

BINMASTER

Taking Control . . . To A Higher Level

SmartBob

Inventory Management System

Software Manual

Version 2



Operating Instructions

Please read carefully

BINMASTER

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System Requirements

The Windows Inventory Management System software requires the following hardware:

IBM[®] compatible Personal Computer, 80486 DX2 66MHz or higher

SVGA Graphics Card and Monitor 800 x 600 min. resolution

1 Serial communications port

16MB RAM (Random Access Memory) on Win 95/98

32MB RAM (Random Access Memory) on Win NT

Windows 95, 98, NT version 4.0 (service pack 4 or higher), 2000

RS-485 Interface Module (supplied by BinMaster)

RS-232 Serial Cable (supplied by user)

SmartBob Remote Units

Installing the Software

Insert the BinMaster IMS CD into the cd drive. From **Control Panel** select **Add/Remove Programs** and then select "Install". Select the cd rom drive where the IMS cd is located. Run the **setup.exe** file. The software will start to automatically load. The program will automatically select the C:\Program Files\Garner Industries\BinMaster V2.x.x as the location where the program will be stored. This path appears in abbreviated form as C:\...\BinMaster V2.x.x on the screen. Following the program location, the default location where the program will store its measurement Data is C:\Program Files\Garner Industries\BinMaster\ V2.x.x\Data. This also appears in abbreviated form on the screen. If you are not intending to share the data file or put the data file out on a network server for sharing, then this C drive location for the data file is proper.

If you are going to share your data with other computers by allowing them to map to your drive, you may want to put the data files on a drive other than your C: drive. In this case you would enter your desired location path in place of the default path. If you want to share the data from a network server drive, then that location path should be entered as the place where the data is to be stored. You must type in the path to the location you want the data in place of the default location. For example, if your server drive is K:\, then you could type in K:\Data, or a more extended path if desired. You must put the word Data at the end of your path so that the program will create a Data folder.

If the IMS software is only going to be running on one PC there will be no file sharing or remote access by other PC's then jump to **Initial Startup**. If there is going to be file sharing or remote access, then continue reading the next paragraph.

Sharing the Data and System Files

If you place the Data in a directory that is not your C:\ drive, you will need to enter that drive location into the BDE. This is a manual operation done after you finished loading the IMS program. It is accomplished as follows:

1. Go to the **Control Panel** menu and select the **BDE** icon.
2. There will be two tabs in the program window, "**Databases**" and "**Configurations**", select the 'Data-bases' tab. Now select "**SmartBob223**". Click on "**PATH**", a radio button will now appear at the far right end. Push the radio button and a window labeled "**Select Directory**" will open. Change the directory in this window to the same directory you put in for the data folder during installation of the IMS software. This is the directory drive you will be sharing with other viewers. On some computers you may only need to put in the Drive letter or name. On other computers you may need to enter the complete path to the "\Data" folder. If you cannot edit the "**PATH**" parameter, select the SmartBob223 icon in the left pane, right-click and choose "Close" to close the current connection and allow maintenance to the "**PATH**" parameter. Then you can change the "**PATH**" parameter. After the "**PATH**" has been changed, push the **OK** button to close this window. Then in the next window push **YES** to save the change.
3. Now select the "**Configurations**" tab, expand the configuration tree, and two more tabs will be shown, "**Drivers**" and "**System**".
4. Expand the "**Drivers**" and then expand the "**Native**" tab under it. Several more items will be under "**Native**".
5. Click on the "**Paradox**" item, several things will be displayed in the right hand pane.
6. Click on the "**NET DIR**" line, a radio button will now appear at the far right end. Push the radio button and a window labeled "**Select Directory**" will open. Change the directory in this window to the same directory drive you put in for the data folder during installation of the IMS software. This is the directory drive you will be sharing with other viewers. You should only put in the Drive letter or name, not the entire path. Then push the **OK** button to close this window. Then in the next window push **YES** to save the change.

Each PC that is to share the data must have the IMS software loaded on it and its BDE NET DIR set to the location of the data file. If the data directory is on a network server, then the directories set into the BDE on each PC will be that of the network server. If a network drive is not being used, but other PCs are being mapped to a host PC directory, then the drive on each PC which is mapped to the host PC directory must be entered in that PC's **NET DIR**. As the IMS software is being loaded on each of these PCs, when the installation program asks for the location of the Data, the appropriate path to the server location or other mapped drive location must be entered.

Each PC that is sharing the data files, but not actually controlling the Smart Bob remote units, must be set "No Interface". This is accomplished in the IMS program by going into the Setup and then Options menu in the IMS program. Put a check mark in the No Interface box.

When creating your bin **System File** in the IMS software, you must store the System in the same directory where the "**Data**" folder resides. This will either be the specified directory on the host computer or the network server. Do not store the System File in the Data folder, but in the directory with the Data folder. PCs sharing a System and Data will go to that directory to select and open the System.

Remote Access Setup

When setting up **Remote Access**, each PC must enter, in the IMS software, the port setting which corresponds to the location of its modem. In the IMS program, enter the "**Setup**" and then "**Options**" menu to enter the modem port. All remote PCs, which will be calling into the host PC, need to have the host telephone number entered. Enter the "**Setup**" and then "**IMS Settings**" menu, activate the Remote button and enter the Remote (host PC) phone number. A radio button will appear in the IMS tool bar to allow activation of dial out.

Each remote site must enter a System name in their IMS program identical to the name of the host System you want to access. This done in the same way you normally enter a System name. Select "**File**" and "**New System**" to activate the window for adding a system name. You will not place any tanks in the System, as these will be copied from the host PC automatically when you access its system file.

When remote accessing system data, first, from the **File, Open System** menu, select and open the desired System on your local PC. Then, go into the **Setup, IMS Settings** menu and type in the exact name of the System you want to access in the System Name space.

To set up the host PC for Remote access, start the **Remote IMS** program by clicking on its icon which appears below the BinMaster IMS icon in your program list. A window will appear labeled **Remote IMS Server**. You must enter the tank System(s) which others will be permitted to view. To do this, click on Setup in the window, and then on the **System Files** button which appears. This will open another window labeled **IMS Access List**. Click on the **Add** button, this will open another window labeled Select Accessible Files. Select the system file you want and then click on the **Open** button. That window will close and the file path will now appear in the IMS Access List, click on the **Done** button to close this window, or on the Add button if more System files are to be added.

The Remote IMS program must remain running on the host PC in order for outside users to be able to call in and access the information. You can minimize the Remote IMS program window. While the Remote IMS program is running, it has control of the modem on the port designated in the IMS program. Other programs that may be running on the PC cannot access this particular modem. The IMS program itself has priority, and in the event of an alarm condition, will pre-empt the Remote Access program and take control of the modem to dial out if it is set up to do so.

If you have any questions, please contact BinMaster at 1-800-278-4241.

Initial Startup

Start the BinMaster IMS program. On the initial startup of the program, you will be asked to enter your registration number. **Enter your registration number and then click on the OK button.**

IMPORTANT! Do not just press the enter key or the activation code will not get set and the IMS program will just go into the demo mode and measurements will not be allowed to be taken.

After entering your registration number and clicking the OK button the IMS program will come up. A system will need to be configured. Proceed on to **Quick Setup**. Quick Setup

Here is a simple step by step guide to quickly configure and begin using your SmartBob Inventory Management System (IMS) software. To get started, set the SmartBob IMS options, Create a new IMS system file, and begin adding bins to your IMS system.

Follow the steps below to set the minimum options to run your SmartBob Inventory Management System.

1. Select Options from the Setup menu.
2. Configure the Port Settings and Units.
3. Select New System from the File menu.
4. Configure the General System Information and set the Local interface option then save the system file.
5. Add your bins and configure the Bin Setup for each new bin. See Adding Bins for more information.
6. Test the measurement operation of each new bin by performing a Manual Measurement.
7. This completes the setup of the basic operating features. You can now setup the Autoscan options and the Faxing, Paging, and E-mailing notification features.

Opening an IMS System File



To open a IMS system file or create a new file. Select Open System or New System from the File menu or use the New or Open toolbar buttons. You will be prompted with a file dialog. Enter or browse for the IMS file name to open and select OK. The system file will opened and the bins will be displayed on the main window.

When creating a new system file the IMS Settings window will be opened. Adjust the system settings and press the OK button when you are finished. You will then be prompted for a file name to store the settings in. Enter a file name to select OK. The new bin databases will be created and the system will be opened. You are now ready to start adding bins to the system. See Adding and Removing bins for more information.

Adding and Removing Bins

Bins can be added or removed from a system at any time. To add a bin select Add Bin from the Setup menu. When adding a bin the Bin Setup window will open. Set the Bin Number to select which of the main window tabs the bin will be displayed on.

To remove a bin, highlight the bin to be removed by left clicking on it. Then select Remove Bin from the Setup menu. Or right mouse click on the bin to be removed and select Remove Bin from the popup menu. Select Yes when prompted to remove the bin. **CAUTION!! measurement data from a removed bin will be lost.**

Taking Measurements

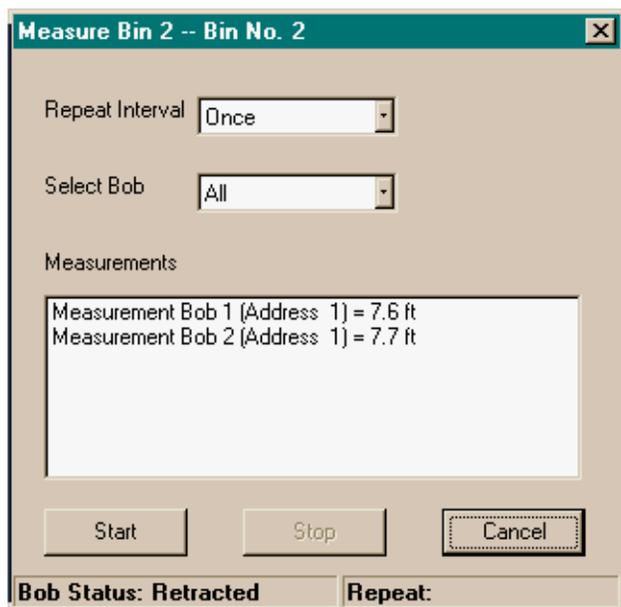


Measurements can be initiated in two ways. Measurements can be done with Autoscanning or a single bin can be measured. To select a bin and take a measurement, highlight the bin by left clicking on it and then select Measure Bin from the Action menu or click the measure tool button. The Measure Dialog will be displayed. Press the start button to start a measurement.

To start an Autoscan measurement select Start Autoscan from the Action menu or press the Autoscan tool button. Press the Yes button when you are prompted to start an autoscan. See IMS Settings for more information on autoscan operation.

Manual Measurements

The manual measurement dialog, allows you to take an immediate level measurement for a single bin. The measurement window can simply start a manual measurement or can be used to take several measurements with a repeated delay. To access the measurement dialog, select Measure Bin from the Action menu or use the Measure tool button. Each measurement is displayed on the dialog as it is taken.



Repeat Interval

Set the repeat interval to take multiple unattended measurements of a bin. The repeat interval can be set to take a single measurement or can be set with intervals to measure continuously or repeated up to 240 minutes apart. When repeated measurements are being done, the Stop button will be enabled to stop measuring.

Select Bob

Use the option if you want to restrict measuring to a single SmartBob unit if the bin has multiple SmartBob units assigned to it.

Level History



The BinMaster IMS software records every measurement taken by a SmartBob unit. These measurements are sorted by pins and the bob numbers. The Level History for a bin can be displayed by selecting Level History from the View menu, clicking the Level History toolbar button or by right-clicking on a bin and selecting Level History from the pop menu. The Level History displays a trend graph of the bins level and displays a point for every measurement. A more detailed listing of the measurements is shown under the graphs in a table.

Zooming the Graph

The graph allows you to zoom into an area to display more detail of measurements over a short time period. To zoom into an area, place the mouse pointer over the upper left of the area you would like to zoom into. While holding down the left mouse button, drag the mouse to the lower right of the area to be zoomed. A zoom box will be displayed around the area. Release the mouse button and the area inside the zoom box will be enlarged. To restore the graph to a normal view, press the restore button on the Level History window.

Panning the Graph

The graph also allows panning. To pan left or right through the graph. Place the mouse pointer on the graph, and while holding the right mouse button, drag the pointer left or right. To restore the graph to a normal view, press the restore button on the Level History window.

Deleting Measurements

To delete measurements, press the Delete button on the Level History window. You will be prompted to enter a date. Measurements older than the date entered will be deleted from the measurement database.

Printing Level History

The level history may be printed by pressing the print button. A print preview window will be displayed to allow you to preview the report, change printer setups and begin printing.

NOTE: If the graph zoom has been used the printed graph will match the zoomed view.

Inventory



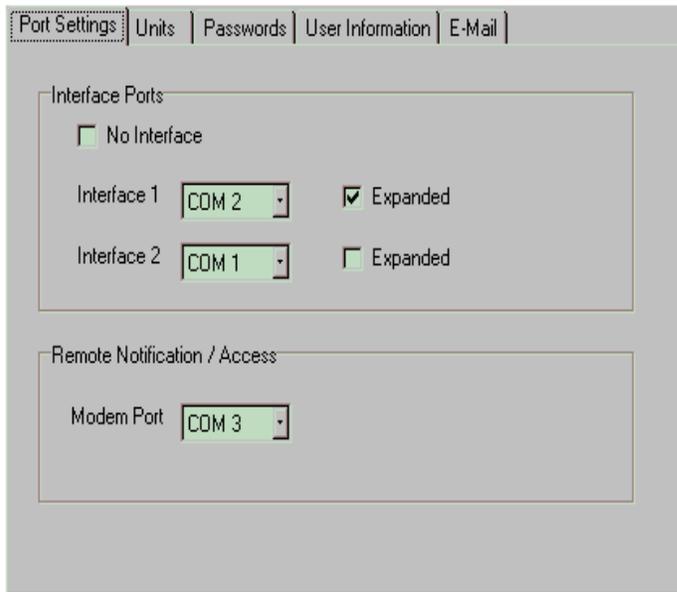
The inventory of all your bins can be displayed on a single graph and table. To display the bin inventory, select Inventory from the View menu or click the Inventory toolbar button. The inventory graph will display the bin levels as percentages so the levels can be compared to each other. More detail may be found in the Inventory table.

Printing the Inventory

To print the bin inventory, press the Print button on the Inventory window. A print preview window will be displayed to allow you to preview the report, change printer setups and begin printing.

Port Settings

The Port Settings tab of the configuration window allows you to set the serial communication ports the software will use to communicate with the SmartBob units. You can also set the communication port your modem is attached to, if the faxing and paging options will be utilized. The Port Settings can be accessed by selecting Options from the Setup menu.



The screenshot shows a configuration window with a tabbed interface. The 'Port Settings' tab is selected. The window contains two main sections: 'Interface Ports' and 'Remote Notification / Access'. In the 'Interface Ports' section, there is a checkbox for 'No Interface' which is unchecked. Below it, 'Interface 1' is set to 'COM 2' and has an 'Expanded' checkbox checked. 'Interface 2' is set to 'COM 1' and has an 'Expanded' checkbox unchecked. In the 'Remote Notification / Access' section, the 'Modem Port' is set to 'COM 3'.

No Interface

Check this box if the IMS system program being used does not have a SmartBob interface connected and the program is only being used to access remote IMS data or data across a network.

Interface 1 and Interface 2

These options are used to set the communication serial ports to be used by the program for operating the SmartBob.

Expanded Checkbox

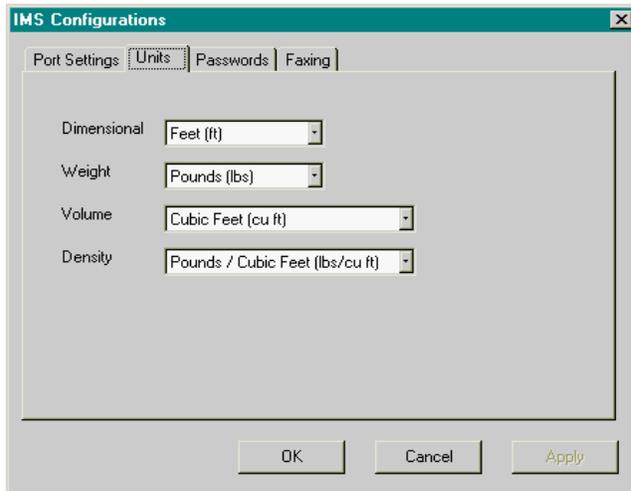
Check this box if an expanded interface is being used. An expanded interface allows up to 90 SmartBobs to operate on one system. The main window tabs will expand to display the expanded Bobs when the expanded checkbox is checked.

Remote Notification

Set this option to the communications port used by your modem. The IMS software can then be used to page or fax information when level warnings occur or report an operation failure of a SmartBob.

Units

The units tab of the configurations window allows you to set the measurement units for configuration and level indication of all the bins. The Units setting can be accessed by selecting Options from the Setup menu.



Dimensional

This option sets the dimension units for setting of the height, width/diameter, and length of each bin. This setting also controls the units the content height will be displayed in.

Weight

This option sets the units the weight of the bin contents will be displayed in.

Volume

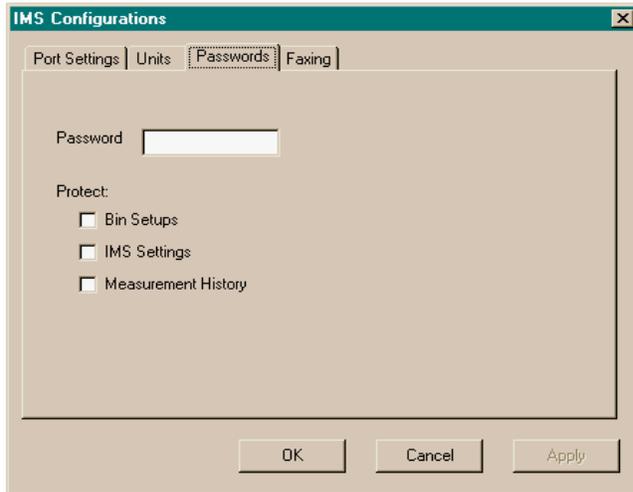
This option sets the units the volume of the bin contents will be displayed in.

Density

This option sets the weight per cubic unit that the density value can be entered in. This value must be set for the BinMaster IMS software to correctly calculate the weight of the bin contents.

Passwords

The passwords tab of the configuration window allows you to set a password which can then be used to protect un-authorized access to the Configurations, Bin Settings, the System File settings and protect against accidental deletion of measurement history. The Passwords tab can be accessed by selecting Options from the Setup menu.



Password

This is the password that will be used to protect the Configurations, Bin Settings, System File settings and protect against accidental deletion of measurement history. The password can be up to 10 alphanumeric digits and is case sensitive.

Bin Settings

Check this box to protect the Bin Settings from un-authorized access.

IMS Settings

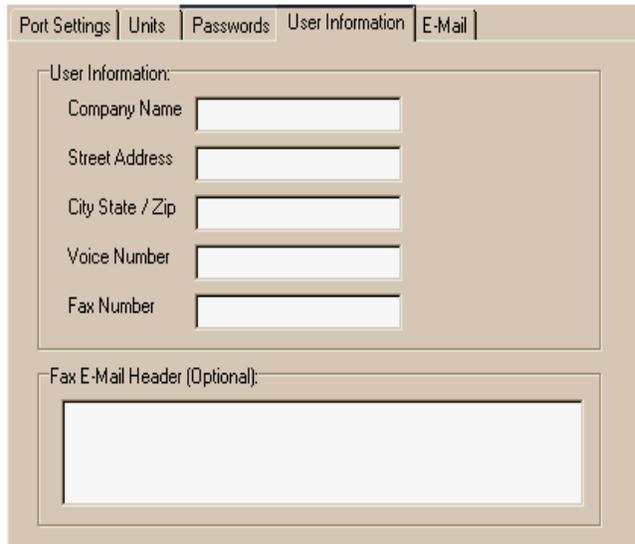
Check this box to protect the IMS file settings from being changed by an un-authorized user.

Measurement History

Check this box to protect the Measurement history from accidental deletion.

User Information

The User Information tab of the configurations window allows you to set the information that will be sent with faxes and e-mail notifications. The information can be used by the receiver of a fax or e-mail to identify where it originated from. This information is a Federal requirement and must be transmitted with all faxes. The User Information tab can be accessed by selecting Options from the Setup menu.



The image shows a screenshot of a software configuration window with five tabs: Port Settings, Units, Passwords, User Information, and E-Mail. The 'User Information' tab is selected. The window contains two main sections. The first section, titled 'User Information:', contains five text input fields: 'Company Name', 'Street Address', 'City State / Zip', 'Voice Number', and 'Fax Number'. The second section, titled 'Fax E-Mail Header (Optional):', contains a large, empty text area for entering a memo.

Company Name, Street Address, City State/Zip

Enter this general information so a receiver of your fax will know where the fax originated from.

Voice Number

Enter a voice number that receiver of a SmartBob IMS fax can call.

Fax Number

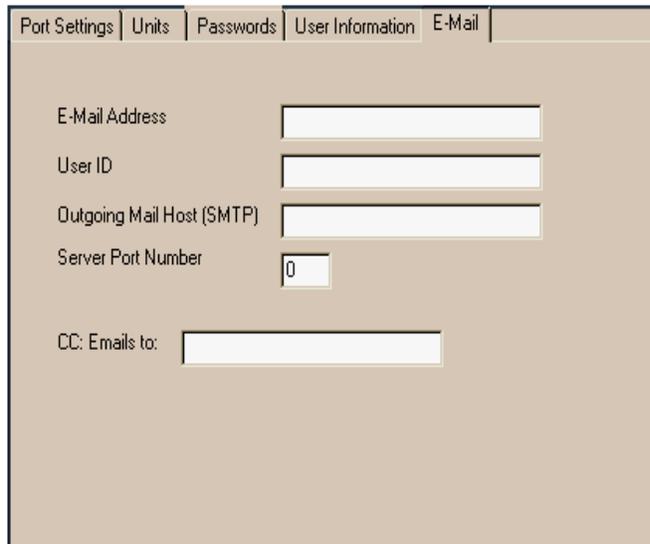
Enter the number of your fax line that the SmartBob IMS software will be using.

Fax E-Mail Header

This memo field is supplied to provide an extra note or information that can be sent with all faxes and e-mails.

E-Mail

The E-Mail tab is used to set your e-mail address, the outgoing mail host address and port information for outgoing e-mail. This information is required for sending e-mail notifications from the IMS software.



The screenshot shows a web-based configuration interface with a tabbed menu at the top. The tabs are: Port Settings, Units, Passwords, User Information, and E-Mail. The E-Mail tab is currently selected. Below the tabs, there are five input fields:

- E-Mail Address: A text input field.
- User ID: A text input field.
- Outgoing Mail Host (SMTP): A text input field.
- Server Port Number: A numeric input field with the value '0' entered.
- CC: Emails to: A text input field.

E-Mail Address

E-Mail address to use for originating e-mail from the IMS software.

User ID

A user ID may be required if your e-mail host uses a proxy server. If the e-mail host does not require a user ID, leave this blank.

Outgoing Mail Host

Enter the mail host address into this field. The host must support SMTP mail protocol to use e-mail notification in the IMS software. If e-mail is already configured on your system this information can usually be found under the account information of your e-mail application.

Server Port Number

The server port is normally set to 25, but may need to be changed in some instances. This information can also be found under the account information of your e-mail program.

CC: E-Mails

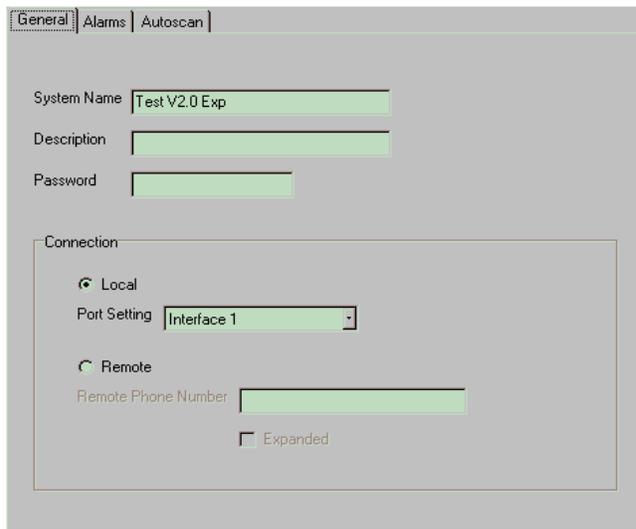
One or more e-mail addresses may be specified to send carbon copies of all e-mails to. If more than one address is to be specified, separate them with a semicolon. Example: "jsmith@aol.com;jdoe@aol.com"

IMS System Files

BinMaster IMS System Files manage the operation of the SmartBob units, storage of bin settings, measurement data, and Autoscan setups. Each system file can store data for up to 30 individual bins or SmartBob units. New system files can be created by selecting New from the file menu or by selecting the new system button from the IMS toolbar. A system file must be created or opened before measurement data can be accessed or taken. The last system file opened when the program is exited will be opened when the BinMaster IMS software is started again.

General IMS System Settings

The General tab of the IMS system settings, allow you to enter a system name, a description of the system and assign a interface the system will be accessed through. These settings can be set by selecting IMS Settings from the Setup menu. When a new system is created, you will be prompted to save the new system file. It is recommended to create a separate file folder for your system files so they can be easily backed up.



The screenshot shows the 'General' tab of the IMS system settings dialog box. The dialog has three tabs: 'General', 'Alarms', and 'Autoscan'. The 'General' tab is active. It contains the following fields and options:

- System Name:** A text input field containing 'Test V2.0 Exp'.
- Description:** An empty text input field.
- Password:** An empty text input field.
- Connection:** A section containing:
 - Local:** A radio button that is selected.
 - Port Setting:** A dropdown menu showing 'Interface 1'.
 - Remote:** A radio button that is unselected.
 - Remote Phone Number:** An empty text input field.
 - Expanded:** A checkbox that is unselected.

System Name

Enter a descriptive name for your IMS system. This name will appear on the top border of the program window so the currently opened system file can be identified.

Description

This field can be used to store a description of the system for later reference.

Password

Enter a password in this field to prevent un-authorized remote access to a system file.

Connection (Local/Remote)

Select the type of connection to be used to access control of the SmartBob units that make up the IMS system. Use a local if the SmartBob units interface is connected directly to the PC using a BinMaster RS232 interface. Choose Remote if the system is to be accessed through another PC running the BinMaster IMS software

Port Setting

Select the RS232 interface to be used to control the SmartBob units for this system. The Interface 1 & Interface 2 serial port settings can be set from the Configurations Port Settings tab.

Remote Phone Number

Enter the phone number of the Remote IMS system to be accessed.

Expanded

Check this box if the remote system has an expanded interface.

Alarms

The system alarms tab is used to set the action resulting from alarms on any of the SmartBob units in the system. The alarm features range from simply a simple dialog displaying the alarm condition, to audible warnings and faxing, paging, or e-mail notification if desired. The alarms tab can be accessed by selecting IMS Settings from the Setup menu.

The screenshot shows a software window with three tabs: 'General', 'Alarms', and 'Autoscan'. The 'Alarms' tab is active. At the top, there are two checkboxes: 'Warning Dialog' (checked) and 'Audible Warning' (unchecked). To the right of these is a text field for 'Paging System ID' containing the number '0'. Below this is a sub-window with five tabs: 'Contact 1', 'Contact 2', 'Contact 3', 'Contact 4', and 'Contact 5'. The 'Contact 1' tab is selected. Inside this sub-window, there is a 'Contact Information' section with three radio buttons: 'Fax' (unchecked), 'Pager' (unchecked), and 'E-Mail' (checked). To the right of these are text fields for 'Description' (containing 'Joe Smith') and 'E-Mail' (containing 'jsmith@aol.com'). Below these is a 'Page Delay' field with '0' and '(Seconds)'. To the right of this are four checkboxes: 'High Alarm' (unchecked), 'Error Alarm' (checked), 'Low Alarm' (unchecked), and 'Site Status' (checked). Below these are two buttons: 'Advanced' and 'Test'. At the bottom of the sub-window is a 'Site Status Notify Schedule' section with two spinners for 'Send Status Every:' (set to '0' Hours and '0' Minutes) and a 'Starting at:' field set to '1:00:00 PM'.

Warning Dialog

Check this box if you would like a warning dialog to be displayed when a level alarm is reached or when a Bob malfunction occurs.

Audible Warning

Check this box to have an audible “beep” or wave file play when the warning dialog is displayed. The audible warning will sound every 3 seconds until the warning dialog is acknowledged.

Note: If your PC has multi-media capabilities and a sound card, the default Windows sound is played. A wave file must be assigned to the default Windows systems sound for it to play.

Pager System ID

The pager system ID should be set to distinguish the system that caused the alarm to the recipient of the pager message. The ID can be up to 4 digits long.

Fax Pager or E-Mail

Select the type of contact. Select FAX if the phone number is to a fax machine or Pager if the number is to a pager. Select e-mail and enter the e-mail address if the contact has e-mail. Select the Advanced button for more options when paging is selected.

Description and Number/E-Mail

Enter the description and phone number or e-mail of the individual to be contacted when an alarm or error condition occurs.

Page Delay

Set the amount of time to delay between dialing the pager phone number and sending the message to the pager. This value may vary between different paging services, so a different delay is provided for each phone number. The page delay does not have any effect on the call progress for a fax. Select the Advanced button for more options when paging.

High, Low, Supply and Error Alarm

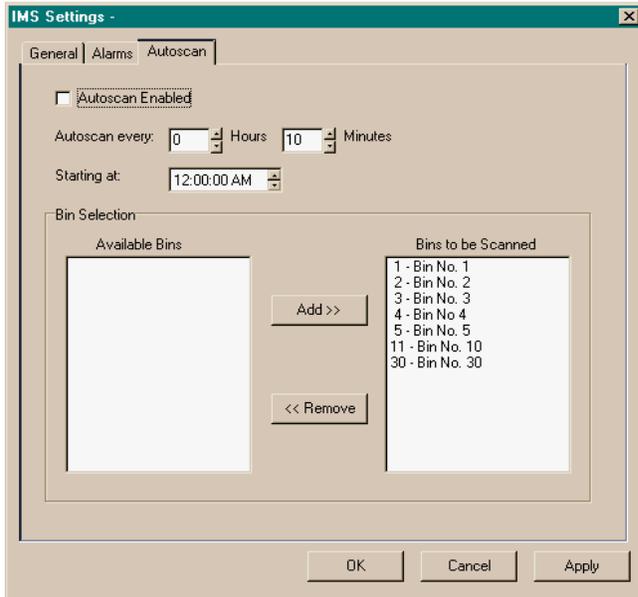
Check each box corresponding to the type of alarm condition(s) you wish the contact to be notified about.

Site Status and Notify Schedule

If the Bin Status option is checked, the contact can be sent an e-mail or fax of the current bin levels of all the bins in the IMS system. Set the interval and start time-of-day that the contact will be sent an update of the site status.

Autoscan

The Autoscan tab of the IMS settings window can be used to configure the bins to be scanned during automatic and manual Autoscan operations and to set the time and interval for automatic Autoscans to be completed.



Autoscan Enabled

Check this box to enable automatic Autoscanning of the selected bins. When this box is checked the software will automatically Autoscan at the preset interval from the starting time.

Autoscan Interval

Set the interval delay between automatic Autoscans. Setting the delay to hour and minute intervals to zero will cause an Autoscan to occur once every 24 hours on the starting time.

Starting Time

Set the starting time to control the time of the first Autoscan for every 24 hour period. This starting time can be used to control the time of an Autoscan that occurs once a day or to control the time past the hour that Autoscans will completed on during a day.

Bin Setups

Bin Setups are entered to configure the size of a bin, density of the bin contents, assign SmartBob addresses, set Alarm heights and control the display of level information for a bin. The bin setups must be entered before measurements can be taken for a bin and are important to allow the program to calculate the correct height, weight, and volume of the bin contents. Bin Setups can be accessed by selecting Bin Settings from the Setup menus or by right-clicking on a bin and selecting Bin Settings from the popup menu.

Configuration

The bin configuration tab allows you to set the dimensional information for a bin and the material densities to allow the BinMaster IMS software to correctly calculate the level of the bin contents and the weight and volume of the bin's contents. The configuration tab can be accessed by selecting Bin Settings from the Setup menu.

The screenshot shows a software window titled 'Bin Configuration'. It has four tabs: 'Configuration', 'Bobs', 'Alarms', and 'Display'. The 'Configuration' tab is selected. The form contains the following fields and values:

- Bin Number: 2
- Title: Bin No. 2
- Contents: Blue Pellets
- Bin Style: Circular
- Height: 10.0 ft
- Diameter: 10.0 ft
- Length: 10.0 ft
- Content Density: 1.0 lbs/cu ft
- Hopper Offsets:
 - Weight: 0.0 lbs
 - Percentage: 0.0 %

Bin Number

The bin number can be set when adding a bin to a IMS system. This number will control the location and tab the bin will be displayed on the main program window.

Title

The bin title will be displayed above the bin on the main program window and other places information for the bin is displayed. The title can be used to help identify a particular bin.

Contents

The contents will be displayed below the bin on the main program window and other places information for the bin is displayed. The contents field is used to identify the type of material in a bin.

Bin Style

Set this list box to the style of the bin you are setting up (Rectangular or Circular). For a rectangular bin, the length of the bin can be entered.

Height, Diameter, and Length

Enter the dimensions of the bin in the units specified in each field. The length parameter can be entered for rectangular bins.

Content Density

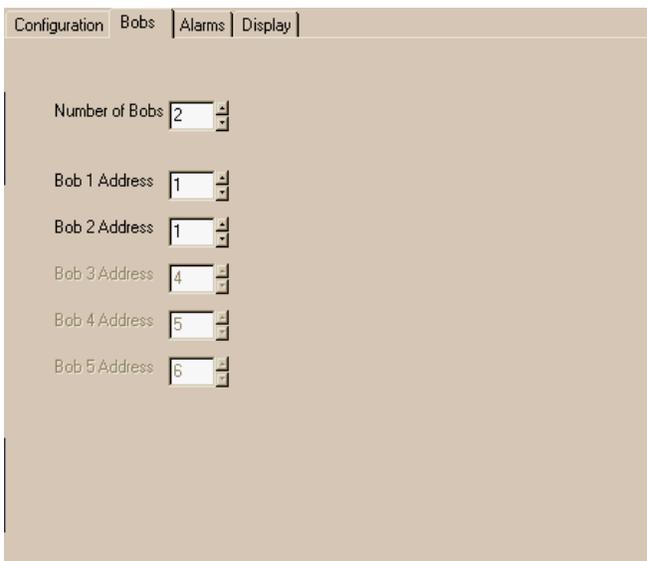
Enter the density of the material being stored in the bin. Use the units specified in the field. The content density is used by the BinMaster IMS software to calculate the total weight of the material stored in a bin.

Hopper Offset (Weight or Percentage)

The hopper offsets can be set if the bin has a hopper bottom that the SmartBob unit will not be able to measure. Enter either the weight or the total percentage of the bin contents that the hopper will hold of the material in the bin. Changing either value will update the other value automatically. Leave these values at zero if you do not want the bin measurements offset.

Bob Addresses

The Bobs tab allows you to configure which SmartBob units will be controlled each bin. Up to 5 SmartBob units may be tied to a single bin. The Average height for all five SmartBobs is used for calculations of the content level, weight and volume. The Bobs tab can be accessed by selecting Bin Settings from the Setup menu.



The screenshot shows a software interface with a tabbed menu at the top containing 'Configuration', 'Bobs', 'Alarms', and 'Display'. The 'Bobs' tab is selected. Below the menu, there are five rows of configuration options, each with a label and a numeric input field with a dropdown arrow:

- Number of Bobs: 2
- Bob 1 Address: 1
- Bob 2 Address: 1
- Bob 3 Address: 4
- Bob 4 Address: 5
- Bob 5 Address: 6

Number of Bobs

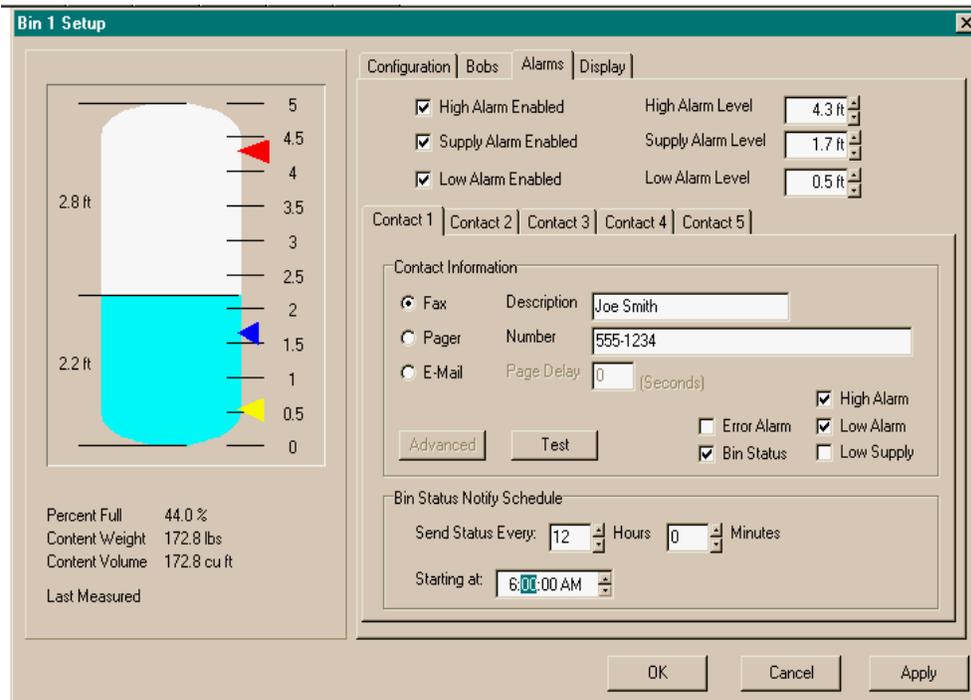
Set this value to the number of Bobs that will be controlled for the bin. A bin can have the measurements of 1 to 5 SmartBob units averaged for calculations of the level, weight, and volume. It may be necessary to use more than one Bob if the bin has a large surface area.

Bob Address 1-5

The Bob address controls sets the Bobs to be operated during a measurement. This value corresponds to the settings on the SmartBob unit's address dip switch.

Bin Alarms

The bin alarms tab allows you to set the High and Low alarms levels for each bin and the contact numbers for paging and faxing for alarm conditions for a bin. The Bin Alarms tab can be accessed by selecting Bin Settings from the Setup menu.



High Low and Supply Alarm Enable

Check these boxes to enable the High, Low, or Supply alarms for a bin. The alarm level indicators on the bins will disappear when they are not enabled. When an alarm is enabled its level indicator will be displayed on the bin detail and can be dragged with the pointer to a new level. Each level indicator has its own color to distinguish it from the others. When an alarm is enabled a warning dialog box can be displayed and any Alarm Notification faxes and pages will be sent if the alarm level is exceeded. See the IMS Alarms Settings for more information on bin alarms.

High, Low, and Supply Alarm Levels

Set these values to trigger an alarm condition when the content height exceeds the pre-set level. Enter the height value in the units shown in the field. Or drag the corresponding level indicator on the bin detail.

Alarm Notification

Five notification numbers can be setup for each individual bin. These numbers can be set to call on any of the alarm conditions. The settings are entered the same as those for the IMS Alarms. See the IMS Alarm Settings for more information.

Bin Status

A bin status notification can be sent to E-Mail and fax recipients at specified intervals during a 24 hour period. Check the Bin Status option to send a fax or e-mail at specified intervals. When Bin Status is checked the Notify Schedule will be enabled for editing.

Display

The display tab of the Bin Settings allows you to set the color the bin content level is displayed as, and the format the bin's level value and graduations are displayed in. The display tab can be accessed by selecting Bin Settings from the Setup menu.



Level Indication

This setting will change the format that the bins level will be displayed as. The level can be displayed as the content height, weight, volume or percentage full. This setting will also change the format of the graduations show in the bin detail of the main window.

Content Color

This setting controls the color the bin content level is displayed as.

Faxing, Paging, and E-Mail

The BinMaster IMS software has the ability to fax, page, or e-mail personnel or suppliers when a bin's level reaches a High, Low, or Supply point or when there is a malfunction with a SmartBob unit. Five contacts may be setup for each IMS system and an additional five contacts can be setup for each individual bin. The contacts setup for the entire system are called when an alarm condition occurs for any bin in the system whereas the contacts setup for each individual bin are called when an alarm condition occurs for that specific bin.

Paging

When the BinMaster IMS software is paging, a small dialog box will be displayed to show the recipient of the page and the progress of the call. The page message includes three pieces of information.

Pager System ID - - 4 digit number identifying the system with the alarm condition.

Alarm Code - - 2 digit number identifying the alarm condition.

Bin Number - - 2 digit number identifying the bin with the alarm condition.

Page Message Format: <Pager System ID (4-digits)><Alarm Code (4-digits)><Bin Number (2-digits)>

Sample: "0001-50-21" or "00015021" - - A low level warning for bin number 21

Alarm Codes

- 10 -- A communication error with a SmartBob interface occurred while trying to make a measurement.
- 20 -- A SmartBob unit was not fully retracted when a measurement was started.
- 30 -- A SmartBob unit could not be retracted and may be stuck.
- 50 -- A Low level alarm has occurred for the bin.
- 60 -- A high level alarm has occurred for the bin.

Faxing

When the BinMaster software is faxing a small dialog box will be displayed to show the recipient of the fax and the progress of the call. The fax messages are text based and pass the general information to identify the recipient and the sender of the fax and information concerning the alarm condition that has occurred and the current level information for the bin contents.

Example:

```

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!                                                                                                                                            !!
!!      To      : Fax Recipient                                                                                                            !!
!!              Fax 555-1234                                                                                                            !!
!!                                                                                                                                            !!
!!      From    : Fax Sender                                                                                                              !!
!!              5555 Street                                                                                                              !!
!!              Somewhere, NE                                                                                                            !!
!!              Ph. 555-123-4567                                                                                                        !!
!!              Fax 555-321-7654                                                                                                        !!
!!                                                                                                                                            !!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
                                HIGH LEVEL WARNING
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

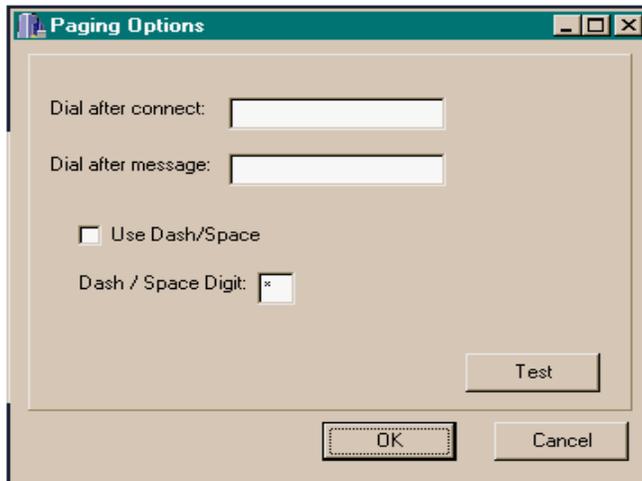
      Bin Number   :      30
      Bin Name     :      Bin No. 30
      Contents     :      Lime Green Pellets
      Max Level    :      50.0 ft.

      Current Level :      47.7 ft.
      Current Weight :      3,746.3 lbs
      Current Volume :      3,746.3 lbs
      Current Percentage:      95.4%

```


Advanced Paging Options

The advanced paging dialog allows you to set extra parameters for paging if necessary. To access the Advanced Paging window, press the advanced button when editing the pager number.



Dial after connect

This field allows you to enter digits to be dialed after the pager phone number is dialed and the pager delay has expired. This may be necessary if the pager service is automated and other options must be selected on the service before the message is sent.

Dial after message

This field can be used to enter digits that must be inserted into the page message. This may be necessary if the pager service before the message is sent.

Use Dash/Space

Check this box to enable dashes or spaces to be inserted into the page message. Some pagers and pager services support this feature normally by pressing the asterisks on a phone keypad. Use this feature if the pager supports it to make the pager message easier to read.

Dash/Space Digit

Enter the digit to be dialed to insert a space or dash in the page message.

Remote System Access

The remote system access features of the BinMaster IMS software allows you to access inventory information from a remote location. The BinMaster IMS software can perform a quick download of current inventory from a remote location and allow offline processing of that information in the form of reports or by viewing on screen. Remote access requires a modem and the Remote IMS Server program to be running on the remote system to be accessed. The Remote IMS Server program is provided as a utility with the BinMaster IMS software. Information is contained in the following sections showing how a remote system may be setup.

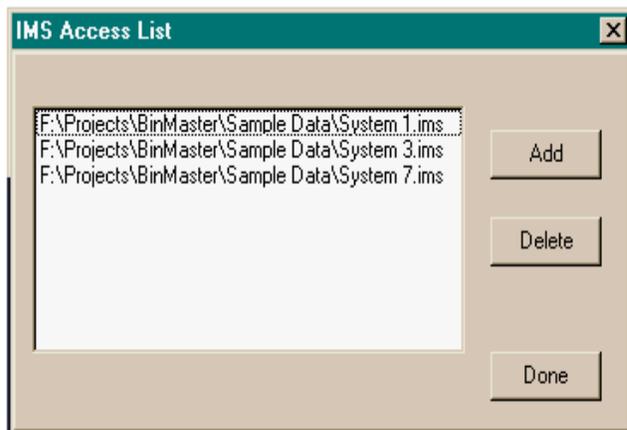
Remote IMS Server

The remote IMS Server software must be utilized to allow remote access to IMS systems on a computer. This software controls the modem in your PC and answers incoming calls from a remote system requesting the IMS data, The software allows access to IMS systems on the host PC and transmits data to the remote system which requests it. If remote access is required at all times, it is recommended that the Remote IMS Server shortcut be placed in your startup folder so it will be running every time the your PC is turned on.

Setup

Start the BinMaster IMS software and set the port settings on the options dialog for the modem port to the correct setting. The Remote IMS Server program shares this setting with the BinMaster IMS software.

Next, start the Remote IMS Server program and select the setup menu. A dialog will be displayed to allow additions and deletions of IMS systems that will be accessed by a remote PC. Press the Add button to display a file dialog and add the systems to be accessed. Note: System files end with the file extension ".ims". Press the done button when the additions or deletions are complete. The Remote IMS Server program is now ready to accept calls.



On the Pc system that will be remotely accessing the IMS data, create a new system file and set the connection type to "remote" along with setting the phone number of the remote PC. Set the name of the system to the same name as the IMS system to be accessed. Accessed to a system will not be allowed if the names do not match. The password may also be entered at this time if you wish to have the password verified automatically every time a connection to the remote system is made. Otherwise, the password will be prompted for when the connection is made.

Connecting

When an IMS system is created with a “remote” connection type, an additional button will be displayed on the toolbar to start the remote connection. Press the button to start the automatic update of inventory information. The modem will call the remote PC and download the current level information and setups for each bin and update the level history for each bin. When the download is complete the modem will disconnect from the remote system. Inventory information downloaded can be accessed when the call is complete. The last downloaded information will remain available anytime the system file is opened.

Bob Diagnostics



The Bob diagnostics dialog can be used to retract a SmartBob unit's Bob in the event of a stuck Bob or for testing of a SmartBob unit. To access the Bob diagnostic function, select Bob Diagnostics from the action menu or click the Bob Diagnostics tool button. After the diagnostics dialog is displayed, select the Bob number to be retracted and press the Retract button. The status of the Bob will show “Retracted” if the retract command is successful. Otherwise, an error dialog will display the error that occurred.

Exporting

The measurement data recorded by the BinMaster IMS program can be exported for use in a spreadsheet or other programs. To export the measurement data, select Export from the File menu. When an export is performed, the data for all of the bins will be exported to the same file sorted by the bin number.

File Format:

Measurement Number

Bin Number

Bob Number

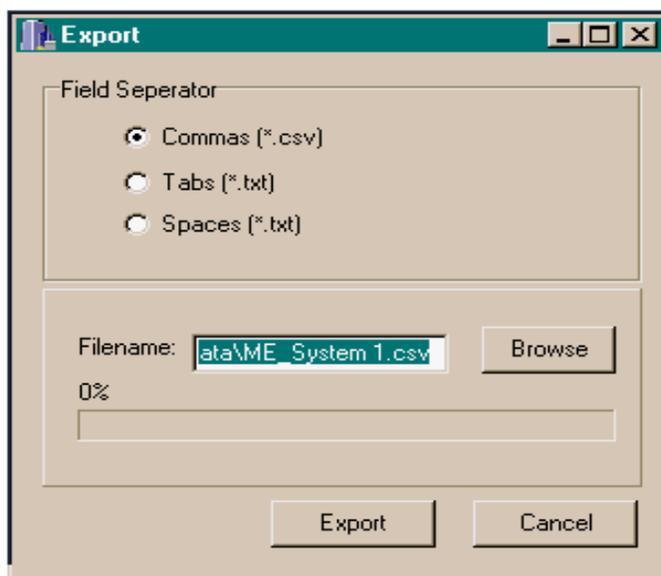
Content Height with unit

Content Weight with unit

Content Volume with unit

Content Percentage

Date and Time of Measurement (Day, Month, Date, Time, Year0



Field Separator

There are three format types available, Comma Separated Values (*.csv), Tab Separated (*.txt) and Space Separated (*.txt). The default value is a Comma Separated Value format (*.csv) which can be directly imported into most spreadsheet programs. Select the type of field separator you require for export to another program.

Filename

Type in the name of the file you would like export the data to. Or use the browse button to move to find a directory. and enter the filename.

Customer Service

BinMaster offers a toll-free Customer Service phone number **1-800-278-4241**. You may call the Customer Service Department for technical and assistance Monday through Friday from 8:00 AM to 5:00 PM Central Time. International customers can call us at **(402) 434-9102** or reach us via fax at **(402) 434-9133**.

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