Bindery Management System

NASTech, Inc.

User Guide

Version 6.00

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Chapter 1 Introduction

The ***NASTech*** **Bindery Data Acquisition** system (**B-DAQ)** performs real-time data acquisition using advanced electronic monitoring techniques.

B-DAQ is comprehensive system designed to provide management at all levels with the information needed to ensure maximum bindery efficiency.

B-DAQ supports all aspects of bindery management including bindery productivity, performance, and accurate skid counts. A real-time machine status module increases efficiency in many areas outside the bindery as well.

Many years of experience have gone into the design and development of this system. Simplicity, flexibility and high availability were the main criteria under which the software was developed. The system utilizes all the latest technology to provide a sound and long-term solution for your business.

We at ***NASTech*** are committed to designing and developing the highest quality software possible and are confident that you will enjoy working with **B-DAQ.** We look forward to working with you and wish you every success in the future.

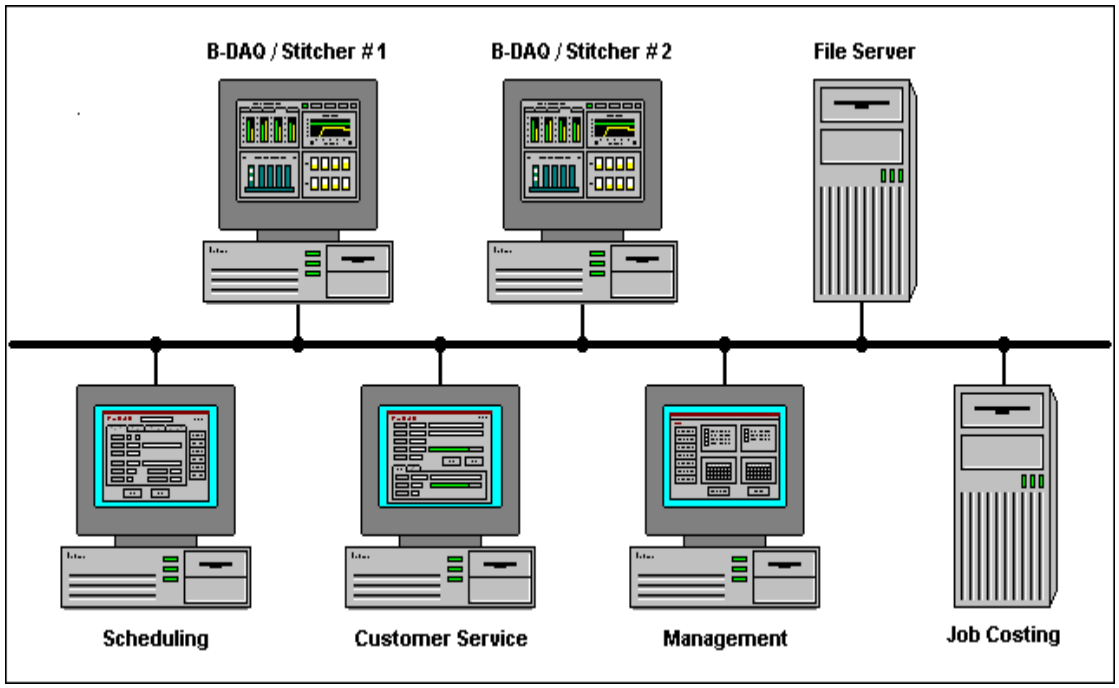
Visit our web site at www.nastechinc.com for current news and updates.

Overview

B-DAQ consists of four primary modules, all operating together to provide the highest level of real-time data possible without compromising the fail-safe requirements of the system. Using our unique Bi-directional Data Synchronization Technology, (BDST), the local and remote databases are continuously synchronized.

- The **Bindery Module** collects real-time data from each machine. The operator records labor and down-time reason codes.
- The **Scheduling Module** is used to define the requirements of the jobs prior to going to the bindery. Data may be provided automatically via an automated scheduling system if present.
- The **Machine Status Module** is used throughout the company to view real-time bindery status information.
- The **Management** / **Reporting Module** is used to define the various master files used by the system and to produce the various charts and reports necessary to track and measure bindery performance.

The **File Server** contains databases common to all modules. The Management computer may be used as the server on small Peer-to-Peer networks.



System Features

- Utilizes standard PC computer hardware
- Microsoft Windows-NT/2000/XP graphical interface
- Touch-screen technology
- Client / Server technology

Basic Measurements

- Machine speed
- Gross count
- Good count
- Good count by pallet

Statistics

(Maintained by machine, by date, by shift, by job, and by version)

- Makeready I time
- Makeready II time + gross count
- Run time + gross count
- Down time (by reason code)
- Number of unscheduled stops
- Good count by version

Events Recorded

- Shift change
- Version started
- Makeready I started
- Makeready II started
- Run started
- Machine stopped
- Machine re-started
- Machine speed change
- Pallet complete (Ticket printed)
- Count complete
- Clean-Up
- Version complete

Chapter 2 Hardware Installation

Hardware components necessary for data acquisition are provided and vary depending on the actual machine configuration and the features to be implemented.

NASTech Supplied Devices

NASTech is responsible for providing the following hardware devices when applicable:

- B-DAQ Console (Optional) for each machine, pre-installed with the following:
    1. ELO Touch Screen Monitor.
    2. APC UPS Battery Backup System.
    3. B-DAQ Press Interface Module.
- National Instruments Data Acquisition Card(s).
- Various cables as outlined on the System Cabling page of this guide. (Chapter 2 - Page 7)

Customer Supplied Devices

B-DAQ utilizes standard PC hardware. Since the machine is being monitored in real-time, the faster the machine the faster the computer should be.
The customer is responsible for providing the following hardware devices:

- **Server computer**
  - Windows NT, Windows 2000, or Windows XP.
  - At Least a 450 MHz CPU, 40GB HD, 128MB RAM.
  - SVGA Video Card, Network Interface Card.
  - CD-ROM Drive, Floppy Drive.
  - Data Back-Up device.
- **Bindery Computers:**
  - Windows NT, Windows 2000, or Windows XP.
  - At Least a 450 MHz CPU, 20GB HD, 128MB RAM.
  - SVGA Video Card, Network Interface Card.
  - CD-ROM Drive, Floppy Drive (Optional).
  - 2 Serial Ports, 1 Parallel Port.
- Stack Lights.
- Sensors, Buttons, Switches and associated Electrical wiring.
- Laser Printer for Pallet Load Tickets and for Stock Tags as needed. (HP LaserJet 2300n - recommended)
- Parallel line drivers when used as local printer and printer exceeds recommended distance from computer.
- Various cables as outlined on the System Cabling page of this guide. (Chapter 2 - Page 7)

Electrical Outlets

- The customer is responsible for providing power to the system.
- The B-DAQ Press Interface Module is mounted on a swing out frame providing access to the back of the computer, keep this in mind when routing the wiring and when Installing AC power outlets in the **B-DAQ** Console.
- AC power outlets must be installed, knockouts in the B-DAQ console are provided to accommodate conduit. 4 AC outlets are recommended.
- AC power outlets are required for the Laser Printer.

Input Signals

The customer is responsible for providing all input Sensor, PLC, and Control connections between the press and the **B-DAQ Bindery Interface Module**. (Note: All input wiring should be shielded to prevent noise)

The input signals to be used vary depending on the configuration of the Machine and the features of B-DAQ to be utilized. This section outlines the available options, and explains some common installation procedures. Upon installation, more detailed instructions and the necessary wiring diagrams will be provided.

Gross books

- **Gross Count** - An inductive proximity sensor, which monitors revolutions of the machine. This signal is used to count gross books produced and to derive machine speed.

Net Books

- **Good Count** - An electric eye, or laser used to indicate that good books have been produced.

Load Tickets

- **End of Load** – A button (momentary contact) to indicate that the pallet is complete.

Output Signals

The customer is responsible for providing all output Sensor, PLC, and Control connections between the **B-DAQ Press Interface Module** and the press. (Note: All wiring should be shielded to prevent noise)

The output signals to be used vary depending on the configuration of the machine and the features of **B-DAQ** to be utilized. This section outlines the available options, and explains some common installation procedures. Upon installation, more detailed instructions and the necessary wiring diagrams will be provided.

Output signals may be used to control any external function such as lighting an indicator, sounding an alarm, initiating a machine shutdown sequence, etc… In order to utilize these signals, a relay will be provided and the external device must be wired accordingly.

The available output signals are as follows:

- **Waste** - Waste being accumulated (red stack light).
- **Count Complete** - Count Complete (white stack light).
- **Shutdown Machine** - Count & overrun complete (Optional).

The output signals can be set to behave as follows:

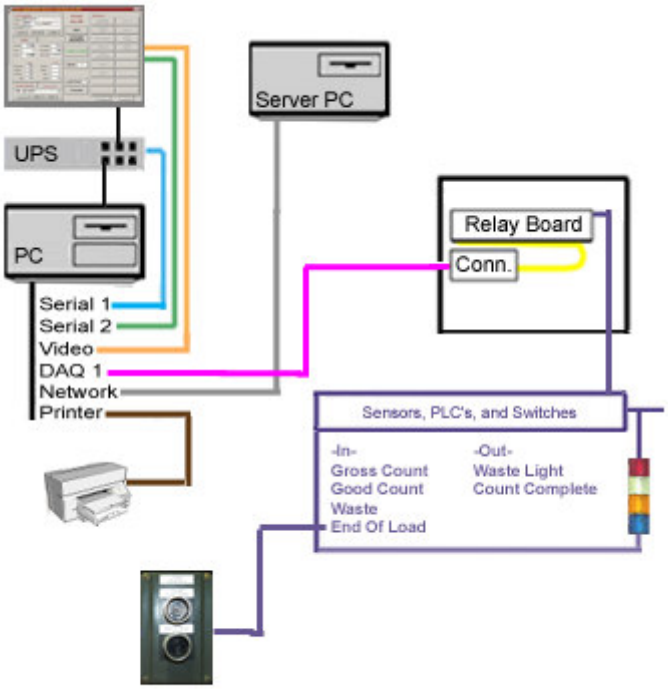
- Remain on while condition exists.
- Alternate on and off at a specified rate.
- Turn on for a specified time and then turn off.
- Trigger other output signals.

Install Bindery Computer Devices

- Install the network interface card. Refer to manufacturer's documentation for details.
- Install the Data Acquisition Card(s), the "Measurement and Automation" software and configure. Refer to National Instrument's documentation for more details.
- Install the ELO Touch monitor software and configure. The monitor should be configured to use Serial Port 1. Refer to ELO's documentation for more details.
- Install the Laser Printer and software drivers. Refer to the Manufacturer's documentation for details.
- Connect the UPS to Serial Port 2.

System Cabling

The following diagram illustrates the basic cabling requirements of the bindery management system.



Electrical Wiring, supplied by user.

Video Cable, M14 to M14 supplied by manufacturer.

Serial Cable, F9 to M9 supplied by manufacturer.

Serial Cable, F9 to M9 supplied by manufacturer.

Ribbon Cable, F68 to F68 supplied by NASTech.

CAT5 Cables (straight through), supplied by user.

Parallel Printer Cable supplied by manufacturer.

Parallel Line Drivers supplied by user (Optional).

Chapter 3 Software Installation

NASTech Supplied Software

NASTech is responsible for providing the following software:

- National Instruments Measurement and Automation Software.
- ELO Touch Tools Software. (Optional)
- APC Power Chute Software. (Optional)
- B-DAQ Installation CDROM.

Customer Supplied Software

The customer is responsible for providing the following software:

- **Server computer**
  - Windows NT, Windows 2000, or Windows XP.
  - Microsoft Access.
  - Microsoft SQL Server. (Optional)

- **Bindery Computers:**
  - Windows NT, Windows 2000, or Windows XP

Initial Installation

B-DAQ is installed onto your hard disk (drive C) using a special installation program. The contents of the installation CD may be copied to your file server to simplify the installation for multiple machines. This must be done if a CD-ROM drive is not available on the **B-DAQ** bindery computer(s). The **B-DAQ** directory on the file server into which the system is installed must have read/write access from each of the client computers.

Server Installation

- Set **Control Panel** \ **Regional Settings** \ **Short Date** to “MM/dd/yy” and enter the correct date.
- Set **Control Panel** \ **Regional Settings** \ **Time** to “HH:mm:ss” and enter the correct time.
- Insert the installation CD in the CD-ROM drive.
- Locate the **B-DAQ-Server** installation directory on the CD.
- Execute **Setup.exe** and follow the directions on the screen to set up **B-DAQ.**
- Select the location for the **B-DAQ** directory and Finish the installation.
- Note: After Installation, you may be prompted to restart the server as various DLL and OCX files may need to be registered in Windows. You may continue the installation and schedule this restart at a more convenient time if necessary.
- Copy the directories from the CD to the **BDAQ\Install** directory
- Copy the **“B-###”** directories from the Floppy Disk, to the **BDAQ** directory.
- Install SQL Database Software. Refer to Microsoft’s documentation for more information (Only if you will be using SQL databases).

Server Configuration

- Open the "**System.ini**" file located in the **C:\BDAQ\Shared** directory. Edit and save the file as follows:
  - Init Path = "Init"
  - Local Base Path = "\BDAQ"
  - Network Base Path = "*YourServer*\BDAQ"
  - ‘ DBTYPE = "SQL" (If you are using a SQL server Database, remove the ‘ (apostrophe) at the beginning of the line.
- Edit **Security.ini** in the **PDAQ\Shared\Init** directory. This will allow users to have read/write access to various programs. For example:
  - [B-Sched]
  - Default = "Read"
  - Administrator = "Update"
  - JOHN SMITH = "Update"
- Edit **DataPurge.ini** in the **BDAQ\Shared\Init** directory. DataPurge.exe allows redundant data to be deleted from the server. The entries made to this file should be specified in military time, a short period of time right after the scheduled network backup. The "**DataPurge.exe**" file may be left running on the server at all times, or you may schedule the task using Windows Scheduler to perform the purge on a weekly or monthly basis. For example:
  - BegPurgeTime = 05:00
  - EndPurgeTime = 06:00
- Edit **DataSync.ini** in the **BDAQ\Shared\InitMachine** directory. "DataSync.exe" automatically transfers data to and from each press computer and the server. While this is a necessary function of the system, data should not be transferred while the server is performing its scheduled backup. The entries made to this file should be specified in military time, as a window of time at which the network backup occurs. For example, if the network backup begins at 2AM:
  - Beg Save Time = 01:00
  - End Save Time = 04:00

- Run **P-Maint.exe** from the **BDAQ\Shared** directory and update the Following Tables. These tables may be set up by NASTech personnel prior to installation. (For more help on running **P-Maint**, refer to the **Utilities** section of this guide):
  - Press
  - Cost Center
  - OperCode
  - Form Type
  - Pallet Type

Server SQL Setup

- (Skip this section if you are not running SQL server).
- Install Microsoft SQL Server on B-DAQ Server.
- Execute “Start…Programs…Microsoft SQL Server…Query Analyzer”.
- Open “BDAQ\Shared\Database\BDAQ6.SQL.
- Execute SQL script to create **BDAQ** database(s).
- Set permissions for B-DAQ press and client computers.
- Execute “Start…Programs…Microsoft SQL Server…Import and Export Data”.
- Select Source = Microsoft Access = “BDAQ\Shared\Database\Remote.mdb”.
- Select Destination = “BDAQ” database.
- Select ALL tables. Un-select ALL Queries.
- Continue with import.
- Execute “Start…Programs…Microsoft SQL Server…Import and Export Data”.
- Select Source = Microsoft Access = “BDAQ\Shared\Database\Stats.mdb”.
- Select Destination = “BDAQ” database.
- Select ALL tables. Un-select ALL Queries.
- Continue with import.

Bindery Installation

- Set **Control Panel** \ **Regional Settings** \ **Date** to “MM/dd/yy” and enter the correct date.
- Set **Control Panel** \ **Regional Settings** \ **Time** to “HH:mm:ss” and enter the correct Date & Time.
- Execute **“Setup.exe”** from the **BDAQ**/**Install**/**BDAQ-Machine** directory on the file server, or from the **BDAQ-Machine** directory on the CD.
- Follow the directions on the screen to set up **B-DAQ**. Install the software in the C:/Program Files directory, and finish the installation.
- Open the “**System.ini**” file located in the **C:**/**Program Files**/**BDAQ** directory. Edit and save the file as follows:
    - Init Path = "Init"
    - Local Base Path = "C:\Program Files\PDAQ"
    - Network Base Path = "*YourServer*\PDAQ"
    - ‘ DBTYPE = "SQL" (If you are using a SQL server Database, remove the ‘ (apostrophe) at the beginning of the line.

Bindery SQL Setup

- Create ODBC Data Source Name (DSN) called **BDAQ** for new BDAQ SQL Server database.
    - Start - Settings - Control Panel - Administrative Tools - Data Sources - ODBC. Click “**Add**”. Select **SQL Server**, Click “**Finish**”.
    - Name the database (BDAQ), and select the NASTech Server.
    - NT or SQL authentication? It is recommended that NT authentication is used. If so, the NT password setup on the computer will allow access to the SQL database.
    - NT or SQL authentication? If SQL authentication is used, the following lines of code MUST be added to the **C:**/**ProgramFiles**/**BDAQ**/**System.ini** file:
        - DB Name = BDAQ
        - Database = BDAQ
        - User Name = *your computer’s User Name*
        - Password = *your SQL Password*
    - Click “**Change Default DB to**”, Select BDAQ Database, Click **Next**.

Start B-DAQ

- Go to **Start Menu → Programs → BDAQ-Press Module → SysUpd**, right-click the **SysUpd** icon and select **Properties**. Edit and save the shortcut as follows:
  - Target: *YourServer*/BDAQ/Shared/SysUpd.exe
  - Start In: C:/Program Files/BDAQ/
- Run **Start Menu → Programs → BDAQ-Machine Module → SysUpd** and click the **Update** button.
- Run **DataSync** from the Desktop and click the **Continue** button.
- Data Sync will now transfer data from the server and populate the **Remote** database at the press. Please allow a few minutes for this process to take place.
- Start **B-DAQ**, when prompted; enter the pallet ID format. NASTech personnel will provide a list of pallet ID numbers prior to installation. You may also find the load ticket format in the associated Pressman.ini file located in the C:\Program Files\ BDAQ\Init directory.
- If you are using a check digit on your Load Tickets enter the prefix letter followed by 7 zeros. If you are not using a check digit, enter the letter prefix followed by 6 zeros.

Client Installation

- Execute **"Setup.exe"** from the **BDAQ/Install/PDAQ-Client** directory on the file server, or from the **BDAQ-Client** directory on the CD.
- Follow the directions on the screen to set up **B-DAQ**. Install the software in the C:/Program Files directory.
- Open the "**System.ini**" file located in the **C:/Program Files/BDAQ** directory. Edit and save the file as follows:
    - Init Path = "Init"
    - Local Base Path = "C:\Program Files\BDAQ"
    - Network Base Path = "*YourServer*\BDAQ"
    - ' DBTYPE = "SQL" (If you are using a SQL server Database, remove the ' (apostrophe) at the beginning of the line.

Client SQL Setup

- Create ODBC Data Source Name (DSN) called **BDAQ** for new BDAQ SQL Server database.
    - Start - Settings - Control Panel - Administrative Tools - Data Sources - ODBC
    - Click "**Add**". Select **SQL Server**, Click "**Finish**".
    - Name database (BDAQ), and select NASTech Server.
    - NT or SQL authentication? It is recommended that NT authentication is used. If so, the NT password setup on the computer will allow access to the SQL database.
    - NT or SQL authentication? If SQL authentication is used, the following lines of code MUST be added to the **C:/ProgramFiles/BDAQ-Client/System.ini** file:
        - DB Name = BDAQ
        - Database = BDAQ
        - User Name = *your computer's User Name*
        - Password = *your SQL Password*
    - Click "**Change Default DB to**", Select BDAQ Database, Click **Next**.

Start BDAQ Client

- Go to **Start Menu → Programs → BDAQ-Client Module → SysUpd**, right-click the **SysUpd** icon and select **Properties**. Edit and save the shortcut as follows:
  - Target: *YourServer*/BDAQ/Shared/SysUpd.exe
  - Start In: C:/Program Files/BDAQ/
- Run **Start Menu → Programs → BDAQ-Client Module → SysUpd** and click the **Update** button.
- Start **B-Sched**, **B-Status**, and **P-Admin**, from **Start Menu → Programs → BDAQ-Client**

Software Updates

Customers will be notified by email when software updates are available for download. It is recommended that you update the software within a reasonable time frame as to avoid redundant support issues.

Our website BDAQ support page (www.nastechinc.com) always contains the latest updates, as well as version specific information relating to each updated program. Check our support pages periodically for additional information.

Manual Updates

Manual Updates to the software are handled as follows:

- Delete all files from the **BDAQ/Shared/SoftwareUpdate** directory.
- Download and save the .zip file to the **BDAQ/Shared/SoftwareUpdate** directory.
- Unzip the downloaded file and save its contents to the **BDAQ/Shared/SoftwareUpdate** directory.
- If **Install.exe** is now in the **SoftwareUpdate** directory, move it to the **Shared** directory and overwrite.
- Updates can be installed on a machine by machine basis for testing purposes. To do so, edit and save the **Update.ini** file located in the **BDAQ/Shared/Init** directory to include the cost center number(s) to receive the update, for example:
  - ***Update = 345***
  - ***Update = 456***
  - ***Update = All*** *(Change back to this when testing is complete, to update all presses)*
- Run **Install.exe** from the **BDAQ/Shared** directory, click the **Update** button, and wait for completion.
- Run **DataComp.exe** from the **BDAQ/Shared** directory, and click the **Continue** button. If database field mismatches are present...
  - *With SQL: Run the included **Update.SQL** script in **SQL Query Analyser**, and run **DataCopy.exe** from the **Start Menu** at EACH press between forms.*
  - *Without SQL: Run **DataCopy.exe** from the **BDAQ/Shared** directory on the server, and from the **Start Menu** at EACH press between forms.*
- The updated files will be transferred to each client computer automatically between sessions, and to each associated bindery computer between forms.

Automatic Updates

Automatic software updates from our FTP site are handled as follows:

- Execute the **NASTechFTP** program from the **BDAQ\Shared** directory on the server. The updates will be downloaded to the server and the new files will be transferred automatically to each press/client computer.

- Allowing the **NASTechFTP** program to be continually running on the server ensures the latest versions of the software will be installed automatically as they become available.

- Automatic updates may be restricted to specified days of the week and at specified times during the day via the **NASTechFTP.ini** file located in the **BDAQ\Shared\Init** directory on the server.

- Using Windows "Scheduled Tasks", you may schedule the **NASTechFTP** program to run at the specified time(s). The following is the procedure to set up the task:

    - Choose **Start\ControlPanel\SheduledTasks**.
    - Click "*Add Scheduled Task*".
    - Click "Next".
    - Click the "*Browse*" button and browse the server to the **BDAQ\Shared** directory and select **NASTechFTP.exe**.
    - Follow the instructions to select the time and enter the user name and password when prompted if necessary.
    - Check the box marked "*Open Advanced Properties for this Task when I click Finish*" button and click the **Finish** button.
    - In the *Run* field, change the path to read exactly as in the following: **C:\BDAQ\Shared\NASTechFTP.exe AUTO**
    - In the *Start In* field, make sure the path is as following: **C:\BDAQ\Shared**

Initialization File

After installing **B-DAQ**, the **Bindery.ini** text file contains default values for your configuration. The parameters are divided into multiple sections as described below. Entries may be added or modified as required. Upper and lower case may be used as desired with additional spacing for readability since all characters are converted to lower case and imbedded spaces are discarded prior to evaluation.

Constants Section

Parameter	Default	Description	
Application		"B-DAQ"	
Auto Lift Gen	No	Causes the system to force an end of "Carton" when the number of books specified by the "Books / Carton" parameter on the Config panel has been delivered to the pallet. Example: AutoLiftGen = Yes	
Auto Ticket Gen	No	Causes the system to force an end of pallet when the number of Cartons specified by the "Cartons / Pal" parameter on the Config panel has been delivered to the pallet. Example: AutoTicketGen = Yes	
Cost Center	???	Cost center ID. Example: Cost Center = "451"	
Cost Center Desc	???	Type and model of machine. Example: Cost Center Desc = "Harris 330"	
Cutoff Speed	3000	This is the minimum speed (Books/HR) which must be reached by the machine in order to be considered running by **B-DAQ**. Example: Cutoff Speed = 4000	
Default MR1 Code Default MR2 Code Default Run Code Default Clean-Up Code Default Idle Code		**B-DAQ** needs to know the operation codes to use when passing information on to job costing. These entries define the default codes to be used. Example: Default MR1 Code = "1234"	**
Emp Overlap Code		**B-DAQ** needs to know the non-chargeable operation code to use for shift overlap when passing information on to job costing. This is done to prevent double charging job. Example: Emp Overlap Code = "8001"	**
Enable Minimize	No	Allows the B-DAQ screen to be minimized when the B-DAQ logo is clicked. Example: Enable Minimize = Yes	

Parameter	Default	Description	
Force Shift	0	Allows all Labor transactions to be sent to cost accounting with the specified shift number. Example: Force Shift = 1	
Hide Job Status	No	Hides the Job Status folder on the left center of the mainscreen. Example: Hide Job Status = Yes	
Job Sched Desc	C	**B-DAQ** normally displays the customer name to identify scheduled jobs. This parameter can be used to display the (J)ob or (V)ersion description instead. Example: Job Sched Desc = “V”	**
Job Sched Present	No	Allows the jobs to be selected via the B-DAQ Scheduling Module instead of Shop Floor. Job Sched Present = Yes	
Job Sched Sort	S	How the order of jobs is displayed when you enter the new job screen. (S)equence, (J)ob Example: Job Sched Sort = J	
Load Ticket Copies	0	Specifies the number of Load Tickets to be printed for completed pallets. Example: Load Ticket Copies = 2	**
Machine Type	P	Designates the type of machine used by the system. (Stitcher, Perfect Binder, Other) Example: Machine Type = Stitcher	
Maintenance Log Interval	0	The number of seconds between updates to the Maintenance Log. This log is used to record the total number of machine cycles counted since **B-DAQ** was installed. Example: Maintenance Log Interval = 120	
Oper Display Type	Valid	Used to indicate weather only he valid operation code buttons or all operation code buttons are displayed. (All, Valid) Example Oper Display Type = All	
Pocket Count	25	Represents the number of available pockets on the gatherer or stitcher. Example: Pocket Count = 32	
Quality Count Constant	2	Used to specify the number of books produced for quality control. This is the number to be used for ALL jobs. Example: Quality Count Constant = 4	

Parameter	Default	Description	
Rated Speed	10000	The rated speed of the machine. This entry is not used for any internal calculations. Example: Rated Speed = 9000	
Sched Cost Centers		B-DAQ displays the job scheduled on all available machines when selecting a job to run. To limit the cost centers displayed, the cost centers desired may be specified separated by commas. Example: Sched Cost Centers = “451,452”	**
Scheduling System		This entry is used for passing job related information to scheduling systems such as: (Primac) Example: Scheduling System = Primac	
Shift Time-1 Shift Time-2 Shift Time-3		Specifies the start time for shift 1, 2 and 3. At least 2 shifts must be defined and the elapsed time for each shift must be the same. Example: ShiftTime-1 = 07:00 ShiftTime-2 = 15:00 ShiftTime-3 = 23:00	
Shift Detail Desc	C	Used to specify the format used for the shift detail report. (C)ustomer,(J)ob,(V)ersion. Example: Shift Detail Desc = J	
Show Config Panel	No	Used to enable the “Config” Panel on the right side of the screen when multiple trimmers are used by the associated machine. Example: Show Config Panel = Yes	
Show Perform Panel	No	Used to enable the “Perform” Panel on the right side of the screen. Example: Show Perform Panel = Yes	
Speed Timer Interval	100	The interval in milliseconds at which to read the hardware counters. Entries less than 100 should not be used on computers running at less than 400 megahertz. Valid intervals are 10 to 1000 inclusive. Example: Speed Timer Interval = 250	
Start Pallet ID		This entry is required and should have a unique alphabetic prefix for each machine followed by 6 digits. An “x” suffix may be defined to request the system to generate a mod-10 check-digit. Example: Start Pallet ID = “C000000x”	
Stop Minimum Time	0	Specifies the amount of elapsed time (seconds) needed to consider the machine down. Example: Stop Minimum Time = 120	
Trimmer Count	1	Specifies the number of trimmers.	

Parameter	Default	Description
		Example: Trimmer Count = 2
Warn Count Complete		Not Used

Database Section

Parameter	Default	Description
Base Path		Specifies the location of the Local Executable.
Data Path 1		Specifies the location and name of the **B-DAQ** working database. Example: Data Path 1=”Bindery.mdb”
Data Path 2		Specifies the location and name of the **Master File** and **Scheduler** database. Example: Data Path 1=”Remote.mdb”
Data Path 3		Specifies the location and name of the **Statistical** database. Example: Data Path 1=”Stats.mdb”

Shop-Floor Interface

Parameter	Default	Description
Auto Shift Report	No	Enables the automatic viewing of the Shift Detail report when signing off. (Yes, No) Example: Auto Shift Report = Yes
Auto Start Tran	No	If reporting labor, this entry specifies whether or not to send “Operation Started” transactions to the **NASTech** shop-floor data collection system.
Company		The company identifier to be used when reporting activity to the Job Costing system. Example: Company = “001”
Department		The department identifier to be used when reporting activity to the Job Costing system. Example: Company = “04”
Division		The division identifier to be used when reporting activity to the Job Costing system. Example: Division = “02”
Info Button Font Color	Black	Used to set the default color for buttons located in the Operations section. (Black, Red, Yellow) Example: Info Button Font Color = Red

Parameter	Default	Description
Info Button Font Size	10	Used to set the default font size for buttons located in the Operations section. Example: Info Button Font Size = 8
Labor	no	Specifies whether or not to pass Job Costing & Labor data to the **NASTech** shop-floor data collection system. Also, the EmpLog table is used to record each employee's activity for the shift. This parameter can also be used to force or warn the operator if the make-ready and run operation codes are not specified. Example: Labor = yes, force Labor = yes, warn
Labor Minimum Time	0	The minimum number of seconds that the machine must be down before reporting the fault to the Job Costing system. Example: Labor Minimum Time = 120
Manual Shift Report	Yes	Enables the "Report" button on the operator section. (Yes, No) Example: Manual Shift Report = No
Non-Charge Job Number	no	Causes a job number to be associated with non-chargeable transactions. If the parameter is "no", the job number, form ID, etc are left blank. Example: Non-Charge Job Number = yes
Oper Button Font Color	Black	Used to indicate the color used for the operation code buttons.(Black, Red, Yellow) Example: Oper Button Font Color = Red
Oper Button Font Size		Used to indicate the Font Size used for the operation code buttons.
Oper Display Type	Valid	Used to indicate weather only he valid operation code buttons or all operation code buttons are displayed. (All, Valid) Example Oper Display Type = All
Port	0	Specifies the PC serial port to be connected to the **NASTech** shop-floor data collection system.
Report Idle Time		Not Used at this time
Shell Command		Command called when Shell button is selected.
Speed	9600	Specifies the baud rate to be used to communicate with ShopFloor. Example: Speed = 9600

Parameter	Default	Description
Work in Process	No	Used to indicate that pallet information is being reported to the cost accounting or WIP system.(Yes, No) Example: Work in Process = Yes
Op-Code		The op-code number. Example: Op-code = 6789
Description		Used to name the various operation codes represented by the buttons which are presented to the operator. Example: Description = “Stitcher | Makeready”
Button Type		Used to specify which type of button is to be added to the “Operations” section of the screen based on a list of system button types as described here: **ADJUST COUNT** – Opens the adjust count screen. **ADJUST PALLET** – Opens the pallet maintenance screen. **BEG-BULK** – Used to indicate that Bulk (non-mail) product is being produced. **BEG-MAIL –** Used to indicate that Mail product is being produced. **BEG-STORE**-Used to indicate that Store copies are being produced. **BEG-VIP**- Used to indicate that samples are being produced. **BREAK**- Used to indicate that a non-lunch break has begun. **END-BULK**- Used to indicate that Bulk (non-mail) product is no longer being produced. **END-MAIL**- Used to indicate that Mail product is no longer being produced. **END-STORE**- Used to indicate that Store copies are no longer being produced. **END-VIP**- Used to indicate that samples are no longer being produced. **LUNCH**- Used to indicate that the lunch break has begun. **MAKE-READY**- Used to define the button as a makeready code. **MULTI-STOP**-Used to open the Multi-Stop screen for selecting machine stops. **SHELL**- Used to invoke command specified by the “Shell Command” Parameter. Used to call Help documentation etc…
Oper-Color	Black	Used to specify the color of the button. (Black, Red, Yellow) Example: Oper-Color = Red

Parameter	Default	Description
Enabled	ALL	Used to indicate at which machine state the code is enabled. (ALL, IDL, MR1, MR2, DWN, CMP, WSH, FRM) Example: Enabled = MR1, MR2
Append Data		Additional data that can be passed to the cost accounting system in conjunction with the labor transactions. Example: Append Data = “A99 = Reset”
Chargeable	No	Used to indicate that the code is chargeable or non-chargeable. Example: Chargeable = Yes
Sub Menu		Used to define the associated Sub-Menu to be used. Example: “MKRDY-PB-MENU”
Sub-Menu		Used to define the codes to be displayed. Example: “MKRDY-PB-MENU”
Oper Info		Used to specify the group of codes to display when using multilevel control. Codes are then defines as part of their associated group. Example: Oper-Info = 88
Info Group		Used to define the group number for multi level control of Op-code selection. Example: Info Group = “87, Waiting For…”
Info Code		Used to indicate the additional code to be sent with the transaction to cost accounting.
Info Desc		Used to name the various operation codes represented by the buttons which are presented to the operator within a group. Example: Info-Desc = “Wait For | Crew”
Info Color	Black	Used to indicate the color of the Op-code when using multi level control. (Black, Red, Yellow) Example: Info Color = Red

Messages Section

Parameter	Default	Description
End Pallet Message		Allows the user to define the error message to be presented to the operator when trying to load a new version without printing the last ticket on the previous version. Example: End Pallet Message = Incomplete Pallet. Please adjust or end pallet!
Shortage Message		Allows the user to define the error message to be presented to the operator when trying to load a new version when the previous version quantity was not produced. Example: Shortage Message = Version Incomplete, Continue?
Sign Off Active Message		Allows the user to define the error message to be presented to the operator when trying to sign off without shift relief, and without entering an idle code. Example: Sign Off Active Message = “Cannot leave active machine unattended. Please correct and try again.”
Sign Off Running Message		Allows the user to define the error message to be presented to the operator when trying to sign off without shift relief, and without entering an idle code. Example: Sign Off Running Message = “Cannot leave running machine unattended. Please try again later.”
Sign On Error Message		When interfacing to the shop floor system, upon sign on, system will check if employee is already signed on, this parameter gives you the ability to change the message that is presented to the operator. Example: Sign On Error Message = “Please Sign-Off Shop-Floor Data Collection System.”

Edit Section

This section is used to alter the data edit criteria of the system. The entries in this section consist of a Field Name followed by an equal sign, followed by a series of keywords and their associated values. The keyword and values sets are separated by semicolons. The use of spaces is optional.

Keyword	Default	Description
type	1	0 = display only 1 = alphanumeric 2 = alphabetic 3 = integer 4 = decimal 5 = date 6 = time 8 = yes/no
minl	1	Minimum number of characters which may be entered.
maxl		Maximum number of characters which may be entered.
optreq	R	"R" = required, entry is required. "O" = optional, entry may be left blank. When left blank, the value defined by the "default" keyword" is inserted as if it were keyed by the operator.
default		Default value to be used if used leaves entry blank. If the data is optional this entry is displayed automatically.
minv		Minimum numeric value which may be entered.
maxv		Maximum numeric value which may be entered.
scaler	2	Maximum number of digits which may follow decimal point.
pattern		A sequence of element size, type and constants. Multiple patterns are separated by commas. A telephone number pattern might be: "type=1; pattern=3N-4N, 3N-3N-4N"
level	1	0 = field may not be changed. 1 = field may only be changed when **B-DAQ** is in STOP mode. 2 = field may be changed at any time. (Check with NASTech before using).

The following describes the default edit criteria for each entry field. The last group defines the edit criteria for entry fields on the remote terminals. To alter the edit criteria, place the command in the **Edit** section of the **Bindery.ini** file. To force a 7 digit numeric job number, enter the following command.

JobNo = “type=3; minl=7; maxl=7”

Parameter	Default Edit Criteria
JobNo	“type=1; minl=2; maxl=8; level=2”
JobTicketNo	“type=1; minl=2; maxl=8; level=2”
JobDesc	“type=1; minl=2; maxl=30; level=2”
JobCustID	“type=1; minl=2; maxl=6; optreq=0; level=2”
JobCustName	“type=1; minl=2; maxl=30; level=2”
JobVersion	“type=1; maxl=6; level=2”
JobQuantity	“type=3; maxl=9; minv=100; maxv=9999999; level=2”
OperID	“type=1; minl=2; maxl=4; optreq=0; level=2”
OperName	“type=1; minl=2; maxl=30; level=2”
OperShift	“type=3; minv=1; maxv=3; level=2”
PayRate	“type=3; minl=2; maxl=2; level=2”
ClassCode	“type=3; minl=2; maxl=2; level=2”
ProductType	“type=1; minl=1; maxl=6; level=2”
PocketCount	“type=3; minl=1; maxl=2; minv=1; maxv=99; level=2”
CrewSize	“type=3; minl=1; maxl=1; minv=1; maxv=9; level=2””
SchedSpeed	“type=3; minl=4; maxl=5; minv=8000; maxv=24000; level=2”
QualityCount	“type=3; minl=1; maxl=1; minv=0; maxv=8; level=2”
QualityFrequency	“type=3; minl=3; maxl=4; minv=500; maxv=2000; level=2”
3or5Knife	“type=3; minl=1; maxl=1; valdat=3,5; level=2”
NumberUp	“type=3; minl=1; maxl=1; minv=1; maxv=2; level=2”

Label Section

A Label section may be used to change selected headings within the system to match those used by your company. Although this is not recommended, we can provide you with the ability to do so if necessary. Please contact us for more information regarding this capability.

Config Data

This section is used to list the entries to be displayed in the configuration dialog box. Those entries that are not used by your plant or by the individual machine may be deleted from the .ini file. The order at which the entries are entered are the order in which the entries are displayed to the operator.

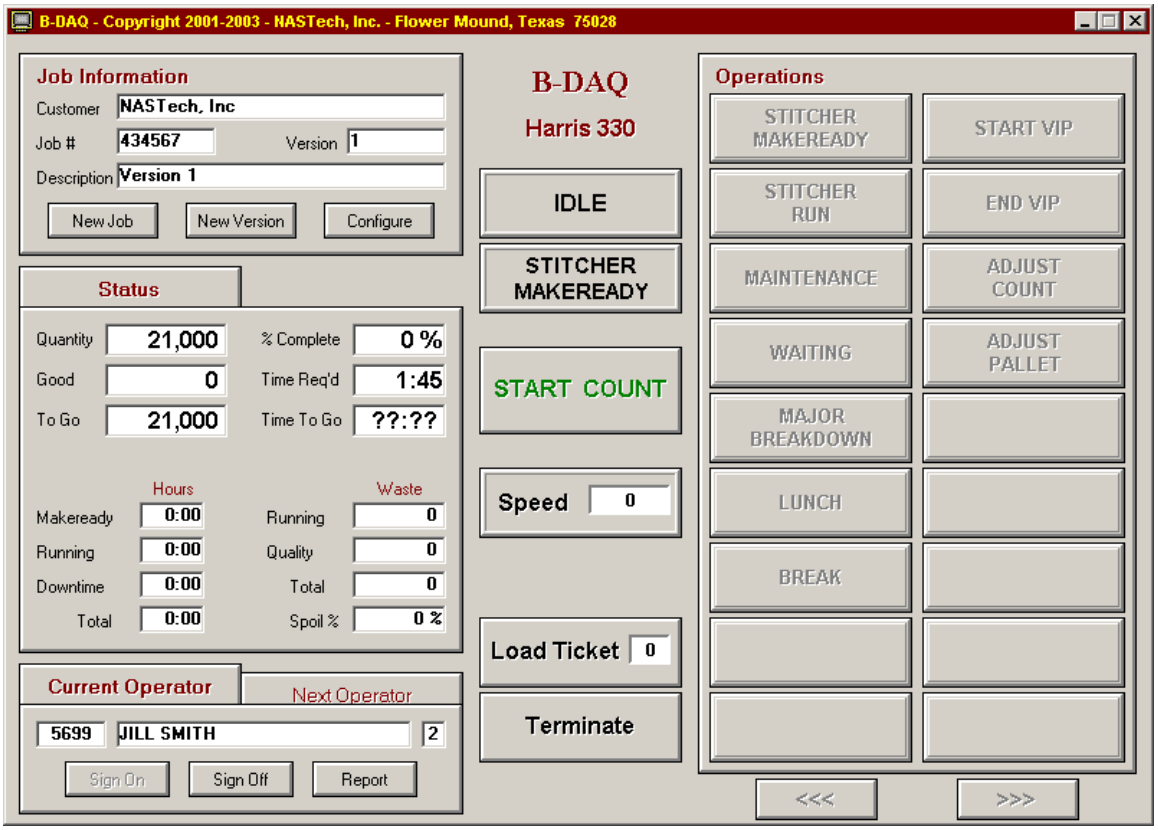
Config Data =

Parameter	Default Edit Criteria
Product Type	Used to enter the product type as defined in P-Maint.
Pocket Count	Used to enter the number of pockets to be used for the job.
Crew Size	Used to enter the crew size.
Sched Speed	Used to enter the scheduled speed of the run.
Quality Count	Used to enter the number of quality copies to be produced each time quality copies are produced.
Quality Frequency	Used to define how often quality copies are produced.
Class Code	Used to enter the class code or payroll code.
3 or 5 Knife	Used to define how the books are cut at the output of the machine.
Number Up	Used to enter the number of books produced per revolution of the machine.

Chapter 4 Bindery Module

Main Screen

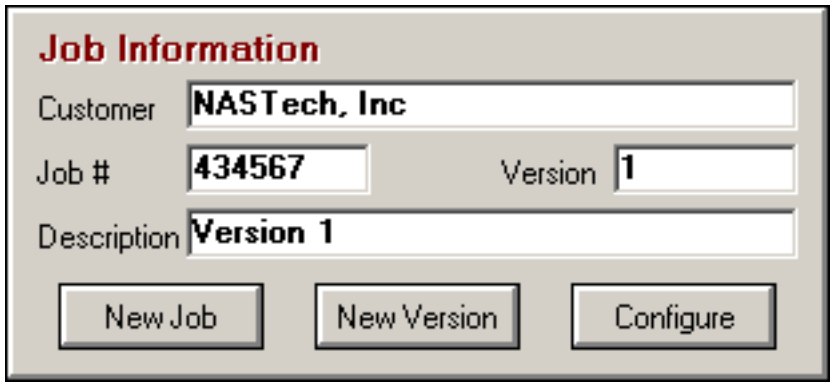
To initiate the system, double-click the desktop **B-DAQ** icon. To terminate, ensure that the system is in the **Stop** mode, then click the **Terminate** button.



The following pages will describe each section of the Main Screen in detail.

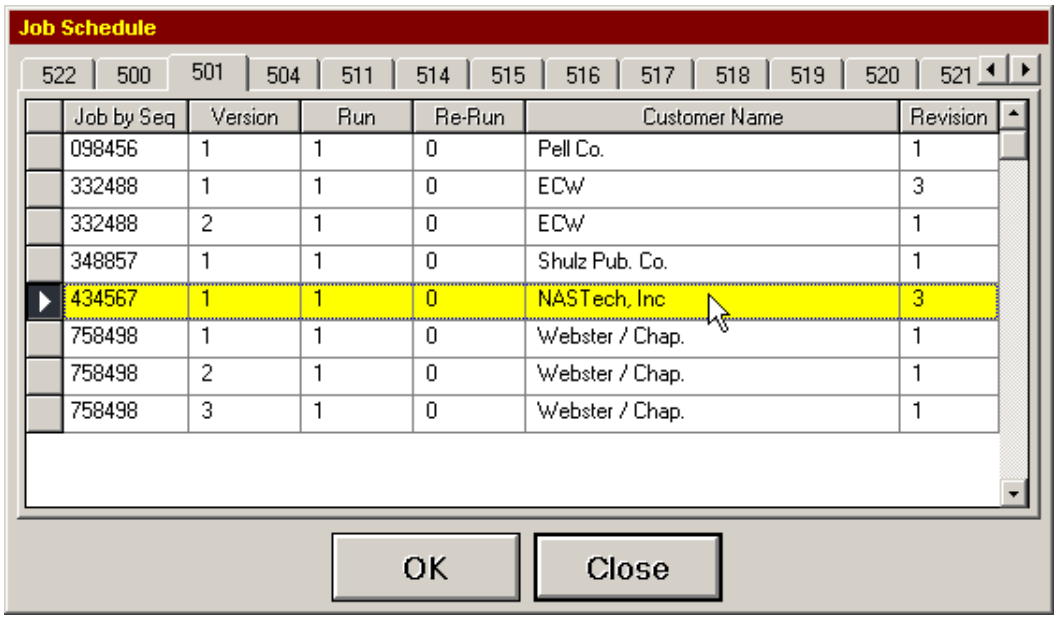
Job Information Panel

The Job Information Panel displays the current Job, and allows Job parameters to be edited. Buttons are also provided to change the current Job or Version, and to change configuration parameters as described in the following:



New Job Button

The **Job Schedule** screen allows the Operator to select a job to be run from the schedule. If the job is not in the schedule, the **Close** button will display a series of dialog boxes that will prompt the operator for the required job information. The tabs at the top of the screen represent the machines that the job was scheduled for. Jobs can be selected from other machine schedules if necessary, using parameter control as defined by the customer.



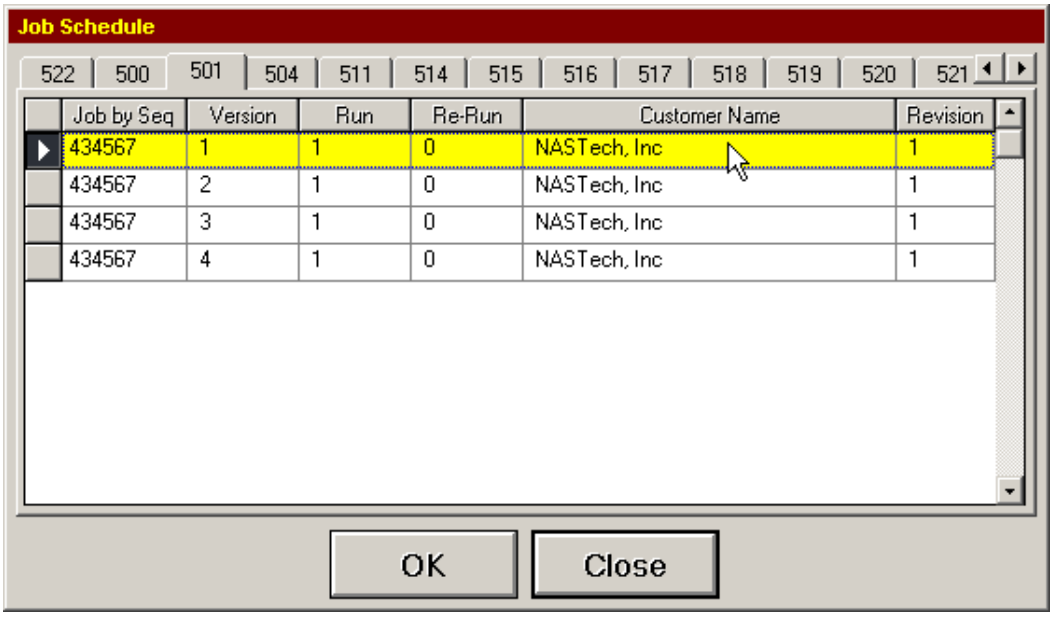
Job by Seq	Version	Run	Re-Run	Customer Name	Revision
098456	1	1	0	Pell Co.	1
332488	1	1	0	ECW	3
332488	2	1	0	ECW	1
348857	1	1	0	Shulz Pub. Co.	1
434567	1	1	0	NASTech, Inc	3
758498	1	1	0	Webster / Chap.	1
758498	2	1	0	Webster / Chap.	1
758498	3	1	0	Webster / Chap.	1

Details

Job by Seq	Displays the job number sorted numerically by the Sequence number as defined in the Scheduling Module (B-Sched.exe). Clicking this heading allows jobs to be displayed numerically by Job number instead. (Job by Job)
Version	The version number.
Run	The run number.
Re-Run	The Re-Run number.
Customer Name	The customer name. Clicking this heading allows the job description or the version description to be displayed instead.
Revision	The revision number.
OK	Enters the selected job data into the system and closes the dialog box.
Close	Used to close the dialog box, without loading a new job.

New Version Button

The **New Version** button allows the Operator to select a new version to be run from the schedule. The versions displayed will be only those versions that share the same job number as previously entered. If the version is not in the schedule, the **Close** button will display a series of dialog boxes that will prompt the operator for the required version information.

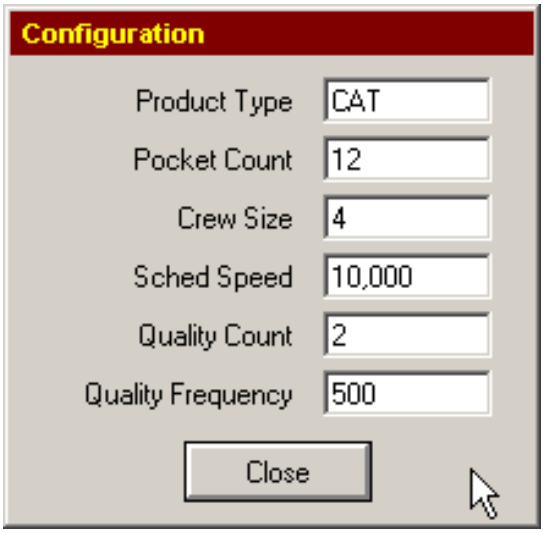


Details

Job by Seq	Displays the job number.
Version	The version number sorted numerically.
Run	The run number.
Re-Run	The re-run number.
Customer Name	The customer name. Clicking this heading allows the job description or the version description to be displayed instead.
Revision	The revision number.
OK	Enters the selected version data into the system and closes the dialog box.
Close	Used to close the dialog box, without loading a new version.

Configure Button

This dialog box is presented to the operator upon loading a new job or version from the schedule, or by clicking the **Configure** button. This data may be pre-loaded by the scheduling department. These necessary parameters must be checked for accuracy before each run. If any required information is missing, clicking in the field heading will display a dialog box in which to enter the required information. The parameters to be entered are user defined in the **Bindery.ini** file. Below are all of the parameters that may be included in the Configuration screen.

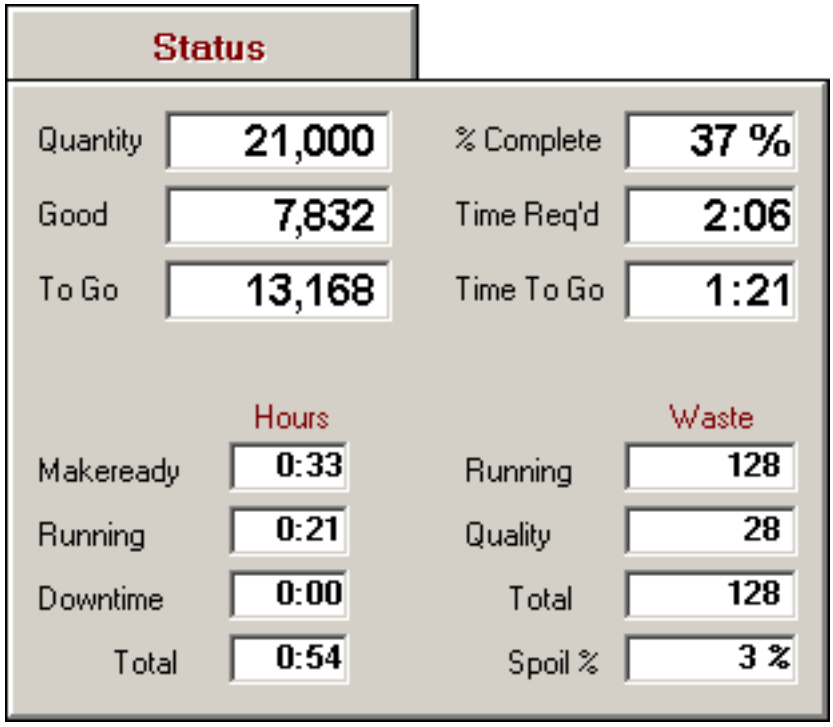


Details

Product Type	The type of product to be produced.
Pocket Count	The number of pockets to be used.
Crew Size	The crew size.
Sched Speed	The scheduled speed of the run.
Quantity Count	The number of quality copies to be produced.
Quantity Frequency	The frequency of quality copies to be produced.
Class Code	The payroll class code.
3 or 5 Knife	Defines how the product is cut.
Number-Up	The number of copies to be produced per revolution of the machine.

Status Folder

This folder is used to display the current status of the version being run. The current status of the entire job may also be displayed if necessary, by entering the appropriate parameter into the **Bindery.ini** file.



Details

Quantity	The order quantity.
Good	The number of good books produced.
To Go	The remaining quantity.
% Complete	The percent complete.
Time Req'd	Time remaining based on the scheduled speed.
Time To Go	Time remaining based on the current speed.
Makeready Hours	Total makeready hours.
Running Hours	Total running hours.
Downtime Hours	Total downtime hours.

Running Waste	Total running waste.
Quality Waste	Total quality copies produced.
Total Waste	Total waste.
Spoil %	Waste percentage of total gross.

Operator Section

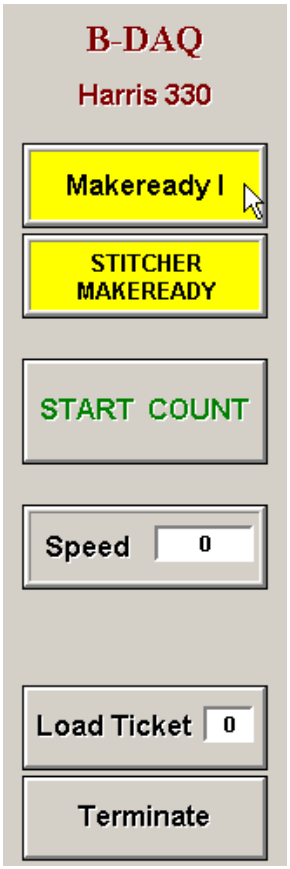
This section identifies the various operators on the associated shift. This information should be defined prior to the start of each shift.

Details

Employee #	Employee ID number.
Employee Name	Employee name.
Shift #	Shift number.
Sign-On	Used to sign on to the system.
Sign-Off	Used to sign off the system
Report	Used to view or print a shift detail report for the lead operator.

Center Section

The center section of the screen displays the current status of the run, and the current operation being performed. Controls are also provided here as described in the following:



Details

Start Count	Used to initialize the counters once the machine has been set up.
Speed	Displays the current machine speed.
Load Ticket	Used to print the load ticket once a pallet has been completed. This box also displays the number of pallets produced during the run.
Terminate	Used to terminate the application.

Operations Section

This section is used to provide for the selection of operation codes.

The buttons displayed here are user defined and used controlled. Therefore, only those codes that are valid for your plant are presented to the operator.

These codes are also dynamically displayed, for example, only those codes that are valid at any particular point in the run are displayed. **Fig.1**

The buttons used for operation codes can also be presented to the operator using multi level control. **Fig.2** shows the operations displayed after the **Waiting** button has been pressed.

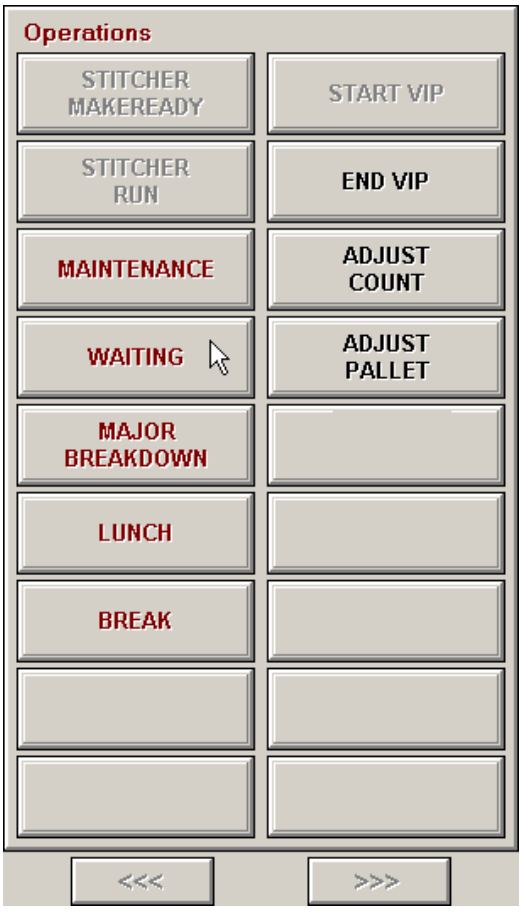


Figure 1

Figure 2

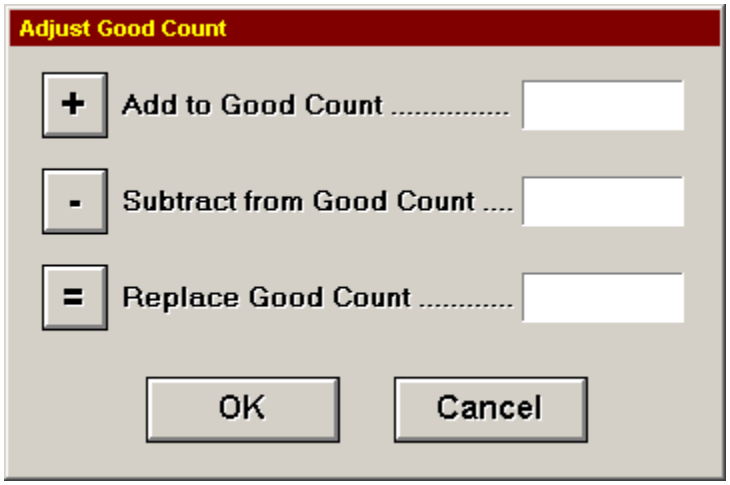
Functions

In addition to the various operation codes, buttons can also be provided here to control various functions of the system. Descriptions of all available functions are as follows:

Adjust Count	Used to open the Adjust Count dialog box.
Adjust Pallet	Used to open the pallet maintenance screen.
Beg Store	Used to indicate that store copies are now being produced.
Beg Vip	Used to indicate that samples are now being produced.
Break	Used to indicate that a Break has begun.
End Store	Used to indicate that store copies are no longer being produced.
End Vip	Used to indicate that samples production is complete.
Force EOP	Used to Print Load Tickets.
Lunch	Used to indicate that Lunch has begun.
Make-Ready	Used to place the machine back into it's makeready status.
Pallet Log	Used to open the Pallet Log.
Shell	Used to invoke command specified by the "Shell Command" Parameter. Used to call Help documentation etc….

Count Adjust

This dialog box is used to make Adjustments to counts as needed. To open, click the “Adjust Count” button from the Operations Panel.

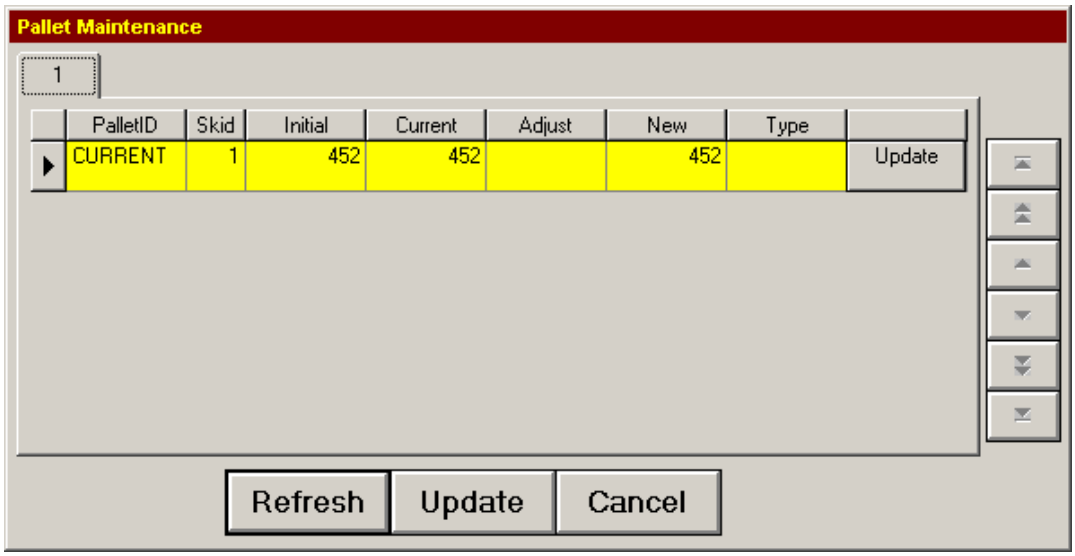


Details

Add to Good Count	Used to enter the number of books to add to the good count.
Subtract from Good Count	Used to enter the number of books to subtract from the good count.
Replace Good Count	Used to enter the good count, this will replace the current good count figure.
OK	Used to make the adjustment, and close the dialog box.
Cancel	Used to close the dialog box without making changes.

Pallet Maintenance

This dialog box is used to make Adjustments to pallet counts as needed. To open, click the “Adjust Pallet” button from the Operations Panel.

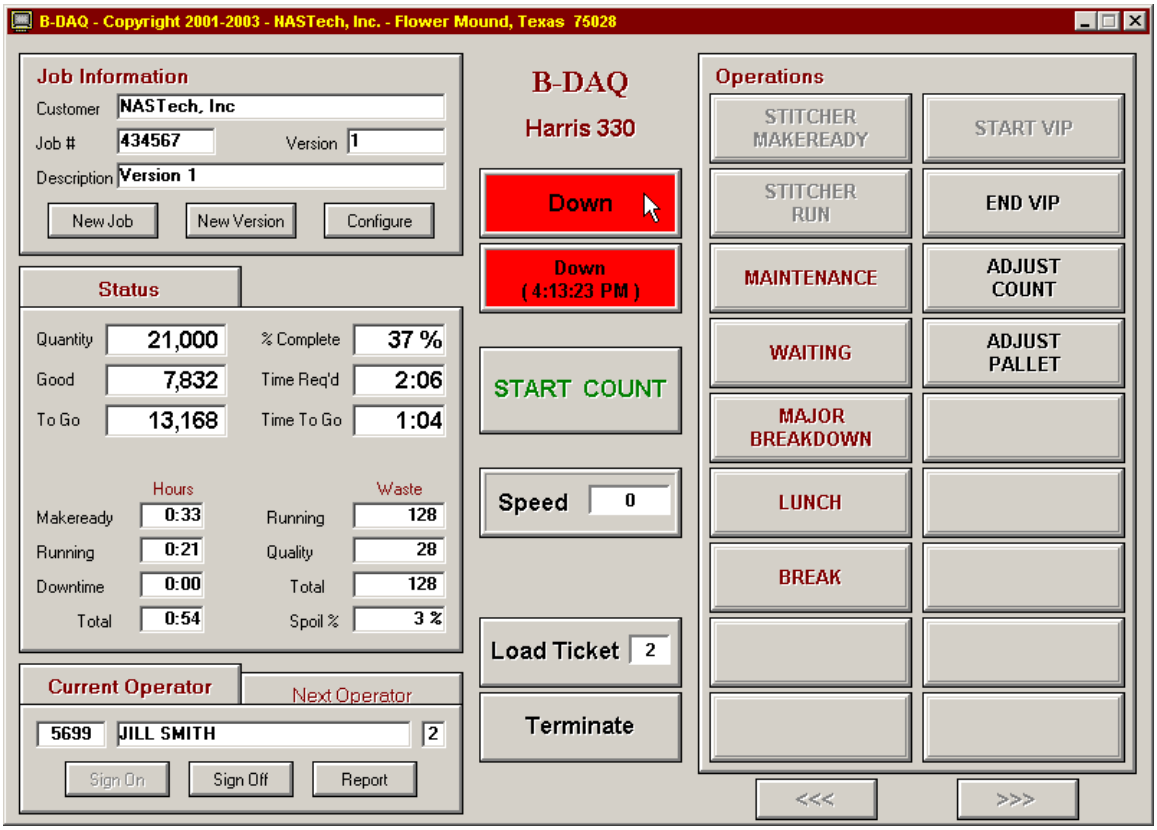


Details

Pallet ID	The Current Pallet.
Skid	The Pallet sequence number.
Initial	Initial count on the Current Pallet.
Current	Current count on the Pallet.
Adjust	Opens the dialog box allowing positive or negative pallet count adjustments.
New	The Adjusted count.
Type	Used to allow the Pallet to be defined, this info appears on the Load Ticket. (EG…”Samples”)
Refresh	Used to refresh the screen.
Update	Used to complete the transaction, and to close the dialog box.
Cancel	Used to close the dialog box without making changes.

Machine Stops

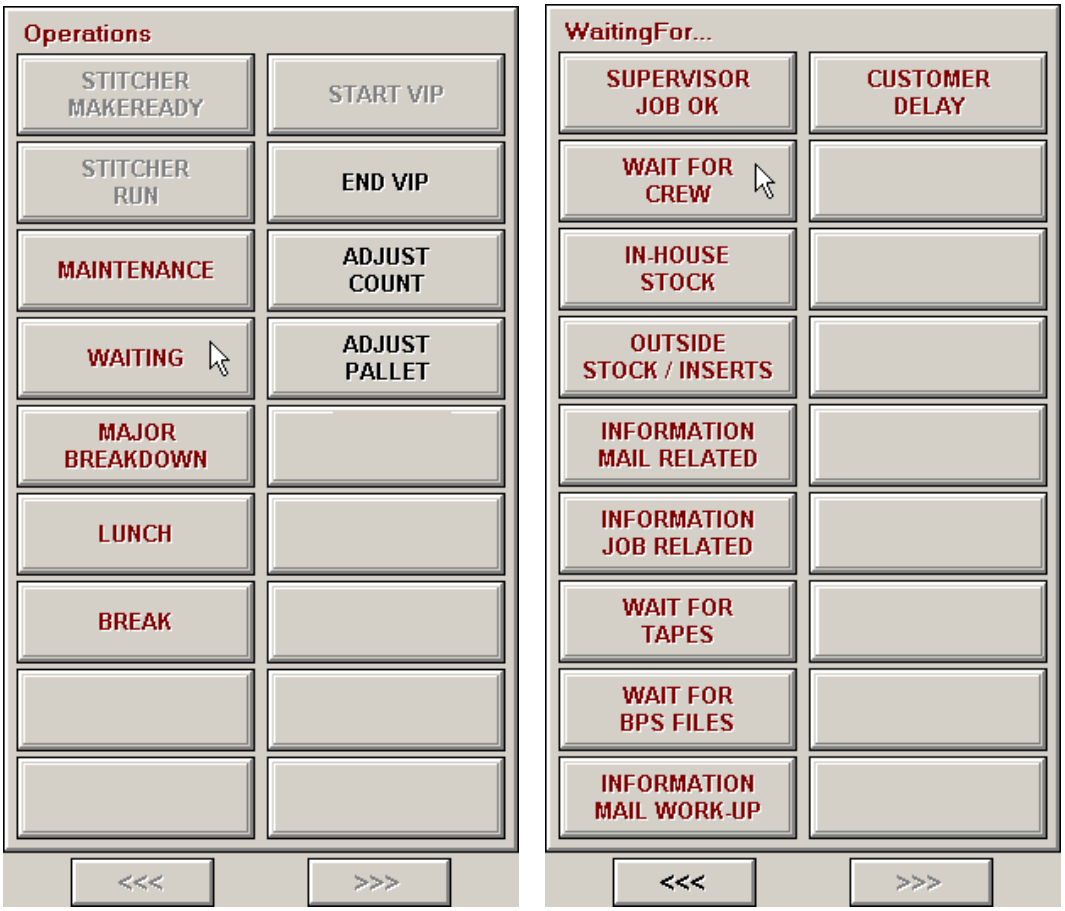
When the machine stops, an entry is made in the log to record the exact date and time of the event. Downtime entries are placed on **HOLD** in the reporting system, awaiting operator entry of the cause of the downtime. These entries are **RELEASED** to the reporting system when a reason is provided.



B-DAQ will periodically attempt to complete processing of released entries. All entries up to the first entry on **HOLD** will be transferred to the Management / Reporting module. Once completed, an entry may no longer be modified.

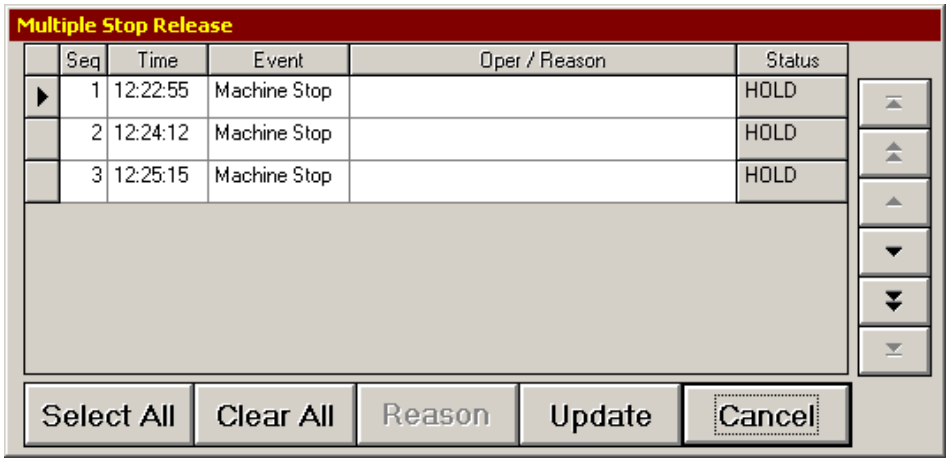
Reason Codes

As mentioned in the previous page, a **HOLD** generated by a **Machine Stop** event can only be **RELEASED** when the Operator enters the Down-Time reason code. The operations section of the screen allows for the selection of op-codes. To release the stop, the operator simply selects the code that most accurately describes the problem that has occurred.



Multiple-Stop

The Multiple-Stop Release dialog box is used when selecting a single reason code to describe multiple stops. This is useful when the machine goes down more than once due to the same problem. When there are multiple stops to report, the **Multi Stop** button will be presented to the operator. Clicking the multi stop button opens the following screen:



Details

y	Used to select the codes to be released.
Seq	The sequence number to describe all stops currently on HOLD.
Time	The time of the down event.
Event	On this Dialog Box, this will display Machine Stop in all cases.
Oper/Reason	Clicking in this field displays a list of codes to be selected.
Status	The current status of the transaction.
Select All	This button allows all events to be selected for editing.
Clear All	This button de-selects all events.
Reason	This button displays a list of codes to be selected and edits all selected codes.
Update	Allows all changes to be uploaded to the server by changing the transaction status to RELEASED.

Cancel	This button closes the Dialog Box without making changes.

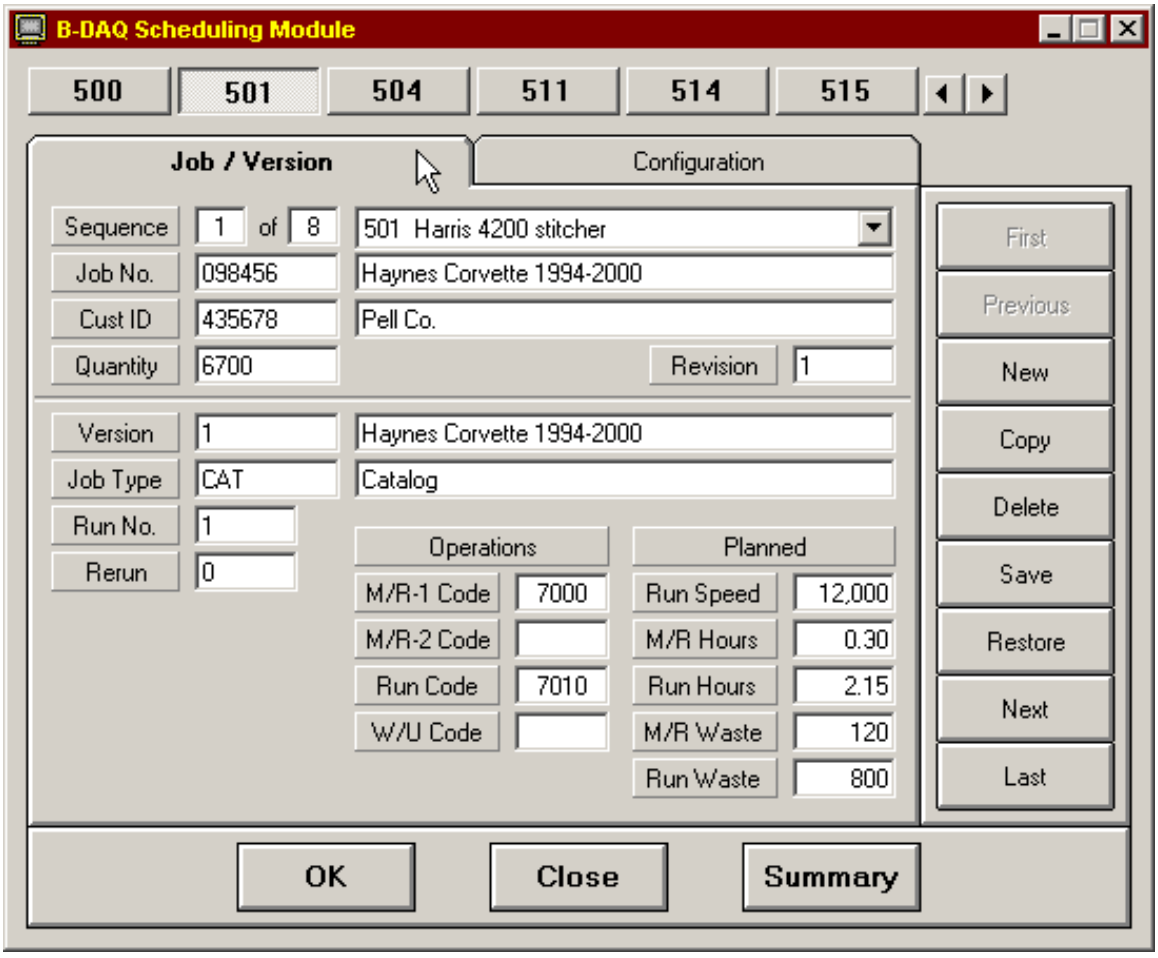
Chapter 5 Scheduling Module

Detail Screen

The Scheduling module is used to store the jobs that are scheduled to run in the bindery. The data defined here is stored until the operator selects the job from the **B-DAQ** Bindery Module.

The **Detail Screen** is used to define the Job and Version to be run, and to describe the configuration of a number of parameters prior to the run.

The parameters to be defined via the Detail Screen are outlined in the following pages.



Menu Options

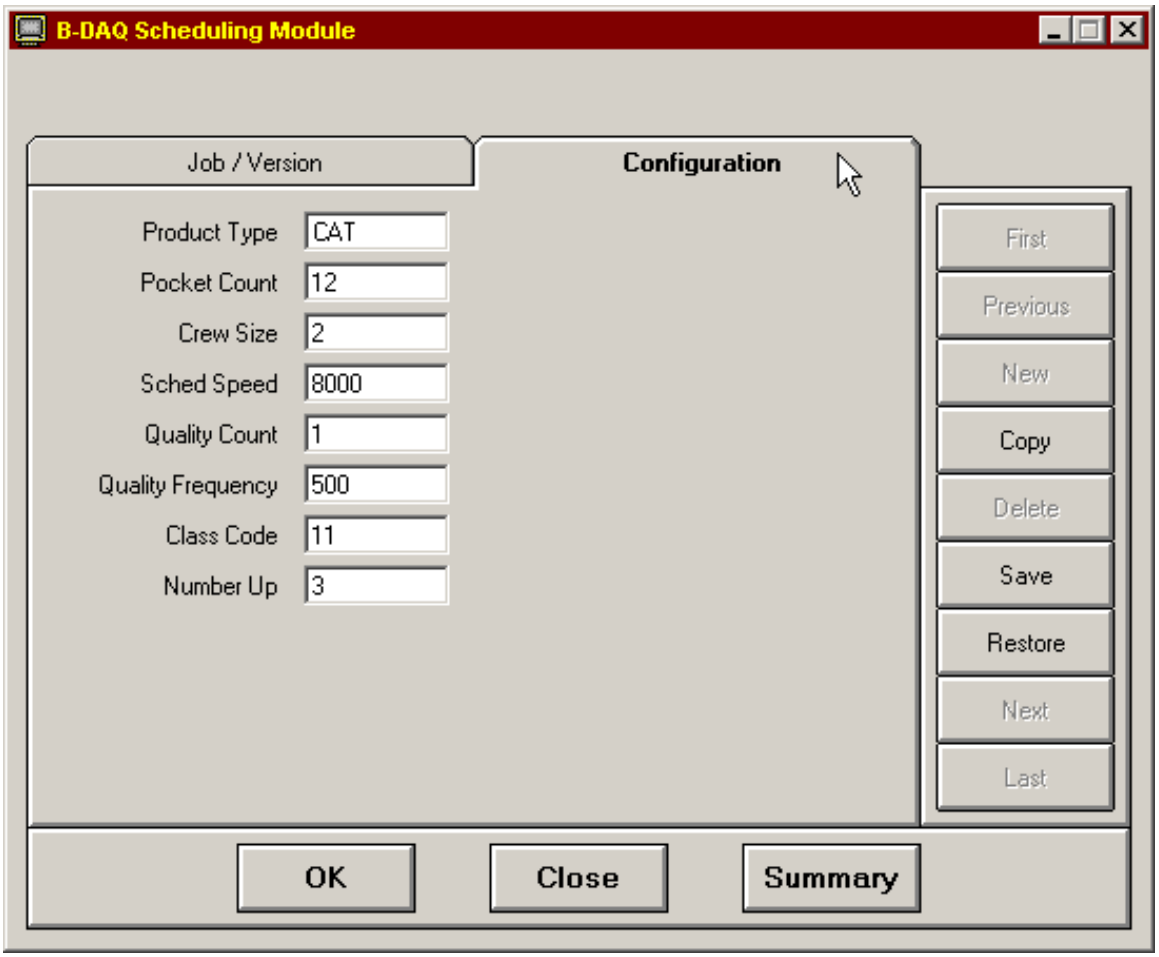
First	View first job in the schedule.
Previous	View prior job in the schedule.
New	Creates a new job sequence number and clears all fields for subsequent entry.
Copy	Copies the data from the currently displayed job to a new job sequence number. The copied job definition may then be selectively modified to define the specifications of the new job.
Delete	Deletes the currently displayed job from the schedule. A warning message is displayed to help eliminate accidental deletions.
Save	Saves the current job schedule in the database.
Restore	Reads the data from the database for the current job. This function is used to negate any and all changes made to the current job since the last time it was saved to the database.
Next	View next job in the schedule.
Last	View last job in the schedule.
OK	Saves the current schedule and exits the program.
Cancel	Exits the program without saving the current schedule.
Summary	Displays the Job Summary screen. The current job remains selected.

Job / Version Folder

Sequence	The current job being viewed and the total number of jobs in the schedule.
Machine Desc.	The machine the job is scheduled to run on. The job may be moved to different machine by selecting the machine from the drop down list.
Job No.	The job number and description of the job being run. The job description is displayed automatically if present on the job master file.
Cust ID	The customer ID and customer name. The customer name is displayed automatically if present on the customer master file.
Quantity	The order quantity.
Version	The version number and version description.
Job Type	The job type and description.
Run No.	The run number.
Re-run	The re-run number.
Operations	The scheduled operation codes for MR-1, MR-2, Run, and Clean-Up.
Planned	The scheduled hours and waste figures are used by **B-DAQ** to compare actual hours and waste to that of the schedule. These figures are available at the machine for the operator to determine whether or not he or she is performing on schedule.

Configuration Folder

This folder is used to define machine parameters. The data displayed here is can be defined by scheduling personnel, or may be left up to the operator to define.



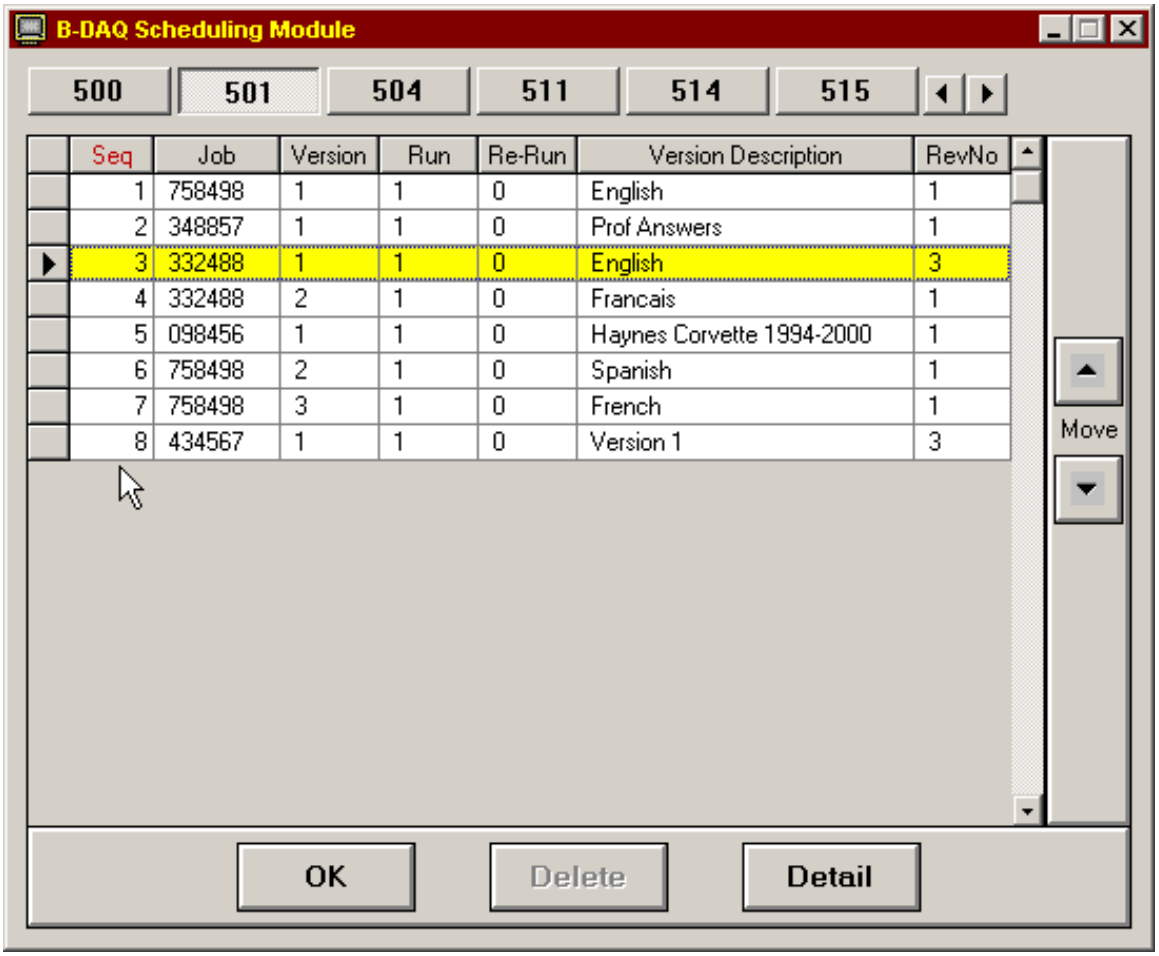
The parameters to be edited are user defined; therefore, only those parameters that are valid for your plant and for each machine will be presented here. The available parameters are explained on the following page.

Parameters

Product Type	The product type.
Pocket Count	The number of pockets to be used.
Crew Size	The crew size.
Sched Speed	The scheduled speed of the run.
Quality Count	The number of quality copies to be produced each time quality copies are produced.
Quality Frequency	The frequency at which the quality copies are produced..
Class Code	The payroll class code.
Sched Speed	The scheduled speed of the run.
Quality Count	The number of quality copies to be produced each time quality copies are produced.
Quality Frequency	The frequency at which the quality copies are produced.
Class Code	The payroll class code.

Summary Screen

This screen is used to locate a job to be edited, to delete jobs from the schedule, and to re-prioritize the sequence of jobs. The buttons at the top of the screen represent the various machines being scheduled.



Menu Options

OK	Saves the current job and exits the program.
Delete	Deletes the currently displayed job from the schedule. A warning message is displayed to help eliminate accidental deletions.
Detail	Displays the detail screen. The current job remains selected.
Move	Increase or decrease the priority of the currently selected record by changing the sequence number.

Parameters

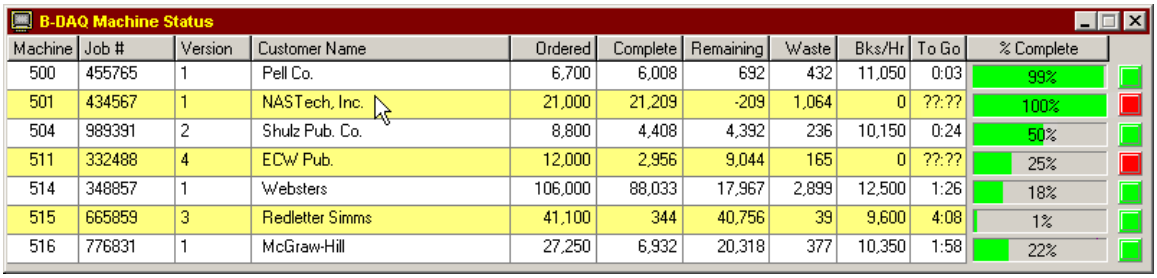
Seq	The sequence number. Clicking this heading allows the jobs to be presented in order by sequence number.
Job	The job number. Clicking this heading allows the jobs to be presented in order by job number.
Version	The version number.
Run	The run number.
Re-Run	The re-run number.
Version desc.	The version description.
Rev No	The revision number.

Chapter 6 Machine Status Module

Summary Screen

The Machine Status Module is used by the scheduling department and management to determine the current status of jobs in the bindery.

The **Summary Screen** is used to view the status for up to 20 machines simultaneously.



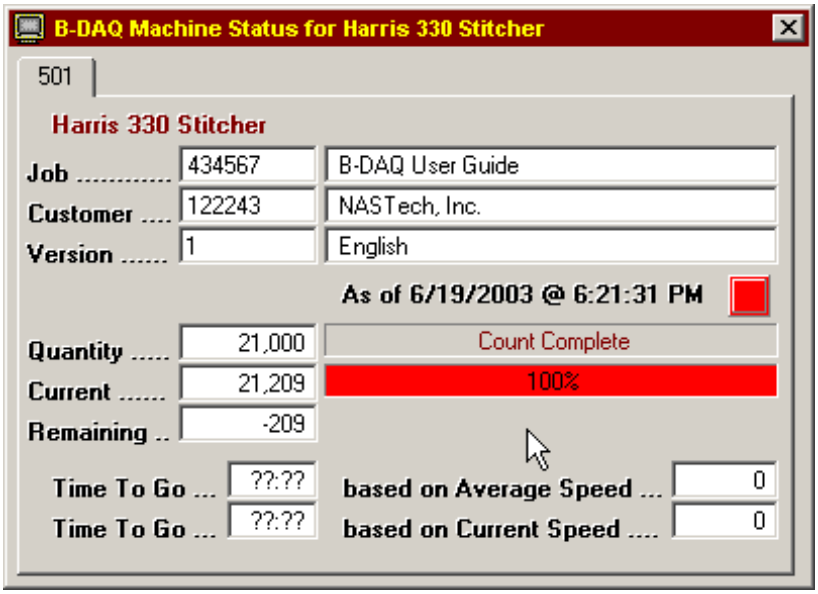
Machine	Job #	Version	Customer Name	Ordered	Complete	Remaining	Waste	Bks/Hr	To Go	% Complete
500	455765	1	Pell Co.	6,700	6,008	692	432	11,050	0:03	99%
501	434567	1	NASTech, Inc.	21,000	21,209	-209	1,064	0	??:??	100%
504	989391	2	Shulz Pub. Co.	8,800	4,408	4,392	236	10,150	0:24	50%
511	332488	4	ECW Pub.	12,000	2,956	9,044	165	0	??:??	25%
514	348857	1	Websters	106,000	88,033	17,967	2,899	12,500	1:26	18%
515	665859	3	Redletter Simms	41,100	344	40,756	39	9,600	4:08	1%
516	776831	1	McGraw-Hill	27,250	6,932	20,318	377	10,350	1:58	22%

Details

Machine	The cost center number.
Job #	The job number.
Version	The version number.
Customer Name	The customer name.
Ordered	The quantity requested.
Complete	The total number of completed books.
Remaining	The number of remaining books.
Waste	The current waste.
Imp/Hr.	The speed of the machine in books per hour.
To Go	The time to go based on the current speed.
% Complete	The percent complete.

Detail Screen

The Detail Screen can be viewed to provide additional details. To open, click the associated job from within the Status Summary Screen.



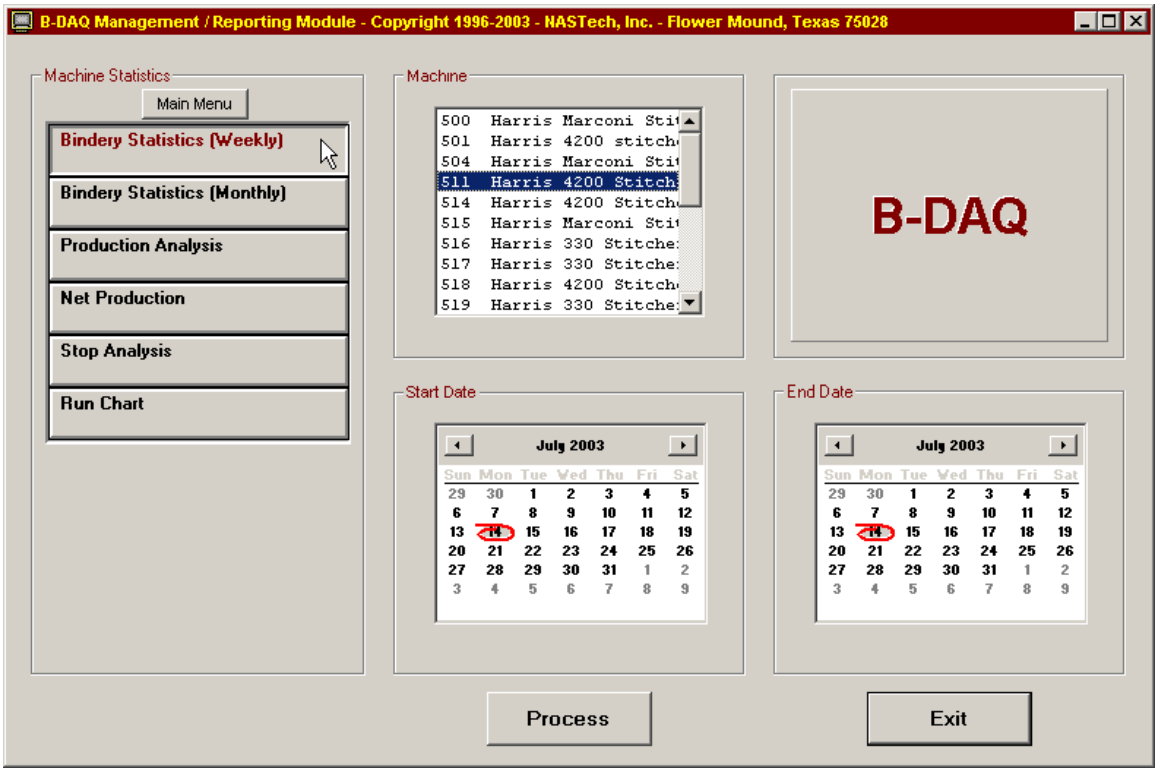
Details

Job	The job number and description.
Customer	The customer number and name.
Version	The version number and description.
Quantity	The quantity requested.
Current	The total number of completed books.
Remaining	The number of remaining books.
Time To Go	The time to go based on the average speed.
Time To Go	The time to go based on the current speed.

Chapter 7 Management / Reporting Module

Overview

The Management / Reporting module is used to display and/or print selected reports. Each report contains selection criteria that may be specified to limit the amount of data reported.



The reports available are presented as a series of buttons, each of which may be selected when required. As new reports are made available, additional buttons are automatically added.

When a report is selected, the four panels to the right are used to specify the selection criteria required for the particular report. Once the selection criterion has been specified, the report may be displayed by clicking on the **Summary**, **Detail**, or **Process** button. Once a report has been displayed, you may open a new report by clicking the **Open Report** button. Opened reports can be reviewed by using the drop down list. Reports are closed using the **Close Report** button.

Once a report is displayed, it may be printed in its entirety or selectively by page.

Upon selecting a report and by clicking the **Process**, **Summary**, or **Detail** button, the B-DAQ reporting system analyzes the system logs and builds a summary database which summarizes all data needed for the selected report.

When a report is not run periodically, the next time you run the report, the system needs to update the summary databases. Depending on the amount of data to be summarized, this process may take a while and the given report may not display right away. There are a few ways to make sure that the summary databases are up to date as outlined in the following procedures:

- From the **P-Admin** main screen, without selecting a report, click the Process button. This will summarize all data for all reports at one time.

- Using Windows "Scheduled Tasks", you may schedule the **P-Admin.exe** program to run periodically. This ensures that the summary databases are up to date. The following is the procedure to set up the task:

    - Choose **Start\ControlPanel\SheduledTasks**.
    - Click **"Add Scheduled Task".**
    - Click **"Next".**
    - Click the **"Browse"** button and browse the server to the BDAQ\Shared directory and select the **P-Admin.exe** file.
    - Follow the instructions to select the time and enter the user name and password when prompted.
    - Check the box marked **"Open Advanced Properties for this Task when I click Finish"** button and click the **Finish** button.
    - In the *Run* field, change the path to the following: **C:\BDAQ\Shared\P-Admin.exe AUTO**
    - In the *Start In* field, make sure the path is as following: **C:\BDAQ\Shared**

System Logs

Shift Log

This report shows the events that have occurred on each machine for a specified period of time. The report is displayed in chronological order.

Heading

Heading	The machine cost center number, description, and the time period for the report.

Body

Date	The actual date on which the associated event occurred.
Time	The actual time at which the associated event occurred.
Elapsed	The elapsed time of the event.
Event	The description of the event.
Oper/Reason	The description of the operation performed or the reason for the Down-Time.
Speed	The speed of the machine at the time the event occurred.
Gross	The gross book count for the currently running version at the time the event occurred.
Comments	The comments entered by the operator to provide additional information about the associated event.

Footing

Footing	The date and time the report was run, the page number and the company name.

Speed Log

This report shows the machine speed fluctuations that occurred for a specified period of time. The speed must change by the amount specified by the *Speed Variance* parameter in the **Bindery.ini** file. The report is displayed in chronological order.

Heading

Heading	The machine cost center number, description, and the time period for the report.

Body

Date	The actual date on which the associated event occurred.
Time	The actual time at which the associated event occurred.
Elapsed	The elapsed hours, minutes and seconds of the event.
Event	The description of the event.
Speed	The speed of the machine at the time the event occurred.
Gross	The gross book count for the currently running version at the time the event occurred.
Net	The calculated good count for the currently running version at the time of the event.

Footing

Footing	The date and time the report was run, the page number and the company name.

Pallet Log

This report shows the pallets that were produced during a specified period of time. Adjustments made to the pallets are also reported. The report is displayed in chronological order.

Heading

Heading	The machine cost center number, description, and the time period for the report.

Body

Date	The actual date on which the associated pallet was created or adjusted.
Time	The actual time at which the associated pallet was created or adjusted.
Event	Indicates whether the pallet was created or adjusted.
Seq	The pallet sequence number.
Pallet ID	The unique pallet identifier for the pallet.
Quantity	The original pallet quantity or the quantity after the adjustment was made.
Job #	The job number for which the pallet was produced.
Sig ID	The Signature identifier for the associated Job.
Description	The version description.
Type	The type of product on the pallet. Used to indicate samples, VIP's etc.

Footing

Footing	The date and time the report was run, the page number and the company name.

Job Statistics

Job Statistics Report

This report shows makeready and run statistics for a specified job. All versions, runs and re-runs for the specified job are printed. Totals are provided for the entire job.

Demographics

Job Number	The job number.
Customer #	The customer ID and name for which the job was run.

Body

Ver-Run	The version and run number.
Description	The version description.
Start Date	The date this occurrence of the version was started.
Start Time	The time this occurrence of the version was started.
M/R Hours	The number of hours expended for Makeready I and Makeready II.
Run Hours	The number of hours expended for the Run.
Down-Time	The number of hours expended for Down-Time including machine restarts.
M/R Qty.	The number of waste books accumulated during Makeready.
Gross Qty	The total gross books produced.
Order Qty	The order quantity.
Net Qty	The total net books produced.
Run/Waste %	The percentage of waste which occurred during the run. =(Run Waste + Restart Waste) / Net Books * 100

Footing

Footing	The date and time the report was run, the page number and the company name.

Production Detail by Version

This report shows makeready, run, and down-time statistics for one or more versions within a specified job. If all versions for the job are selected, a summary report will also be displayed for the entire job. The following describes both the Detail and Summary report options. The Summary report does not break out down-time statistics and does not break out stop codes.

Heading

Heading	The machine cost center number

Demographics

Job Number	The job number and associated description.
Version	The version ID for each of the versions associated with the job being reported.
Run	The run and re-run numbers for each of the associated versions.
Customer	The customer ID and associated customer name.
Ordered	The order quantity.

Shift Detail

Shift	The shift number.
Gross (Imp)	The total accumulated gross count by shift.
Net (Imp)	The total accumulated net count by shift.
Waste (Imp)	The total accumulated waste count by shift.
% Waste Net	= Waste Count / Net Count * 100
Print-Time	= (MR2 + Run) in hours.

Event Detail

Gross (Imp)	Includes gross books accumulated during MR2. Also includes gross books accumulated during Production (Run + Down-Time +Restarting), Production/DT, and Non/Charge.

Net (Imp)	Includes net books accumulated during Production (Run + Down-Time +Restarting).
Waste (Imp)	Includes waste books accumulated during MR2. Also includes Gross books accumulated during Production (Run + Down-Time +Restarting) Production/DT, and Non-Charge.
Hours	Total Time for the associated event in hours.
Pct	The percentage of time for the associated event.
Num	The number of occurrences for the associated event.

Speed Detail

Gross	The average gross books per hour during Run (Run + Restart). = Gross Books / Run Hours.
Net	The average net books per hour during Production/Run (MR3 + Run + Restart). = Net Books / Run Hours.

Yield

Gross	The average number of gross books per hour during Run (MR3 + Run + Restart). = Gross Books / Run Hours.
Net	The average number of Net books per hour during Run (MR3 + Run + Restart). = Net Books / Run Hours.

Stop Detail

Stops	M = Makeready, I = Idle. (Detail Report only)
Code	The down time code.
Description	The code description.
Waste (Imp)	The total waste books accumulated for the associated event.
Hours	The total time for the associated event in hours.

Pct	The percentage of the total time for the associated event.
Num	The number of occurrences for the associated event.
Manual Entries	Waste books, hours, time percentage, and number of occurrences by version **(Detail Report only).**
System Entries	Waste books, hours, time percentage, and number of occurrences by version. **(Detail Report only).**
Idle Entries	Waste books, hours, time percentage, and number of occurrences by version. **(Detail Report only).**
Down-Time	Summary of all Down-Time by waste books, hours, time percentage and occurrences. Summarizes all Down-Time including Manual Entries, System Entries and Idle Entries. **(Summary Report only).**

Footing

Footing	The date and time the report was run, the page number and the company name.

Machine Statistics

Production Detail by Machine

This report summarizes bindery activity by operation and down-time for the associated shift(s) and machine during the specified period. The following describes both the Detail and Summary reports. The Summary report does not break out down-time statistics and does not break out stop codes.

Heading

Heading	The machine the version was run on, and the start and end dates for the version.

Shift Detail

Shift	The shift number.
Gross	The total accumulated gross count by shift.
Net Books	The total accumulated net count by shift.
Waste (Imp)	The total accumulated waste count by Shift.
% Waste Net	= Waste Count / Net Count * 100.
Run-Time	= (MR2 + Run) in hours.

Event Detail

Gross	Includes gross books accumulated during MR2. Also includes gross books accumulated during Production (Run + Down-Time +Restarting), Production/DT, and Non/Charge.
Net	Includes net books accumulated during Production (Run + Down-Time +Restarting).
Waste	Includes waste books accumulated during MR2. Also includes gross books accumulated during Production (Run + Down-Time +Restarting), Production/DT, and Non/Charge.
Hours	Total time for the associated event in hours.
Pct	The percentage of time for the associated event.

Num	The number of occurrences for the associated event.

Speed Detail

Gross	The average gross books per hour during Run (Run + Restart). = Gross Books / Run Hours.
Net	The average net books per hour during Run (Run + Restart). = Net Books / Run Hours.

Yield

Gross	The average gross books per hour during Run (Run + Restart). = Gross Books / Run Hours + Downtime + Washup.
Net	The average net books per hour during Run (Run + Restart). = Net Books / Run Hours + Downtime + Washup.

Stop Detail

Stops	I = Idle D = Downtime (Summary Report) M = Manual Entry Downtime (Detail Report) S = Press Stopped Downtime (Detail Report)
Code	The Down-Time code.
Description	The code description.
Waste (Imp)	The total waste books accumulated for the associated event.
Hours	The total time for the associated event in hours.
Pct	The percentage of the total time for the associated event.
Num	The number of occurrences for the associated event.
Manual Entries	Waste books, hours, time percentage, and number of occurrences by version. **(Detail Report only).**

System Entries	Waste books, hours, time percentage, and number of occurrences by version. **(Detail Report only).**
Idle Entries	Waste books, hours, time percentage, and number of occurrences by version. **(Detail Report only).**
Down-Time	Summary of all Down-Time by waste books, hours, time percentage and occurrences. **(Summary Report).**

Footing

Footing	The date and time the report was run, the page number and the company name.

Production Analysis Report

This report summarizes key operating indicators for the specified period. The report may include statistical data for multiple machines and/or shifts. The following describes both the Detail and Summary report options. The Summary report combines shift statistics for all shifts.

Heading

Heading	The machine cost center number, description, and the time period for the report.
Shift	The shift number(s).

Counts

Gross	The total number of gross books accumulated for the specified period.
Net	The total number of net books accumulated for the specified period.

Makeready

Number	The number of Initial, Subsequent and Total Makereadies.
Time	The total number of makeready hours expended for the specified period.

Stops

Number	The number of machine stops which occurred for the specified period. Only those stops incurred during Running are included
Time	The total number of Down-Time hours expended for the specified period. Only the Down-Time incurred during Running are included.

Productivity

Run Time	The total run time in hours and the run time percentage for the selected shifts, for the selected period.
Sched	The total number of scheduled hours for the selected period.
Un-Sched	The total number of un-scheduled hours for the selected period.

Shift Detail

Period Ending	The date.
Shift	The shift number.
Gross Books	Gross books.
Net Books	Total net books.
MR Count	Total number of make-readies for the shift.
MR Hours	Total make-ready hours for the shift.
Stop Count	Number of machine stops.
Down Hours	Total down time in hours.

Footing

Footing	The date and time the report was run, the page number and the company name.

Bindery Statistics Report (Weekly)

This report shows bindery statistical information summarized weekly by machine and by shift. The following describes both the Detail and Summary report options. The Summary report combines shift statistics for all shifts.

Heading

Heading	The machine cost center number, description, and the time period for the report.

Charts

- **Average Makeready Time** is charted for each week in the specified period. Goal and Trend lines are also charted.
- **Yield** / **Hour** is charted for each week in the specified period. Goal and Trend lines are also charted.
- **Books Bound** is charted for each week in the specified period. Goal and Trend lines are also charted.

Body

Period Ending	The date of the last day of the week. The first and last days of the week are defined in the **P-Admin.ini** file.
Shift	The shift number(s).
M/R Count	The number of Makereadies performed during the specified period.
M/R Hours	The number of hours expended for Makeready for the specified period.
Run Hours	The number of hours expended during Running for the specified period.
Down Hours	The total Down-Time which occurred during Running for the specified period.
Total Hours	The total hours expended from the start of the version to the end of the version. This includes all Makeready, Run and Down-Time hours.
Net Yield	= Net Books / (Run + Down-Time hours)

Yield/Run Hr.	The total books produced per run hour. Net Books / (Run + Down-Time hours)
Yield/Tot Hr.	The total books produced per run hour. Net Books / (Total hours)

Footing

Footing	The date and time the report was run, the page number and the company name.

Bindery Statistics Report (Monthly)

This report shows bindery statistical information summarized monthly by machine and by shift. The following describes both the Detail and Summary report options. The Summary report combines shift statistics for all shifts.

Heading

Heading	The machine cost center number, description, and the time period for the report.

Charts

- **Average Makeready Time** is charted for each month in the specified period. Goal and Trend lines are also charted.
- **Yield** / **Hour** is charted for each month in the specified period. Goal and Trend lines are also charted.
- **Books Bound** is charted for each month in the specified period. Goal and Trend lines are also charted.

Body

Period Ending	The date of the last day of the month. The first and last days of the month are defined in the **P-Admin.ini** file.
Shift	The shift number(s).
M/R Count	The number of Makereadies performed during the specified period.
M/R Hours	The number of hours expended for Makeready for the specified period.
Run Hours	The number of hours expended during Running for the specified period.
Down Hours	The total Down-Time which occurred during Running for the specified period.
Total Hours	The total hours expended from the start of the version to the end of the version. This includes all Makeready, Run and Down-Time hours.
Net Yield	= Net Books / (Run + Down-Time hours)

Yield/Run Hr.	The total books produced per run hour. Net Books / (Run + Down-Time hours)
Yield/Tot Hr.	The total books produced per run hour. Net Books / (Total hours)

Footing

Footing	The date and time the report was run, the page number and the company name.

Net Production Report

This report lists all jobs run on the specified machine for the requested period. The jobs are listed in the order in which they were run.

Heading

Heading	The machine cost center number, description, and the time period for the report.

Body

Job #	The job number.
Customer Name	The customer's name.
Job Description	The description of the job.
Version	The version number.
Job Type	The job type.
Net Books	The number of good books produced.
Ordered	The order quantity.
Last Activity	The date and time of the last activity for this version.

Footing

Footing	The date and time the report was run, the page number and the company name.

Stop Analysis Report

This report is used to analyze machine stops based on several different criteria. Several charts are produced which rank the reasons for the stops.

Heading

Heading	The selected machine cost center numbers, description, and the start and end dates for the report.

Charts

- Top 10 causes of Machine-Stops based on frequency of the stop.
- Top 10 causes of Machine-Stops based on Down-Time hours.
- Top 10 causes of Machine-Stops based on aggregate cost.

Body

Code	The associated operation code.
Description	The reason for the stop.
Count	The number of stops for the specified period.
Hours	The total number of Down-Time hours expended for the Machine-Stop.
$ Value	The dollar value based on the machine rate and the cost based on the values defined in **P-Maint.exe.**

Footing

Footing	The date and time the report was run, the page number and the company name.

Machine Run Chart

This daily report charts books per hour for all shifts on a selected machine. This report also includes down-time and reason codes for stops occurring during the specified period.

Heading

Heading	The selected machine cost center number, description, and the start and end date for the report.

Demographics

Job Number	The job number and associated description.
Customer	The customer ID and associated customer name.
Goals	The goals for machine speed and books per hour as defined in **P-Maint.**

Chart

Books / Hour	Books per hour, also includes goal lines.

Body

Shift	The shift number.
Operator	The lead operators name.
Count	The number of good books produced.
Period Ending	The period ending representing each point on the chart.
Minutes Down	The total minutes the machine was down.
Reason	The down time reason code.

Footing

Footing	The date and time the report was run, the page number and the company name.

Chapter 8 Utilities

Overview

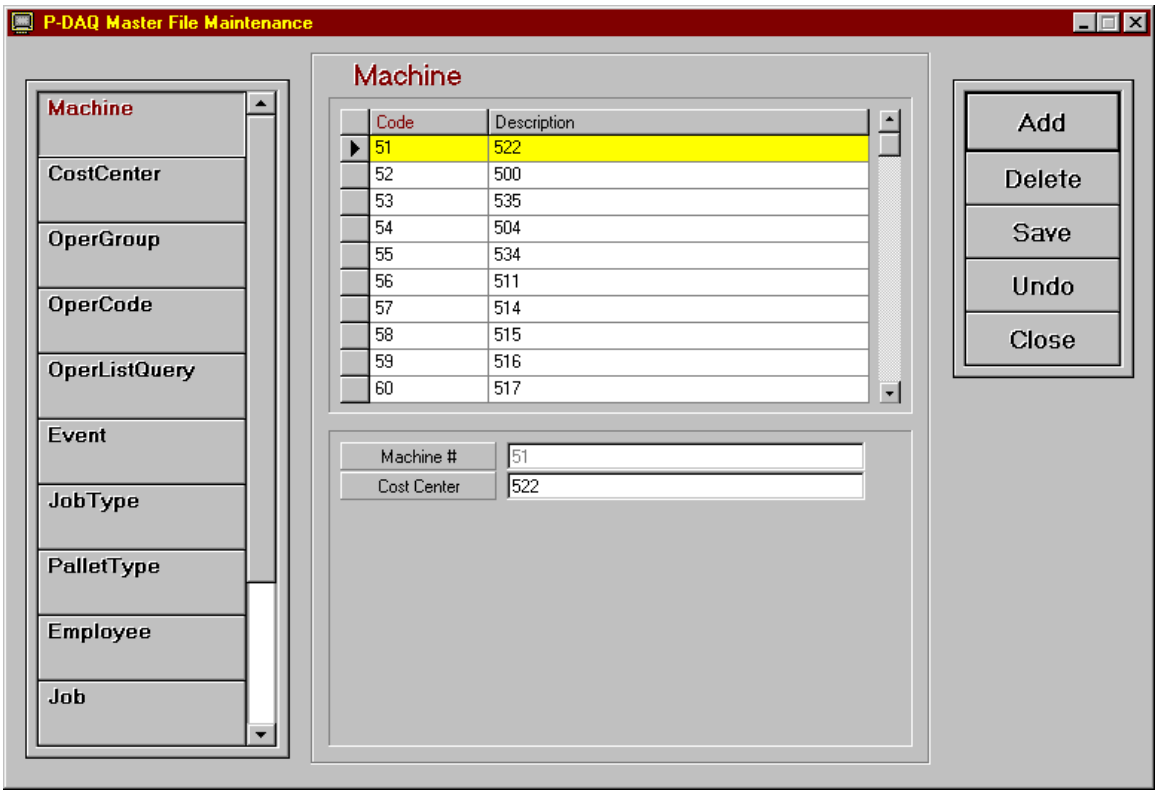
The B-DAQ system contains several programs designed to perform system maintenance, to perform system updates, and to be used when B-DAQ is to communicate with other systems. These programs can be executed from any computer that has the B-DAQ Client Module installed, and by those individuals that have permission as defined in the **Security.ini** file on the server. The following describes these programs in detail.

P-Maint

P-Maint is used to update tables that are stored in the Remote Database.

To execute, double click the **P-Maint.exe** icon from the **BDAQ/Shared** directory on the server.

The buttons on the left side of the screen represent the tables to be edited. To edit a table, click on its associated button and use the center of the screen to enter the associated data.



The following pages list the fields to be edited and give a brief explanation of the required entries.

Code / Description fields

Code	This field is used to display the operation code, machine number, employee number, etc…
Description	This field is used to provide a description of the code to be used.

Machine

Machine	The unique machine number assigned by NASTech.
Cost Center	The cost center number assigned to the machine.

Cost Center

Cost Center	The cost center number assigned to the machine.
Description	A description of the machine. (IE. “Harris-Marconi”)
Type/Model	The model number.
Rate/Hour	The hourly rate of the machine in dollars.
Rate/M Imp	The average cost of materials per 1000 books.

Oper Group

Group Code	The group code.
Description	A description of the associated group.

Oper Code

Oper Code	The cost center number designated for the machine.
Description	A description of the code.
Group Code	The associated group the code belongs to.
Alternate	The code to be used to report the associated activity to the Cost Accounting system.
Type	Indicates whether the code is a Makeready, Run, Downtime code etc…

Machine Related	Not Used.
Man Related	Not Used.
Material Related	Not Used.
External Cause	Not Used.
Makeready 1	Indicates that the code is a makeready 1 code.
Makeready 2	Indicates that the code is a makeready 2 code.
Run	Indicates that the code is a run code.
Wash-up	Indicates that the code is a Wash-up (Clean-Up) code.
Machine Stop	Indicates that the code is a Machine Stop code.
Data 1	Used to define additional data to be sent to Cost Accounting.
Data2	Used to define Makeready as Initial (I), or Subsequent (S).

OperListQuery

Center	The cost center number assigned to the machine.
Oper Code	The associated operation code.
Description	The description of the operation code.
Active	Indicates that the code is valid for the associated machine. Y or N.

Event

Event Code	The NASTech assigned Event Code.
Description	The description of the code.
Reason Reqd	Denotes whether a reason is required for the associated event. True or False.
OperCode	The default Operation Code for the associated event.

Job Type

Job Type	The Job Type code.
Description	The description of the job type.

PalletType

Pallet Type	The Pallet Type code.
Description	The description of the Pallet Type.

Employee

Emp ID	The Employee number.
Name	The Employee's name.

Job

Job Number	The Job number.
Description	The description of the Job.
Cust ID	The customer number.
Cust Name	The customer name.
Quantity	The required quantity to be produced.

Customer

Cust ID	The Customer ID number.
Company Name	The Company name.

Standards

Type-Pockets	Machine Type and number of pockets.
Description	Description of the machine.
Type/Model	Machine Type.
# of Pockets	Number of pockets.

# of Helpers	Number of helpers.
Speed Goal	The speed goal.

Machine Goal

Cost Center	The cost center number designated for the machine.
MR Waste Books	Expected MR waste.
Run Waste %	Expected Run Waste percentage.
Net Yield Imps	Expected Net Yield.
Run Time %	Run Time / Scheduled Time * 100.

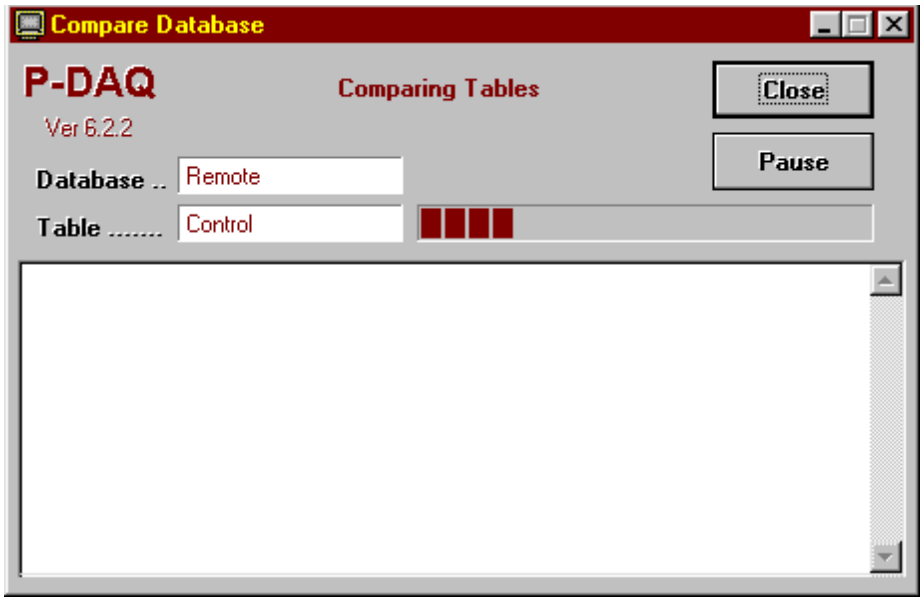
DataComp

In some cases when the software is updated, new fields are added, deleted or changed in the B-DAQ database. DataComp is used to compare tables in the current database to the new tables in the updated database to indicate any changes that have been made.

DataComp should be executed on the Server and on the Bindery Computer whenever a system update is provided.

To execute on the Server, double click the **DataComp.exe** icon in the **BDAQ\Shared** directory.

To execute on the Bindery Computer, choose **Start/Programs/B-DAQ Machine Module/DataComp.**



To begin the compare process, click the **Continue** button. Any table that has been changed will appear in the display area of the screen.

If new fields have been added, use the **DataCopy.exe** program to copy the old data to the new table as described in the following pages.

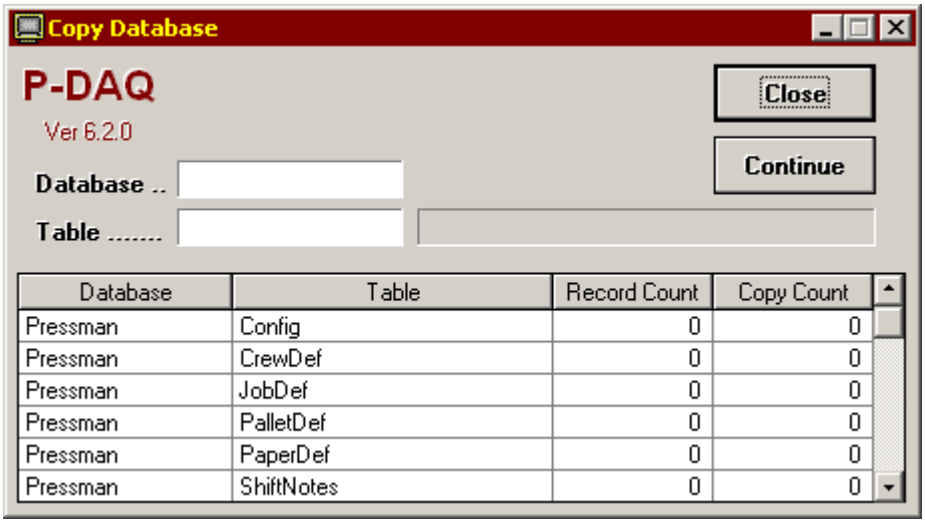
DataCopy

In some cases when the software is updated, new fields are added, deleted or changed in the B-DAQ database. DataCopy is used to copy tables in the current database to the new tables in the updated database.

DataCopy should be executed on the server and on the Bindery Computer whenever DataComp shows a difference between the current and new database structures. However, when using SQL server, Data Copy is not required to be run on the server.

To execute, on the Server, double click the **DataComp.exe** icon in the **BDAQ\Shared** directory.

To execute, on the Bindery Computer, choose **Start/Programs/B-DAQ Machine Module/DataComp**.

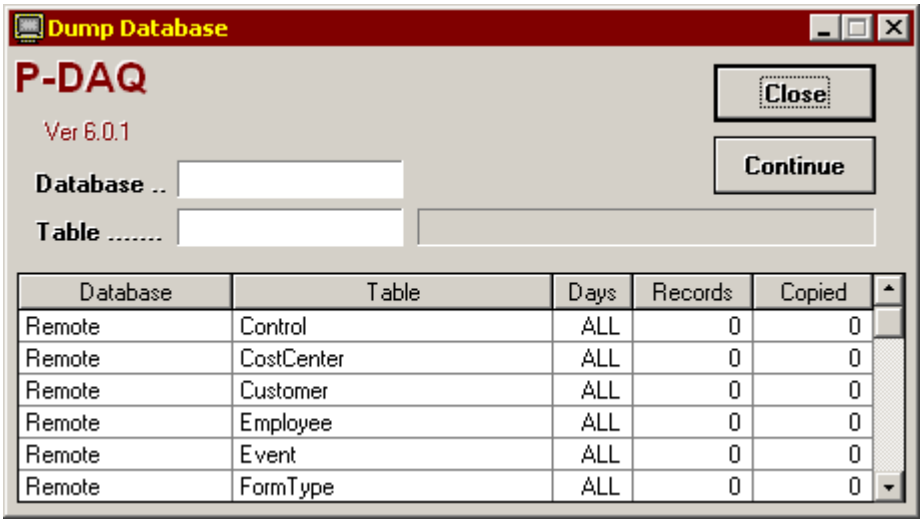


To begin the copy process, click the **Continue** button. Any table that has been copied will appear in the display area of the screen.

DataDump

Data Dump is used to extract data from BDAQ databases to be sent via email to NASTech personnel for troubleshooting purposes.

To execute, double click the **DataDump.exe** icon in the **BDAQ\Shared** directory on the server.



Database	Table	Days	Records	Copied
Remote	Control	ALL	0	0
Remote	CostCenter	ALL	0	0
Remote	Customer	ALL	0	0
Remote	Employee	ALL	0	0
Remote	Event	ALL	0	0
Remote	FormType	ALL	0	0

The default records to be copied are pre-determined by the **DataDump.ini** file located in the **BDAQ\Shared\Init** directory of the server. Under normal circumstances, the default values will suffice. However, during troubleshooting, a NASTech representative may ask the customer to include more or less data. To do so, on the Data Dump screen, enter the number of days prior to the current date to include in the Days field for each table to be copied.

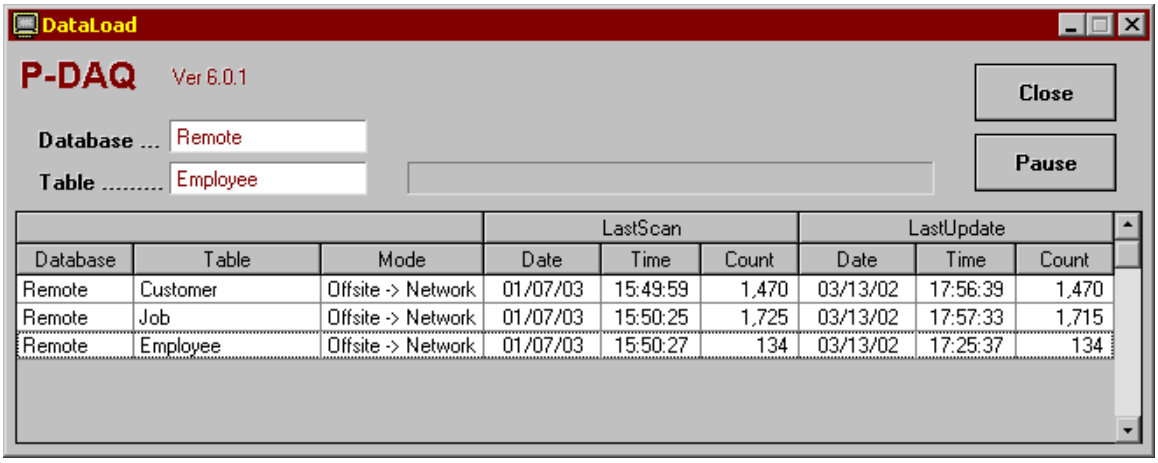
To begin the dump process, click the **Continue** button. Any table that has been copied will appear in the body of the program.

When completed, the copied databases will appear in the **BDAQ\Shared\DataDump** directory of the server. These two **.mdb** files may then be Zipped and e-mailed to NASTech personnel for evaluation.

DataLoad

Data Load is used to extract data from Primac databases to be transferred to B-DAQ remote databases.

To execute, double click the **DataLoad.exe** icon in the **BDAQ\Shared** directory on the server.



To begin the copy process, click the **Continue** button. DataLoad can be left running on the server, however it is recommended that you Schedule the task as outlined in the following:

Using Windows “Scheduled Tasks”, you may schedule the **DataLoad.exe** program to run periodically. This ensures that the hard drive is not inundated with unnecessary data. The following is the procedure to set up the task:

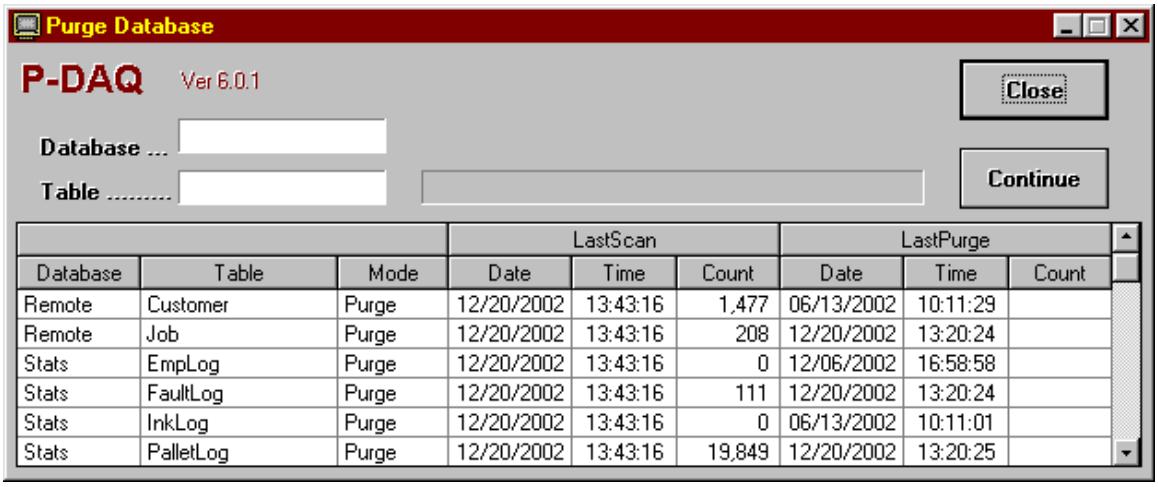
- Choose **Start\ControlPanel\SheduledTasks**.
- Click **“Add Scheduled Task”.**
- Click **“Next”.**
- Click the **“Browse”** button and browse the server to the BDAQ\Shared directory and select the **DataLoad.exe** file.
- Follow the instructions to select the time and enter the user name and password when prompted.
- Check the box marked **“Open Advanced Properties for this Task when I click Finish”** button and click the finish button.
- In the *Run* field, change the path to the following: **C:\BDAQ\Shared\DataLoad.exe AUTO**
- In the *Start In* field, make sure the path is as following: **C:\BDAQ\Shared**

DataPurg

DataPurg is used to delete unnecessary data from the system.

The tables to be purged and the data to be retained are both pre-determined by the **DataPurg.ini** file located in the **BDAQ\Shared\Init** directory of the server. Under normal circumstances, the default values should suffice.

To execute, double click the **DataPurg.exe** icon in the **BDAQ\Shared** directory on the server.



			LastScan			LastPurge		
Database	Table	Mode	Date	Time	Count	Date	Time	Count
Remote	Customer	Purge	12/20/2002	13:43:16	1,477	06/13/2002	10:11:29	
Remote	Job	Purge	12/20/2002	13:43:16	208	12/20/2002	13:20:24	
Stats	EmpLog	Purge	12/20/2002	13:43:16	0	12/06/2002	16:58:58	
Stats	FaultLog	Purge	12/20/2002	13:43:16	111	12/20/2002	13:20:24	
Stats	InkLog	Purge	12/20/2002	13:43:16	0	06/13/2002	10:11:01	
Stats	PalletLog	Purge	12/20/2002	13:43:16	19,849	12/20/2002	13:20:25	

To begin the Purge process, click the **Continue** button. DataPurg can be left running on the server, however it is recommended that you Schedule the task as outlined below:

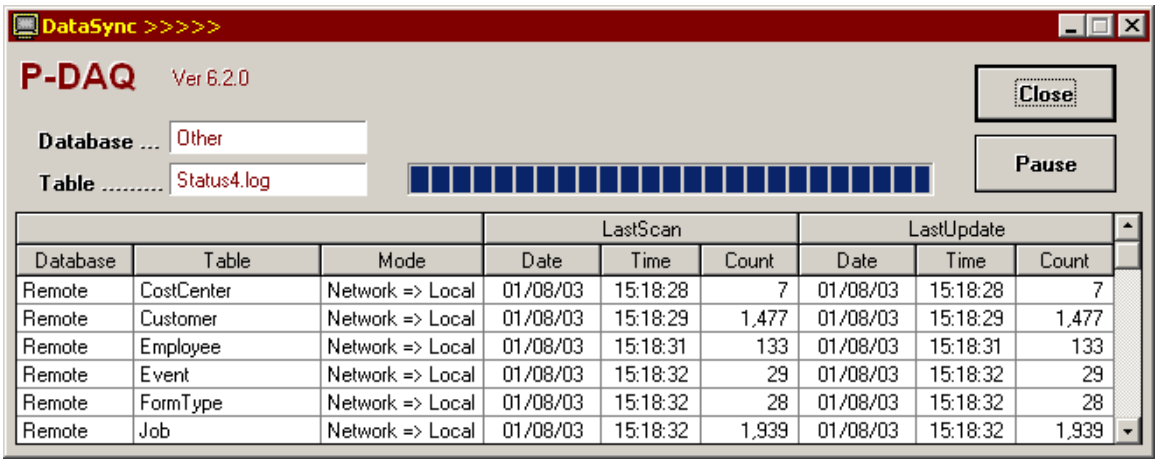
Using Windows “Scheduled Tasks”, you may schedule the **DataPurg.exe** program to run periodically. This ensures that the hard drive is not inundated with unnecessary data. The following is the procedure to set up the task:

- Choose **Start\ControlPanel\SheduledTasks**.
- Click “Add Scheduled Task”.
- Click **“Next”.**
- Click the **“Browse”** button and browse the server to the BDAQ\Shared directory and select the **DataPurg.exe** file.
- Follow the instructions to select the time and enter the user name and password when prompted.
- Check the box marked **“Open Advanced Properties for this Task when I click Finish”** button and click the finish button.
- In the *Run* field, change the path to the following: **C:\BDAQ\Shared\DataPurg.exe AUTO**
- In the *Start In* field, make sure the path is as following: **C:\BDAQ\Shared**

DataSync

DataSync is used to transfer data to and from the Bindery Computer and the Server. DataSync should be left running on the Bindery Computer **AT ALL TIMES.**

To execute, double click the **DataSync.exe** icon on the Bindery Computer's desktop.



			LastScan			LastUpdate		
Database	Table	Mode	Date	Time	Count	Date	Time	Count
Remote	CostCenter	Network => Local	01/08/03	15:18:28	7	01/08/03	15:18:28	7
Remote	Customer	Network => Local	01/08/03	15:18:29	1,477	01/08/03	15:18:29	1,477
Remote	Employee	Network => Local	01/08/03	15:18:31	133	01/08/03	15:18:31	133
Remote	Event	Network => Local	01/08/03	15:18:32	29	01/08/03	15:18:32	29
Remote	FormType	Network => Local	01/08/03	15:18:32	28	01/08/03	15:18:32	28
Remote	Job	Network => Local	01/08/03	15:18:32	1,939	01/08/03	15:18:32	1,939

To begin the data transfer process, click the **Continue** button. To minimize the program on the screen, click the B-DAQ logo.

To expedite the flow of data to and from the server, tables can be scanned, uploaded, or downloaded in real time by clicking the associated table name.

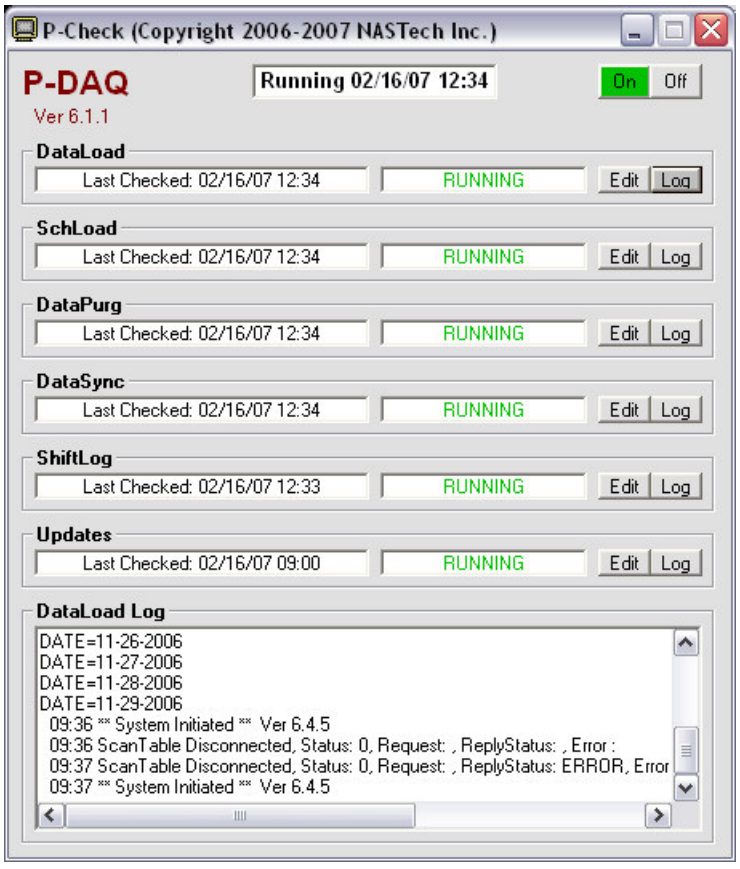
P-Check

P-Check is used to continuously monitor the status of some key B-DAQ system applications, and is also used to provide local B-DAQ system administrators with information about system updates, and problems with the P-DAQ database.

When one of the monitored applications fails to execute or when there is a database problem, up to 3 administrators and 3 supervisors can be notified automatically via email. This ensures that B-DAQ system applications that are scheduled to run are indeed running as required.

To execute, double click the **P-Check** icon in the **BDAQ\Shared** directory on the server.

P-Check should be left running on the server at all times. (When minimized, the application will appear in the task list on the bottom right-hand corner of the PC)



The top center of the screen displays the status and the current time. The top right of the screen provides an **On** and **Off** button to start and stop all of the check processes.

The following is the applications and processes that may be monitored:

DataLoad	Checks to make sure that DataLoad.exe is running and that there are no communication issues with the host computer.
SchLoad	Checks to make sure that SchLoad.exe is running and that there are no communication issues with the host computer.
DataPurg	Checks to make sure DataPurg has executed at the scheduled time.
DataSync	Checks to make sure that DataSync is running on all Press Computers. Shift supervisors can also be notified to remind the pressman re-run the application upon failure.
ShiftLog	Checks to make sure that there are no HOLDS in the ShiftLog older than 14 days. If so, the Administrator will be required to manually COMPLETE them on the server.
Updates	Checks for the latest updates on our website, and provides the B-DAQ administrator with a list or current and available system applications.

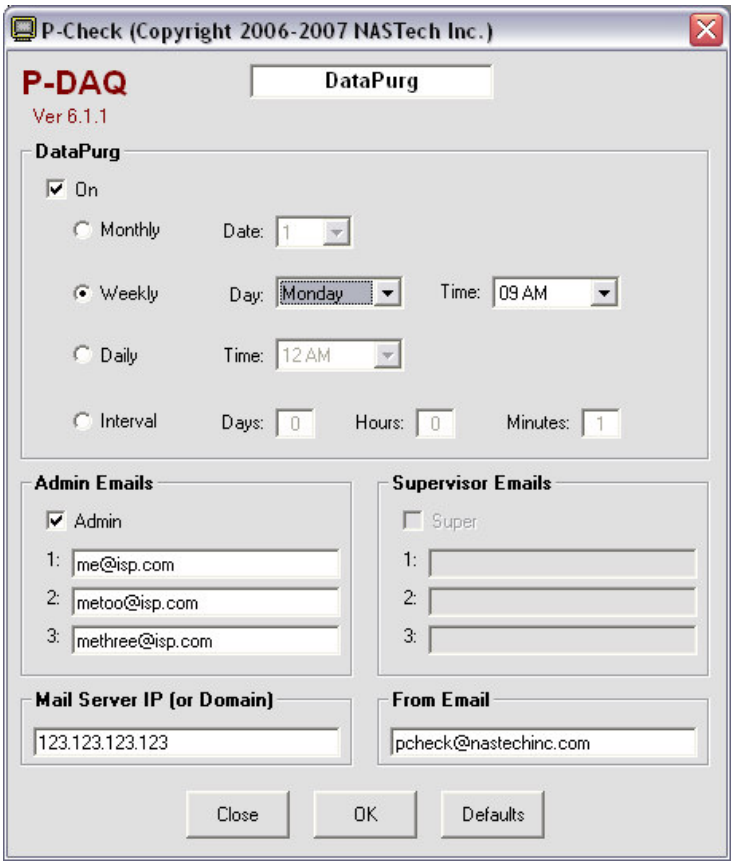
P-Check will send a Daily report of all running applications and processes at 9am during weekdays to the B-DAQ administrator(s).

Schedules should be set up in such a way to ensure that enough time has passed to allow an application that is scheduled with the windows scheduler to have executed. For example, if DataPurg is scheduled to run weekly, then the schedule for DataPurg should be set to check DataPurg weekly as well.

Each of the applications and processes displays the last time the associated check was performed, the status of the check, an **Edit** button, and a **Log** button.

The **Log** button is used to display the log file for the associated process on the bottom of the screen.

Clicking the **Edit** button opens the Edit screen for each process as described on the following page.



App Section Used to enable the check for the associated application or process, and to schedule the check on the selected date, time, or interval.

Admin Used to turn on the email feature and to list the administrator(s) email address(s). (Email settings are global to all processes)

Supervisor Used to turn on the email feature and to list the supervisor(s) email address(s). (Available for the DataSync application only)

Mail Server Enter the Mail Server's IP Address or Domain name.

From Email The "From" property on the associated email.

Close Used to close the Edit window without applying changes.

OK Used to apply the changes.

Defaults Used to restore the default settings.

Appendix A Hardware Devices

EP-210

The Computerwise EP-210 module is used to collect data from the machine sensors, PLC's or Switches. The following information is provided for quick reference only. For more detail or for information regarding hardware options installed, consult the EP-210 manual.

Before the EP-210 may be used with **B-DAQ**, the module must first be configured. Failure to do so may cause the module and other modules on the sub-net to operate improperly.

Configure

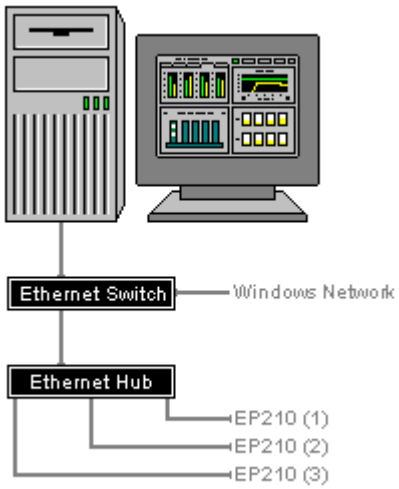
- Before you can use the EP210 with the B-DAQ system, you must configure the IP address of the unit. Each unit should have a unique IP address.
- When connected to the B-DAQ PC, the EP210 must be segregated from the existing network via an Ethernet Switch or a Router.
- When connecting multiple EP210's you must use a Hub or a switch with enough ports for all units. See the Diagram on the next page for an illustration of this.
- To configure the unit's IP address, Subnet Mask, or Default Gateway, you must connect the EP210 to a PC serial port with a serial crossover 9pin Female to 9pin Female cable and power the unit.
- Once connected, run HyperTerminal from the Windows Start Menu: **Start – Programs – Accessories – Communications – HyperTerminal**.
- Type "EP210" as the name for the connection and click **OK**.
- Select the **COM** port you have connected the unit to and click **OK**.
- For **Port Settings**, set to **9600** Bits Per Sec, **8** Data Bits, **None** Parity, **1** Stop Bit, and **Hardware** Flow Control. Click **OK**.
- Once you have connected to the unit, hold the **[CTRL]** key and press the **V** key on your keyboard 3 times to enter setup mode.
- Type **SHOW** followed by **[Enter]** to view the current parameters.
- To make a change to a given parameter, type the parameter name, followed by the **=** equal sign, followed by the new value, followed by **[Enter].** For example: MYIP=123.123.123.123[Enter]
- Repeat this process until all parameters have been set.
- When completed, type **SAVE** followed by **[Enter].**
- Disconnect and re-connect the unit from Power. Re-enter setup mode using HyperTerminal and type **SHOW** followed by **[Enter]** to double check the new parameters.

Install

- The EP210 is typically installed in close proximity to the signals it will acquire, but may also be installed where the B-DAQ bindery PC resides.

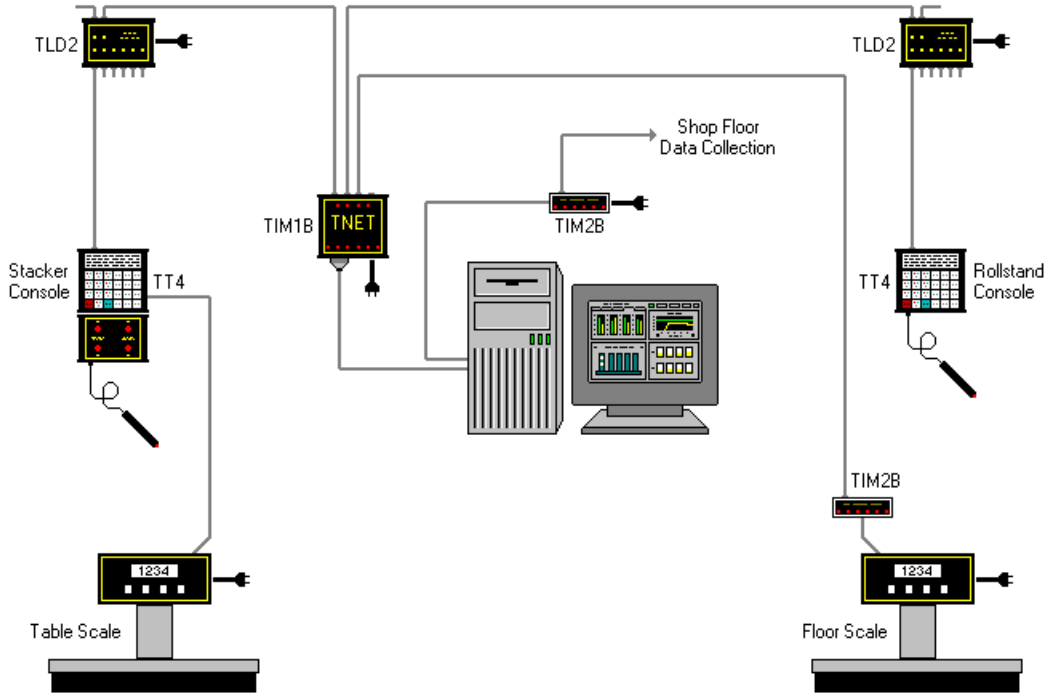
Connect

- The EP-210 is connected to the press signal terminal blocks with a DB-25 cable, and to the PC hub (or Switch or Router) with an Ethernet cable.



Modular Cables

The following diagram illustrates the basic modular cable requirements of the Bindery Management system. Unshielded twisted pair (UTP) cable is recommended for all modular cabling as it provides protection against electrical interference. It is also recommended that a suitable number of spare devices be kept on hand at all times.



The maximum distance between self-powered components is 2,000 feet. The maximum distance between the TT4 and its power supplying component is limited to 100 feet.

The TLD2 line drivers are only needed if the distance from the TT4's and the TIM1B exceeds 100 feet and no local power is available for the TT4 terminal.

The TIM2B is only needed if **B-DAQ** is to interface with the **NASTech** shop-floor data collection system, or to a floor scale indicator.

Modular Cable

Modular cables are standard 8 conductor "Silver Satin" or unshielded twisted pair (UTP) with RJ-45 connectors. The cable is wired straight through as shown in diagram (same color wire on same side of both connectors). While "Silver Satin" cable is acceptable in most installations, unshielded twisted pair (UTP) cable is recommended as it provides greater protection against electrical interference.

When using twisted pair cable, the pairs should be connected to the connectors as follows:

Proximity Sensors

Proximity Sensors are used to provide Gross Count to the system.

Proximity Sensors are purchased and installed by local plant personnel.

Proximity Sensors used should be of the 3 wire PNP (sourcing) type, providing a positive12v DC voltage.

NASTech recommends TURCK brand sensors of this type which have Schmidtt Triggers built in.

Install

- For best performance, all Proximity Sensors should be installed within 1/16 of an inch to the medium that it is sensing.

Connect

- Sensors are connected to the Terminal block provided by NASTech as per the included wiring diagram.

Troubleshoot

- When behaving erratically, make sure the Sensor is tightly connected to its chassis and that it is mounted perpendicular to the medium that it is sensing.
- Ensure that the unit is within 1/16 of the medium that it is sensing.
- Check all wiring from the sensor to the NASTech terminal block.

Appendix B Glossary of Terms

Count Complete	Event	=	Occurs when the required number of books have been produced.
Down-time	Time	=	From the time the machine stops until good books are again produced. By definition, down-time can only occur while the machine is running.
Version Started	Event	=	Occurs once a new job or version is loaded.
Idle-time	Time	=	Accumulated time between forms, and elapsed time for these operations as defined as Idle in the “Oper-code” table.
Makeready I (MR1)	Event	=	Occurs immediately following the version started event.
	Time	=	Time from initial event to subsequent Makeready II event. Does NOT include Down-Time or Idle-Time.
	Count	=	Number of these events that occurred during a specified period or for a specified job or version.
Makeready II (MR2)	Event	=	Occurs when Makeready I is active and the machine reaches the Cutoff Speed.
	Time	=	Time from initial event until at least one good book is counted. Does NOT include Down-Time or Idle-Time.
	Count	=	Number of these events that occurred during a specified period or for a specified job or version.
	Waste	=	The number of waste books.
Net Speed			The number of books produced divided by Run hours.
Net Yield			The number of net books produced divided by (Run + Down-Time) hours.
Non-Charge Time	Time	=	All time accumulated while **B-DAQ** is in Stop Mode.

Machine Running	Event	=	Occurs once the first good book reaches the output of the machine.
	Time	=	From the time of the initial good book until the required count is reached and then the machine speed drops below the Cutoff Speed.
	Net	=	The number of good books that were saved during the event.
	Waste	=	The number of waste books that were discarded during the event. Waste accumulated during Restarting is NOT included.
	Count	=	Number of times the machine stopped during a specified period or for a specified job or version.
	Waste	=	See Restart events.
Print-time	Time	=	All time that books are being produced (MR2 + Run + Restart).
	Count	=	Books produced from the time the machine starts running until the end of the job or version, including Down-Time.
Restart Run	Event	=	When the machine speed reaches the Cutoff Speed after a machine stop event. This event is recorded if the associated stop occurred during Run.
	Waste	=	All waste books produced from the time the machine stopped until good count is achieved.