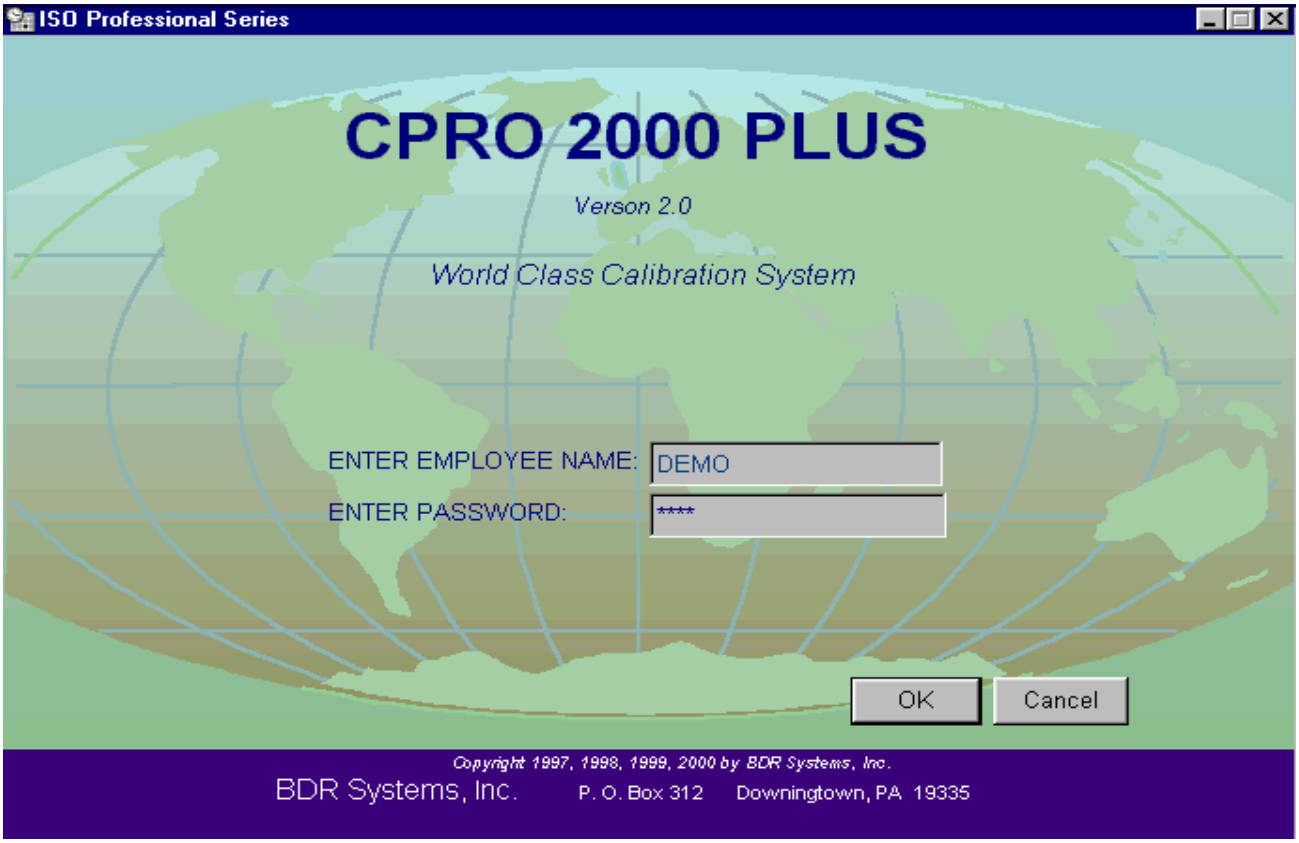
CPRO 2000 PLUS is supplied on a CD with all the programs and the User’s Guide. The disk will self start when inserted in the drive (or select the CD drive and then Install.exe from explorer). Select the Professional Calibration Systems button, then the Install CPRO 2000 PLUS Calibration System button.

The installation program will create new directories automatically in the drive and directory name the user specifies when prompted. The default directory is C:\CPLUS.

To install on a network server map the CPLUS folder to a DOS drive (such as J:/CPLUS. Then create shortcuts on each workstation with the target J:/CPLUS/cplus.exe.

STARTING PROGRAM

During the installation process a program group named CPRO 2000PLUS was created. To start CPRO 2000 PLUS double click on the CPRO 2000 PLUS icon, or select from the program list in Windows. The program may also be started by double clicking on C:\CPLUS\CPLUS.EXE (or the directory name specified by the user in the installation process) in either windows File Manager or Explorer. The CPRO 2000 title and main menu will be displayed.



SECURITY

A security system is incorporated in CPRO 2000 PLUS to provide limited access of the individual programs and data so that only duly authorized personnel can view or change data. Each employee of the company is identified by name and each is issued a unique password. In addition, the modules that the employee is permitted access are designated. Five levels of security are provided to limit the activity of the employee in that module.

Level 1- System Administrator
Enters security passwords
Level 2- Personnel
Access to employee records and labor rates
Level 3- Manager
Access to all other records, data and management reports
Level 4- Operator
Access to all other records and data.
Level 5- Review
Can only view summary records, cannot change data.

Only employees with security Level 1 have access to the security portion of the system. To access the security setting, select “SUPPORT” from the main menu of the CPRO 2000 PLUS module. Then select “EMPLOYEES”.

The employee designated as the system administrator (by setting the security level for that employee to 1) should enter the security level and password for each employee. Note that only the employee(s) with Level 1 security will have access to this screen. Be sure the at least one employee has the Level 1 designation before deleting the “DEMO” employee from the employee list. The CPRO 2000 PLUS system is shipped with an employee named “DEMO” with the password “DEMO” and security level 1 so there is initial access to the security screen.

PROGRAM STRUCTURE

HELP SCREENS

Each of the modules is supported by extensive on line help that is accessible at every window. Help may be accessed from either the help contents selection from window menus or by selecting the “Help” button on each window.

SAMPLE DATA

CPRO 2000 PLUS is supplied with sample data simulating a manufacturing business. The data is automatically provided during the installation process. It is strongly recommended that this data be left on the system until the user becomes thoroughly familiar with all the features of the program. While becoming familiar with the program this sample data may be modified, or additional data may be entered. For each new window it is suggested the user read the help associated with the window. Follow the instructions for adding, modifying or deleting data and records.

After becoming familiar with the features of CPRO 2000 PLUS the sample data may be removed individually from the appropriate windows using the delete method provided for that window.

STRUCTURE

The CPRO 2000 PLUS program is designed to be extremely simple to use and to provide the maximum amount of information using very few windows. For example the “Calibration” and then the “Equipment” selection of the menu will immediately provide the user with detailed data about the equipment that is selected as well as the calibration history about the selected equipment- without changing windows! Buttons are provided so that complete detailed data about either the equipment itself or the calibration records can be easily retrieved.

The program is constructed using several basic window types: Menus, Scrolling Tables, Data Entry windows, and Reports

Menus: Selection of area of interest.
Scrolling Tables: a list of available records.
Data Entry window: Individual detail data about a selected record.
Reports: Print out of information.

To rapidly access data, locate fields are included in the tables which are expected to contain a large amount of data. When the desired data is typed in and the tab key selected to accept the field, the table cursor goes immediately to the selection. Also, when the table records are in focus (the mouse cursor is pointed to a record), typing a single character will access the nearest record meeting that parameter. As additional characters are added the desired record is located.

Tables:

[PgDn] scrolls the table to the next page of data.
[PgUp] scrolls the data to the previous page of data.
[Ctrl-PgDn] scrolls the table to the last page of data.
[Ctrl-PgUp] scrolls the table to the first page of data.

Forms:

[Tab] accepts the data entry for the highlighted field and advances the highlighted cursor to the next field. When the last field is accepted all the data is saved for the record and control returns to the table window.
Select “OK” button to accept all the data from any window.
Within a highlighted field move the cursor to the desired location using the mouse or the left and right arrow keys. Characters may be deleted with the [Delete] or [Backspace] keys.

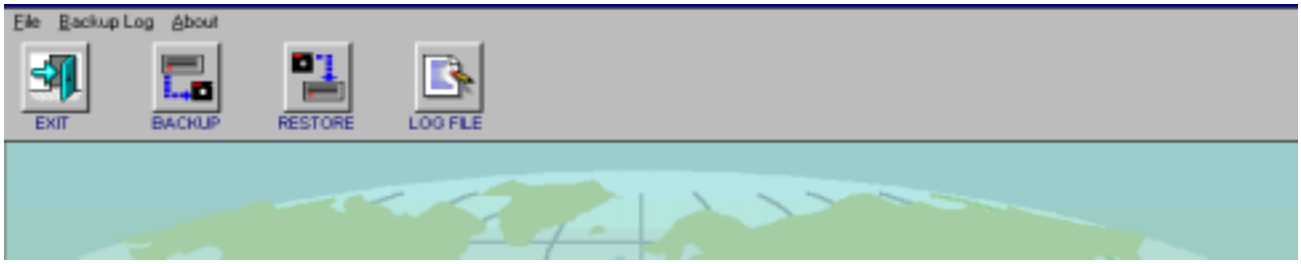
BACKING UP AND RESTORING DATA FILES

The Backup and Restore feature is intended to be used to back up all the data files (*.tps) residing

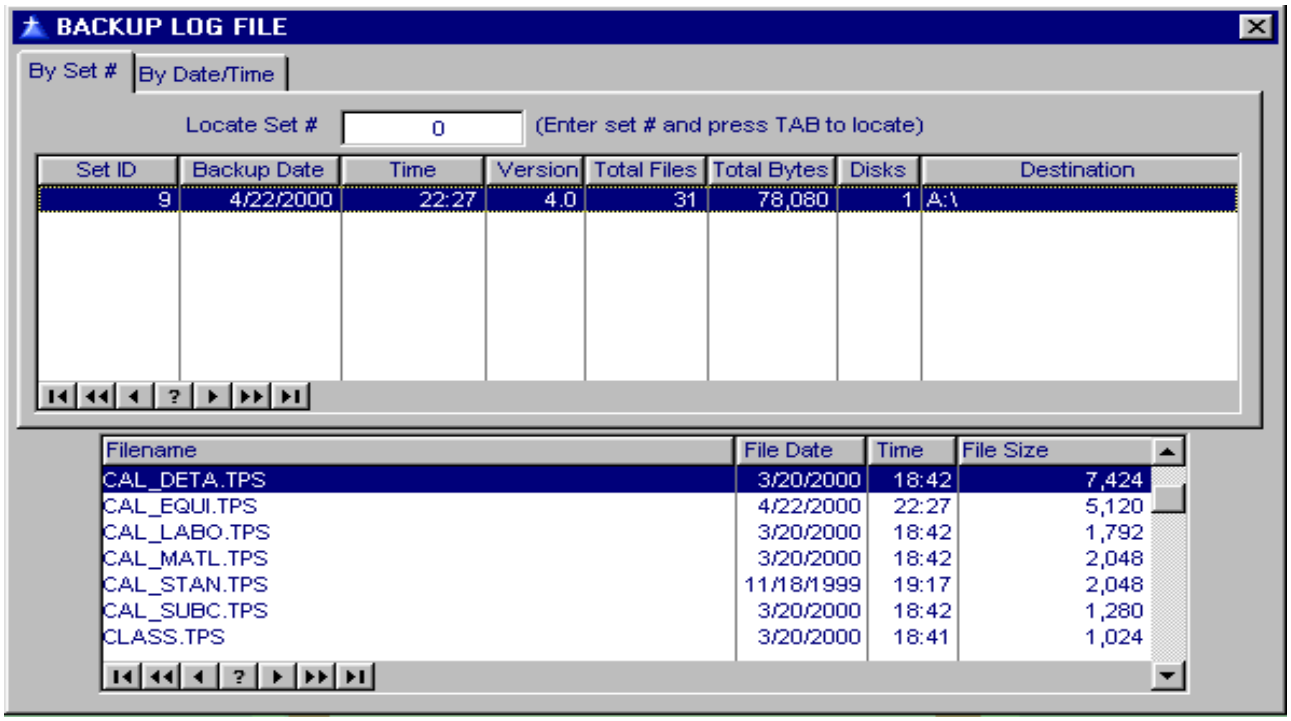
in the base directory for the program. The Backup and Restore feature can be run from within the main program or can be run from the BACKER.EXE file in the base directory. The Backup and Restore feature may be accessed only by the System Administrator (Security Level 1) or a Manager with Security Level 2.

The data is stored in a compressed form, on disks or in the hard drive, to conserve space. Every time a backup is carried out a unique Set Number is allocated and stored on each floppy in the disk set. During Restore the user can click on the Log File button to see the Set Number, Disk Number, Date of Back Up etc. If you insert a disk from the wrong set or out of sequence you will be warned accordingly

Starting the Backup and Restore feature: from the main menu select File, then BACKUP and RESTORE. To Backup all the data files (*.tps) simply select the BACKUP icon and follow the instructions. Alternately, double click on the BACKER.EXE file in the program base directory. To Restore all the data files select RESTORE and follow the instructions. After Backup or Restore the user will automatically exit from the program (since all program data files must be closed during the Backup process).



The backup files and the files that were backed up ar displayed by selecting the Log File button:



TECHNICAL SERVICE

Unlimited technical support for CPRO 2000 PLUS is provided for one year from the date of purchase. Before contacting technical support make use of the Help functions that are available at each window. Contact BDR Systems customer service at 610-873-8570 or e-mail at address plant@bdrsystems.com (be certain to type the address exactly as shown, do not use capital letters).

The CPRO 2000 PLUS professional calibration module is comprised of five major sections: Support, Calibration, Inventory, Purchasing and Reports. The integrated system is designed to track every equipment and other assets that require emergency or unscheduled calibration as well as regular scheduled calibration. The documentation of calibration data is specifically designed to provide record retention and traceability to assist in achieving the requirements of ISO9000. The system also provides valuable management information to analyze and evaluate the effectiveness of the CPRO 2000 PLUS program, the cost of equipment calibration and repair, and the status of all assets of any period.Changes to equipment or calibration records are logged for traceability. A full featured inventory and purchasing system is included in the program.

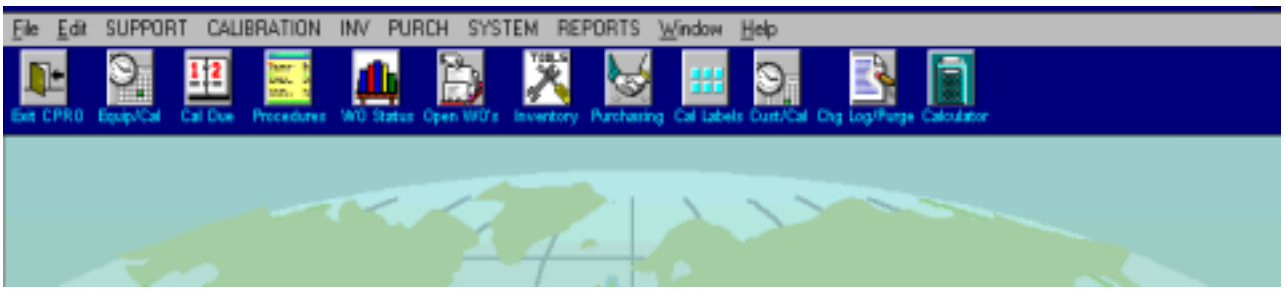
Major features include:

- Equipment/Asset Inventory
- Calibration Procedures on line
- Work Order system
- Print Calibration Labels
- Certificates of Calibration
- Monitors Calibration
  - By Internal company equipment or by Customer Equipment
  - Calibration Due notification
  - Labor Costs tracked
  - Material Costs tracked
  - Subcontracting costs tracked
  - Detailed results recorded for each procedure step
- Inventory System
  - Min/Max
  - Transaction Tracking
- Purchasing System
  - Receiving System
  - Automatic PO Generation
- Data Backup and Restore feature
- Provide calibration services to outside customers
- Equipment and Calibration Changes logged

The system is provided with sample data to illustrate the functions of the various windows. It is strongly suggested that the user access and fully understand the function of each window and control to become thoroughly familiar with all the features before beginning the entry of active company records.

USING CPRO 2000 PLUS

Select the CALIBRATION menu selection in the CPRO 2000 PLUS main menu.



Selections may be made from the menu selection tool bar at the top, or the icon selection tool bar. Selections made in the menu selection tool bar result in drop down menus with additional choices.The icon selections provide rapid access to the most frequently used sections of the program When the cursor is placed on the icon the destination will be displayed.

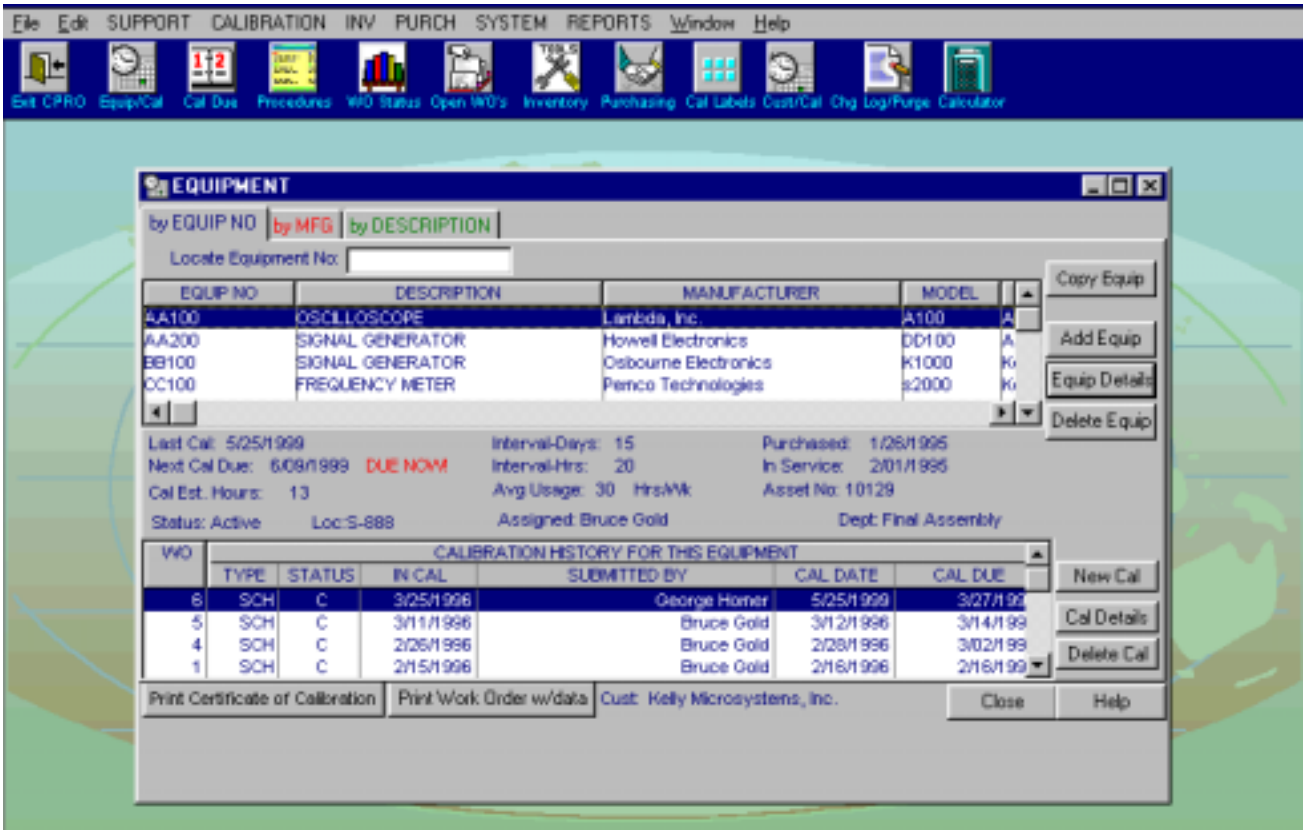
To become familiar with the features and structure of the program the following tour of the program is recommended. Every calibration action begins with using the Calibration selection from the main menu or directly by using the Equipment/Calibration icon. A sub menu provides selection of Equipment, Procedures, Cal Due, Work Order Status, Open Work Orders or Print Claibration Labels.

The selections:

Equipment: Complete access to all equipment detail and calibration history.
Procedures: Detailed CPRO 2000 PLUS procedures for selected equipment.
Cal Due: A table listing of all equipment requiring calibration during the selected period.
Work Order Status: A table listing of all work orders with pertinent data.
Open Work Orders: Current open work orders.
Print Calibration Labels: Select equipment for label printing

EQUIPMENT

Select the Equipment item from the Calibration menu or select the Equipment/Calibration icon on the left of the tool bar or the Customer/Cal Icon on the right. The Customer/Cal selection is used for companies that do calibrations for other companies. The data displayed will be for the selected customer only.

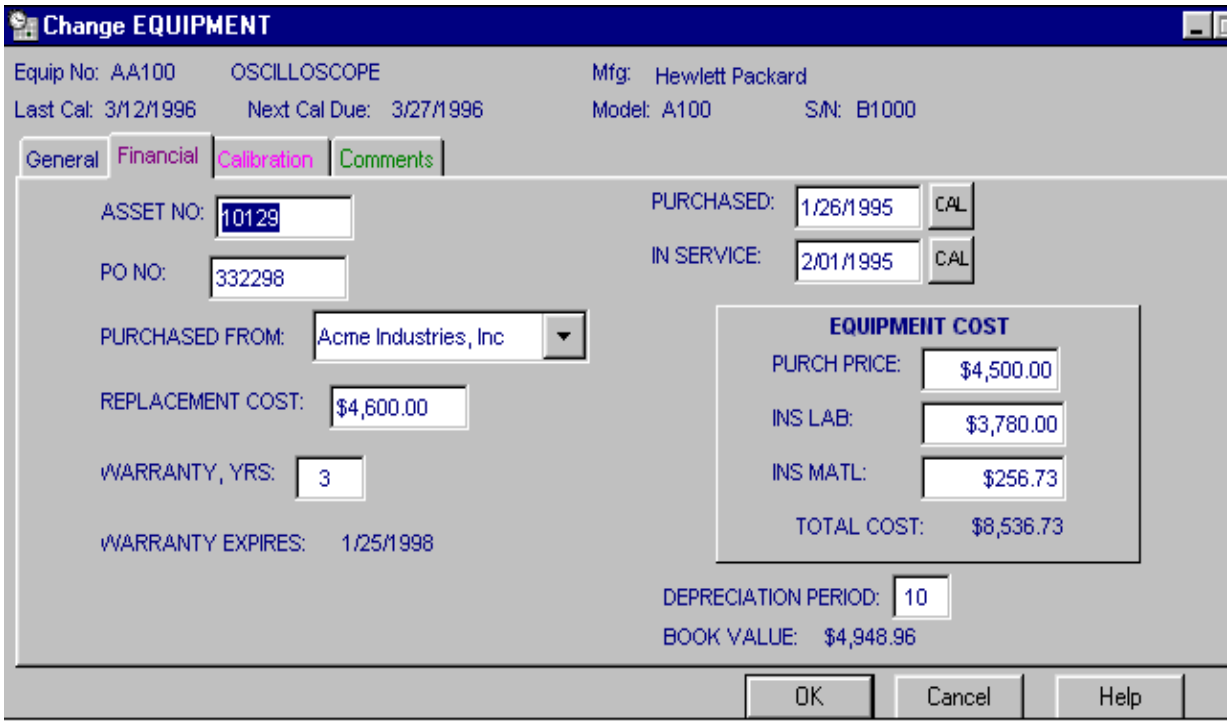


The window is divided into an upper and lower section. The upper section contains a scrolling table with a listing of all equipment that has been entered into the system. The lower section contains a scrolling table with all the calibration records for the equipment that is highlighted in the upper screen. Between the upper and lower tables is additional equipment detailed data for the equipment that is highlighted. Between the two tables pertinent information about the status of the calibration for this equipment is presented. At a glance the user knows the last time a calibration wascompleted, the due date for the next calibration, and other important information concerning the highlighted equipment. Use the up and down arrows, selected with the mouse, to scan through the equipment records. Notice how the calibration records and detailed equipment data changes for each change in highlighted

equipment. Without changing windows the user can select an equipment record and view pertinent detail information about the equipment and the calibration history of that equipment. Additional detailed information is available by selecting the appropriate button next to the equipment or calibration scrolling tables.

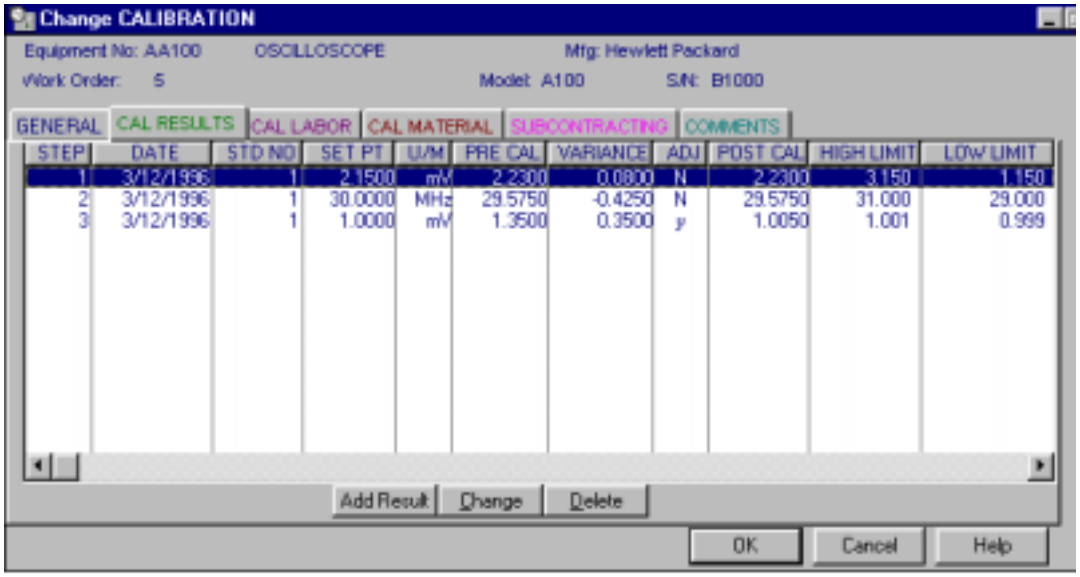
The equipment data may be sorted and viewed by equipment number, manufacturer, or equipment description. Place the mouse cursor on the tab above the upper table and click the left mouse button to select the preferred sort.

To the right of the equipment table are buttons to copy, add, view detail, or delete equipment records.Place the mouse cursor on the “Equip Details” button and click with the left mouse button. Select the various Tabs to view the financial,and calibration information about the equipment. Point to the tab with the mouse and click the left mouse button.



CALIBRATION HISTORY

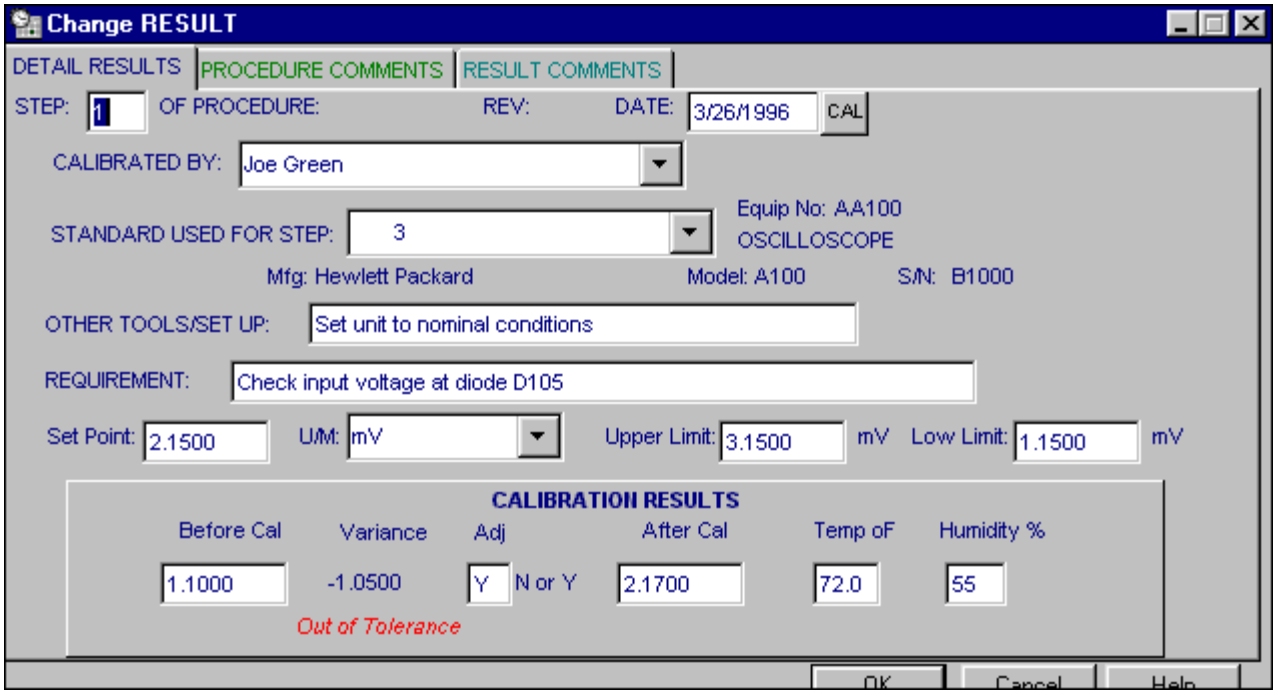
The lower portion of the equipment window contains all the calibration history for the equipment that is highlighted in the upper equipment table. Each calibration work order is listed with the status and calibration due dates. To view the details concerning a specific work order highlight the work order and press the “Cal Details” button.



All the General information about the work order is shown. Tabs are provided to display the detailed calibration Results, Labor, Materials, Subcontracting and additional comments. Select the “Cal Results” tab. Each step of the procedure is listed with the date that the calibration was performed, the set point or nominal value for the result, the value before the calibration was performed and the variance from the set point. If an adjustment was required it is indicated with a Y (yes) or N (No).

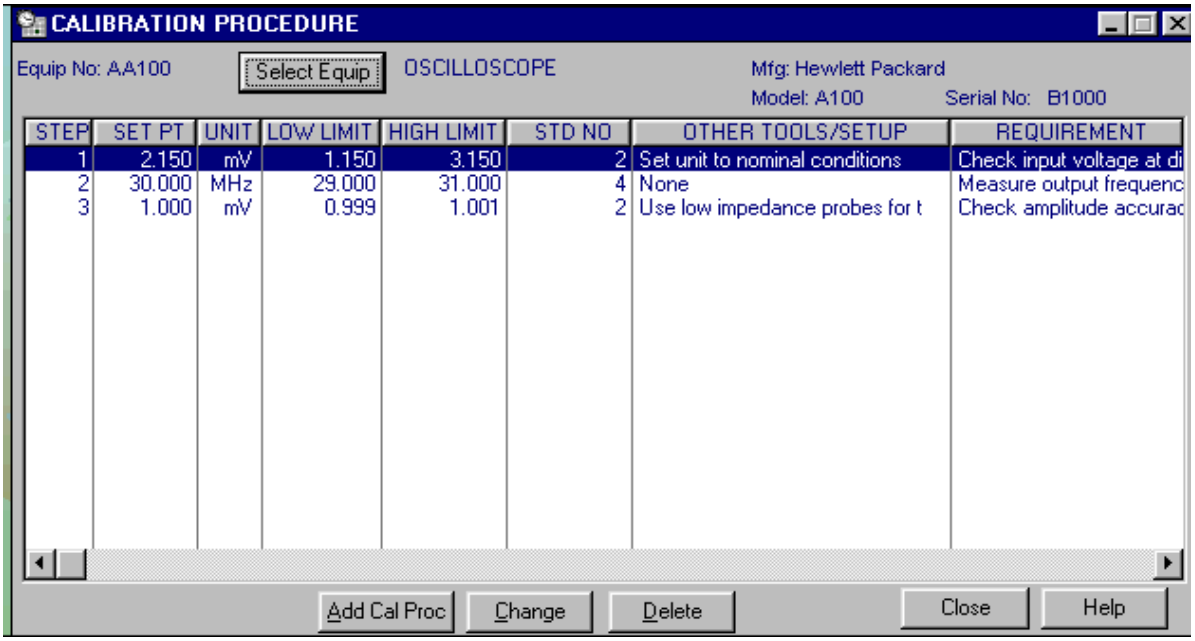
The value of the step parameter after calibration is indicated (Post Cal), and the requirement high and low limits are displayed.

To obtain complete detail for a particular step, use the mouse to highlight the desired step and then click on the “Change” button.



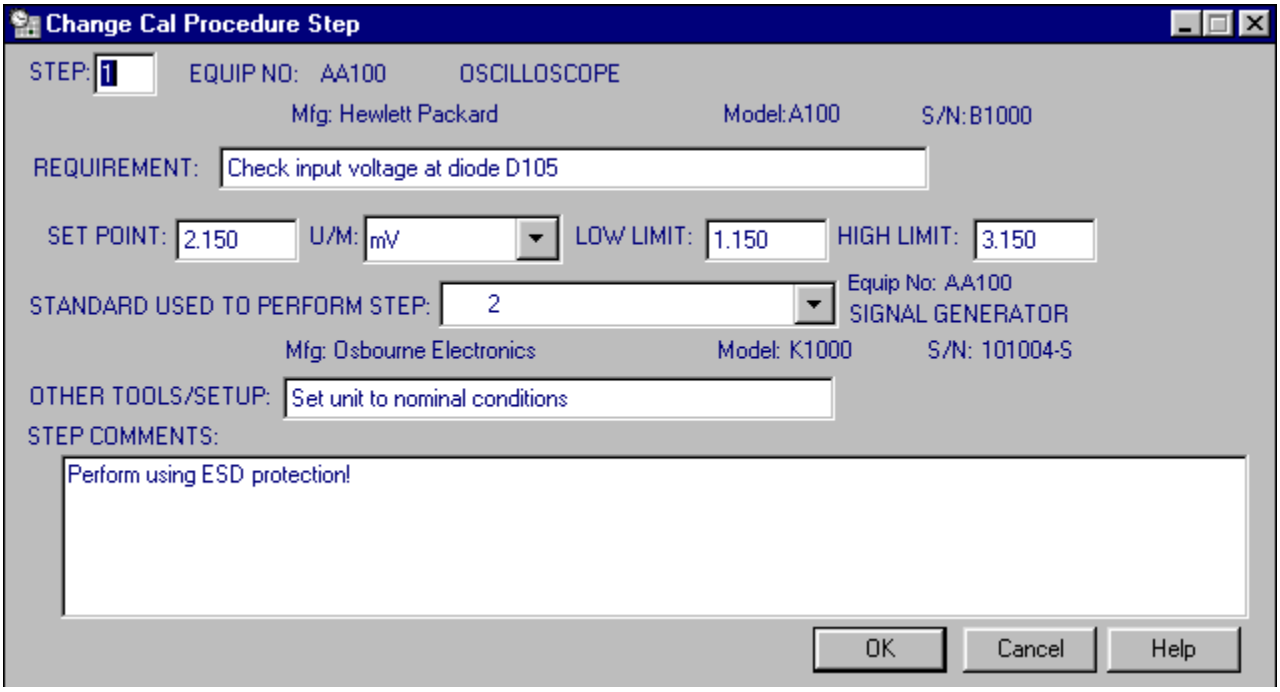
CALIBRATION PROCEDURES

Select “CALIBRATION” from the CPRO 2000 PLUS main menu and then “PROCEDURES”. Press the “Select Equip” button , then select equipment number AA100 .The CPRO 2000 PLUS procedure for equipment number AA100 will be displayed.



Press the “Change” button to modify or view the procedure step highlighted in the procedure scrolling table.

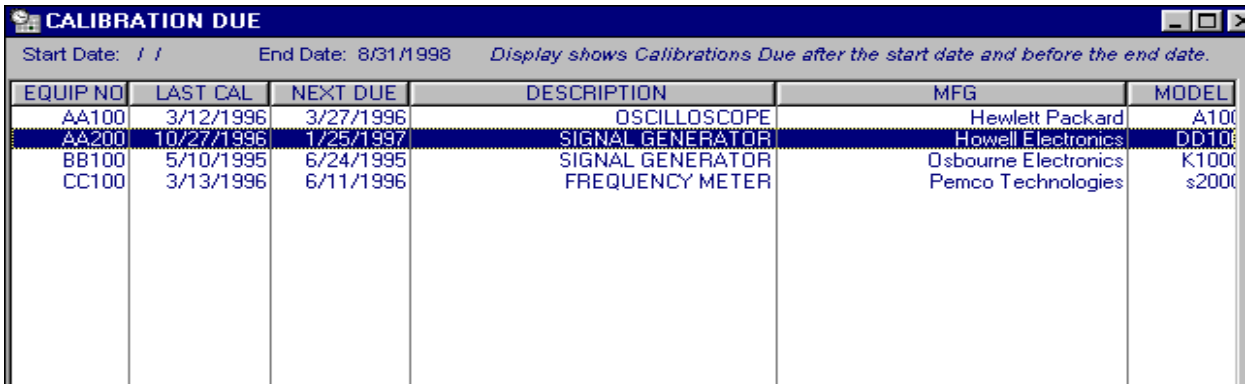
The detailed information about the step selected is displayed including the set point, high and low limits, standard used, step description, tool and setup requirements and comments relative to this step.



CALIBRATION DUE

The user may view all of the equipments for which calibrations are either due or past due between specified date periods.

Select CAL DUE from the CALIBRATION sub menu, or select the Calibration Due icon. Select an individual customer or “All” to display all calibrations that are due within the dates specified by the user.



CALIBRATION DUE

After entering a start date and an end date all the calibrations that are due or past due during the period are displayed. If a work order has been issued, but not completed, the number is displayed.

WORK ORDER STATUS

The work order status is a listing of every work order that has been initiated. The pertinent information regarding the work order is provided. In addition to the date of initiation the current status of the work order is indicated as an“O” for a work order with no completion dates and a “C” for work orders that have a completion date.

Choosing the OPEN WORK ORDERS menu selection displays only those work orders which have not been closed.

OPENING NEW WORK ORDERS

Opening a new work order in CPRO 2000 PLUS is very simple.

1.From the main menu select “CALIBRATION”.

2.Select “EQUIPMENT” from the sub menu.

3.Scroll through the Equipment table to highlight the equipment that is to be calibrated.

4.Use the mouse to select the “New Cal” button.

5.The next sequential work order number is automatically assigned.

6.When the above window is first opened the Scheduled Calibration Type will be displayed with the block checked and the Unscheduled Calibration block will be hidden. If the calibration action is emergency or unscheduled, place the mouse cursor on the Scheduled Calibration block and click the left mouse button. This will deselect the Scheduled Calibration block and will expose the Unscheduled Calibration block. Accept the selection by pressing Tab.

7.The cursor will advance automatically to the next data entry field each time a field is accepted by pressing the Tab key. Alternately, use the mouse to advance to any specific data entry field.

8.Fields with down arrow buttons will display drop down data selection tables. Use the mouse to depress the down button. Point to the desired selection from the table using the mouse cursor and accept by clicking the left mouse button.

9.Do not enter a date in the “WORK ORDER COMPLETED” field until the calibration is actually completed. This date entry will close the work order.

10.Calibration labor, materials and subcontracting data may be entered by selecting the labeled tabs using the mouse. Point to the requested tab and click the left mouse button.

A work order is closed by entering a completion date for the calibration activity. Point to the “WORK ORDER COMPLETED” field with the mouse and enter the date that the calibration effort was completed. The status of the work order will be changed from “Open” to “Closed”.

SUPPORT

The “Support” menu selection contains the data that is used frequently in completing calibration records, such as vendor names, employee lists, customers, units of measure etc.This data is used in drop down selection lists in the calibration and equipment data entry sections to save the user typing time.

INVENTORY

The “Inventory” menu selection consists of the Item Master File, which contains detailed information regarding every calibration part used, and the Inventory file, which indicates the current status of each part. This includes the vendor, last material transaction, and the current on hand balance. Whenever a part is allocated for use in a calibration work order the inventory level is adjusted accordingly. Whenever the on hand inventory falls below the minimum stocking level specified in the Item Master file the part is automatically added to the Purchase Order list for action by the user.

PURCHASING

The CPRO 2000 PLUS program is designed to determine when parts used in the calibration function deplete the inventory below the minimum stock level established in the item master file. When parts are “issued” (by adding parts to the material used on a maintenance or calibration work order) the on hand inventory is reduced accordingly. When this occurs the part is added to the table of “requested purchase orders” using the order quantity specified in the item master file. The user can scan this table periodically and select the items for which purchase orders are to be issued.The “PURCH” menu selection enables the user to generate new purchase orders, view the status of open purchase orders, and retrieve purchase order history. Select “PO’s” from the purchasing main menu to view the table of all purchase orders.

To view only open purchase orders, select “OPEN PURCHASE ORDERS” from the menu. The listing of purchase orders may be viewed in several sort orders by selecting the tabs, using the mouse.

Select “REQUESTED PURCHASE ORDERS” to view those parts which have fallen below the minimum stock level defined in the inventory system. Items will automatically be added to the list when parts are specified for use in a calibration (issued) and the stock level has been depleted below the minimum level.

To automatically generate purchase orders for the listed items point to each item that is to be included and press the left mouse button. Each item selected for purchase order generation will remain highlighted. To deselect an item, point to the item and press the left mouse button once. The item will not be highlighted.

When all the selections have been made point to the “Print Marked PO’s” button and press the left mouse button. Individual purchase orders will be printed for each vendor of the required parts. All parts from the same vendor will be combined on a single purchase order.

RECEIVE MATERIALS

To accurately track the purchase order system it is required to document the receipt of parts against the purchase order that was issued to a vendor for that part. When parts are received select the “RECEIVE MATERIAL” menu item from the Purchasing main menu.

This table listing are all of the current open orders. That is, those purchase orders for which there are one or more items that the quantity of the item received is less than the quantity of the item ordered.

The table displays the open purchase orders, the part number of the part, the quantity of the part ordered, the last received quantity and the total received quantity.

Select the purchase order of the received part by using the mouse to position the highlighted selector bar on the correct purchase order. The user may sort the data by Purchase order, Stock Number, Part Number, or by Vendor to aid in the selection process. Point to the desired sort tab using the mouse and press the left mouse button.When the correct purchase order is selected point to the “Receive Matl” button with the mouse and press the left mouse button. Enter the receive date and the quantity received to update the status.

REPORTS

The “Reports” selection enables the user to obtain a wide variety of reports concerning the Equipment, Calibration, Procedures, Work Orders, and Management Analysis. Take the opportunity to explore the various report formats to fully understand the functions. The unique Management Analysis reports are of particular interest and provide the user with labor summary, calibration cost data, calibration manpower requirements, and calibration department performance. If calibrations are performed for other company a certificate of calibration may be printed from this menu selection.

PRINTIING CALIBRATION LABELS

Printing calibration labels in CPRO 2000 PLUS is very simple and straight forward. From the main menu select "CALIBRATION", then "PRINT CALIBRATION LABELS" from the sub menu, or simply click on the Cal Labels Icon.

This table displays all of the equipments in the system. For the equipment highlighted in the table the last calibration date and the next calibration due date are displayed below the scrolling section.

Select all the equipments that you want to print calibration labels for by highlighting each in the scrolling table. In the SEL column the value of "1" will be indicated for each selected equipment.

Labels are printed onto standard Avery laser label stock. Use Avery Laser Label paper 5667, 5267, or 8167. These are 1/2" x 1 3/4" individual labels. There are 4 columns of labels across and 20 rows down on each sheet for a total of 80 labels per sheet.

For maximum utilization of the sheet of labels the user can select the starting position for printing the selected labels. The labels will be printed starting at that position and continuing across the columns and down the rows until all the labels have been printed or have filled the sheet.

To select the starting position and to start the printing sequence select the "Print Cal Labels" button after all equipments have been selected.

Enter the column number (1-4) and the row number (1-20) of the starting location for printing. Press OK for a preview of the page that will be printed on the laser printer.

Use the Zoom control (x100 or x200) to view the selected labels clearly.

If the location on the sheet and the label content is correct, print the labels by selecting the printer icon, or select

file, print.

After the labels are printed the initial of the person authorizing the accuracy of the label or the person that conducted the last calibration is added to the label in the "By:" field.

TIP:
Although label manufacturers do no recommend multiple passes through the laser printer, the user may want to start printing from the bottom of the sheet, when small quantities of labels are needed, to minimize the possibility of a paper jam in the printer. Count the number of labels to be printed, then count back from the last position (of usable labels) to obtain the correct starting location.

DATA CHANGE LOG

The Chg Log/Purge icon selection from the main menu is used to view all changes to equipment and calibration results on a field by field basis. By just logging field changes (and not whole records) the size of the logfile can be kept down. The System Administrator (security level 1) is the only person authorized for access to the Data Change Log.

The change log records all changes to equipment records and all calibration results records. Periodically the accumulated data in the Data Change Log File should be purged to maintain only the necessary records required for tracking purposes.

The pertinent information about the highlighted changed record is displayed below the scrolling table, including the Work Order number, equipment number, and serial number. The table displays the old value of the field, the new value, the employee that made the change and the time of the change. If desired, the original value may be restored by selecting the RollBack button for the selected record.

A purge function, selected with the Purge Log Records button, is provided to delete all the records within the date range selected by the System Administrator.

It is good practice for the System Administrator to review the size of the Data Log File (ActLog.tps in the root directory of the program) periodically to determine when file size reduction is appropriate.