AXIBATCH

USER MANUAL

Version 2

June 2018

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1 Introduction

This document is the instruction manual for the AxiBatch Concrete Batching software.

1.1 License Agreement

The AxiBatch software is licensed to the end user to be installed on one computer per individual license. This software requires registration whereby the installed computer ID is required.

1.2 Publishing Rights

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1.4 Definitions

AXIBATCH	Concrete Batching and Docketing Software.
CONSOLE	Program that allows editing of the AxiBatch Database and run reports
AXIBATCH DATABASE	Main Database including Recipe and Customer tables, and the Completed Loads Database containing completed batch records
AGGREGATES	Materials such as stone and sand that are used to make Concrete and that are loaded into large Hoppers via a Front End Loader or an Overhead Bin Plant.\
INVOICER	A separate software that produces invoices from completed loads that reside in the Completed Loads database.
PREORDER	An order that resides in the PREORDER table in the database and appears in a Grid View on the Top Left of the main screen of AxiBatch. You cannot batch from these records.
PROGRESSIVE	An order that has been transferred from the PREORDER table to the BATCH table. It resides in the BATCH table in the database and appears in a Grid View on the Bottom Left of the main screen of AxiBatch. You can batch from these records.
PLC	Programmable Logic Controller. An industrial stand alone computer that controls and monitors the plant input and outputs.
AXISOFT	A PLC emulator that runs on a computer that communicates to Ethernet devices for Input Output control. This allows for partial to full automation.

1.5 Features

AxiBatch is designed to run on a Microsoft Windows operating systems, including Windows 7 (SP3) ,8 and 10. AxiBatch and Console software package was written using Microsoft C# and requires Net Framework 4 to run.

1.6 AxiBatch Modes Available

Automation - Automation of the Concrete Batching using a PLC

AxiSoft - Partial to Complete Computer based Modular Automation using Ethernet Devices. AxiSoft provides more configurations than the PLC system.

Docket - No Automation, just Docketing

1.7 Harware Requirements

1.7.1   Recommended Computer Hardware Requirements for Windows 7

- Intel Core i7 chip (min 4 Core)
- 19" TFT Colour Monitor (2 Monitors with Extended capability)
- 250GB (100 MB Free Hard Drive Space)
- 8 to 16 GB RAM
- 10/100/1000 Ethernet
- CD/DVD ROM Drive

1.7.2   Recommended Computer Hardware Requirements for Windows 10 and running with AxiSoft

- Intel Core i7 chip (min 4 Core)
- 24" TFT Colour Monitor (2 Monitors with Extended capability)
- 256GB SSD Drive
- 1TB Hard Drive for storing backups
- Minimum 16 GB RAM
- 2 of 10/100/1000 Ethernet Ports (1 for Office Network, the other for AxiSoft control gear
- CD/DVD ROM Drive
- USB 6 Ports

2   Getting Started

2.1 Launching AxiBatch

Double Clicking the AxiBatch icon on the desktop will launch the AxiBatch software. The screen below will be displayed

If this is the first time that AxiBatch is run, a first-time screen will appear.

To configure this First-Time screen:

1. Select the operation mode (Select "No Automation" if you have no PLC Connection or simply using AxiBatch as a Docketing System. Select AxiSoft if you have an AxiSoft system
2. Use the default Database path, and press Test Connection. This will check that you have communications to your database file. If you don't you may not have installed the Firebird Database engine from your installation CD. If you alter the path, you must copy AxiBatch.gdb and CompOrders.gdb from that path to your new path manually, then change to that path in the text box and try Test Connection again.
3. Once you have connection press the "Clean Plant Settings Table"
4. If your mode was "PLC M340" then set your PLC address and press Test Connection.
5. If your mode was "AxiSoft" then set the pipe address and press Test Connection. If AxiSoft is on the same machine use "Local" as the pipe address.
    (Refer to the AxiSoft manual if you purchased AxiSoft Controls)

Press Proceed to continue and save the settings that you have made.

2.2 Logging In

AxiBatch software identifies three user levels and their passwords for authentication and protection.

   Level 1   **Operator** user name only gains access to operating the plant and viewing Reports.

   Level 2   **Administrator** user name has access to the same functions as the operator plus access to most of the settings.

   Level 3   **Technician** user name gains full access.
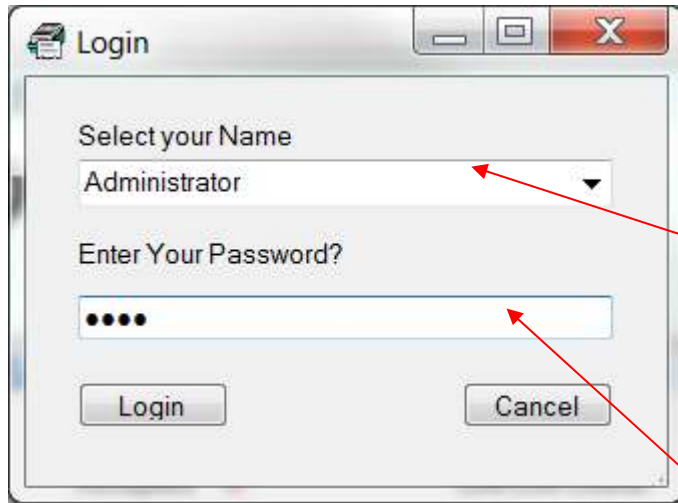
The AxiBatch software will automatically come with 3 user names. They are Operator, Administrator and Technician.

You will need the Administration / Technician level to be able to configure most functions.

Password Required

2.3 User Credentials

Apart from the different levels, you can assign various functionality to each user. This is edited in the Users table found in Console. (Edit->Users).

To create a new user, right click in Users table grid and select "Create New User". The person creating the new user must be logged in and have the credential to be able to create a new user. Technician user will always have this qualification.
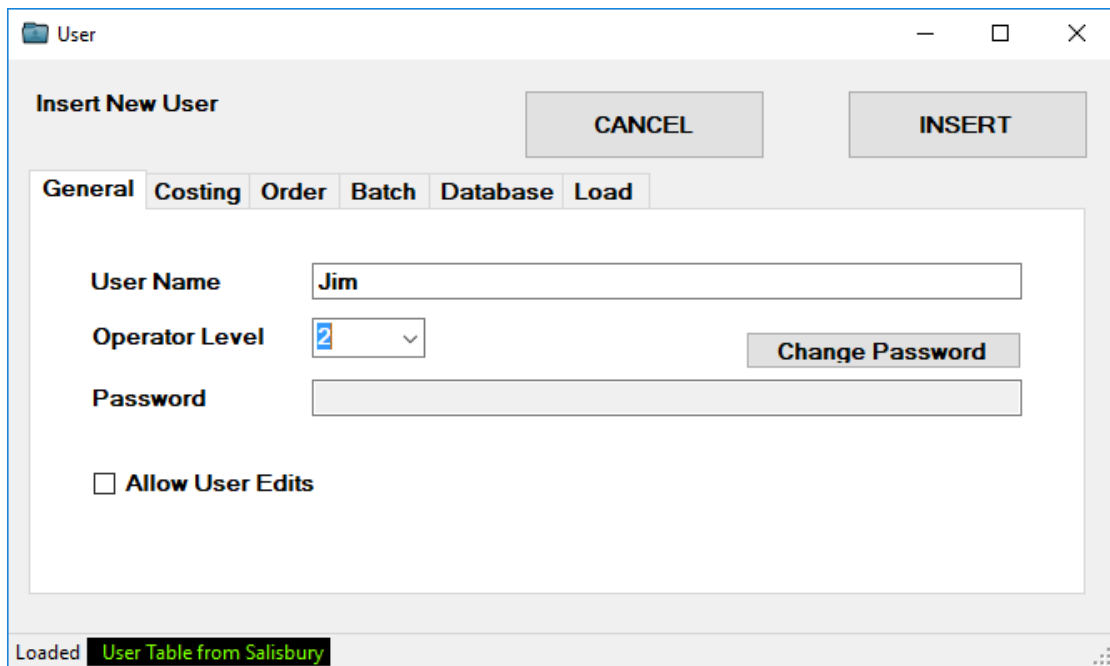
To add a password, press the "Change Password" button. Follow the instructions at the bottom of the screen. Enter the new Password and then press the ENTER key. Enter the password again and press the Enter key. The password will be entered if exactly the same the second time around.

Go through each tab and select any option that you wish the operator to be able to perform.

2.3.1 Users General Tab

2.3.1.1 Allow User edits

Will allow this User the edit or insert new users

2.3.2 Users Costing Tab

2.3.2.1 Allow Credit Control

Allows the user the be able to change the Credit Status of the Customer and approval to batch for that customer if in Stop Credit

2.3.2.2 Allow Price Edits

Allows the user to edit recipe pricing

2.3.3 Order Tab

2.3.3.1 Show Costings in Order Form

This will allow the user to see the costings tab in the Order form

2.3.3.2 Allow Access to Flat Fee

This will allow the user to change the Flat Fee and will show the Flat Fee calculator

2.3.3.3 Allow Short Load Override

This will allow the user to turn off or on the Short Load fee if there is a Short Load

2.3.3.4 Allow Costing Override

If the Class is set to an override price this will allow that user to be able to set that price

2.3.3.5 Allow Order to be Deleted

This will allow the user to be able to delete the order

2.3.3.6 Allow Discount

This will allow the user to be able to set a negative flat fee

2.3.3.7 Allow to change MISC Class

This allows the user to be able to change the MISC class in the MISC tab

2.3.3.8 Allow to change Prog Load in Order

This will allow the user to the change the progressive quantity in an order

2.3.3.9 Allow to change Date/Time in Order

Defaulted to on, this allows the user to set the Date and Time for the next batch

2.3.4 Users Batch Tab

2.3.4.1 Allow Bin Edits

This will allow the User to be able to edit Bin settings, such as Material, Moisture, Infights, Jogging, Flow Alarms and Bin Capacity

2.3.4.2 Allow Discharge Profile Edits

This will allow the User to be able to edit Discharge Profiles for Trucks. These are basically sequencers to tell the system how it is to discharge the materials into the truck.

2.3.4.3 Allow Master Database Access

This will allow the User to be able to access the Master Database area in Console.

2.3.4.4 Allow Settings Access

This will allow the User to access the Settings area in AxiBatch.

2.3.4.5 Allow Stock Adding

This will allow the User to access the Stock Add form in both AxiBatch and Console

2.3.4.6 Allow Stock Adjustment

This will allow the User to access the Stock Adjustment form in both AxiBatch and Console

2.3.4.7 Allow RFID Read Cancel

This will allow the User to cancel the Truck Bay RFID read and allow another scan in case the wrong card was scanned by another driver

2.3.5 Users Database Tab

2.3.5.1 Allow Customer Edits

This will allow the User to be able to edit, insert or delete customers from the Customer table.

2.3.5.2 Allow Material Edits

This will allow the User to be able to edit, insert or delete the material in the Materials table.

2.3.5.3 Allow Recipe Edits

This will allow the User to edit, insert or delete the recipes and or the items in the Recipes and Recipe Items table.

2.3.5.4 Allow Vehicle Edits

This will allow the User to edit, insert or delete Vehicles in the Vehicle table.

2.3.5.5 Allow Supplier Edits

This will allow the User to edit, insert or delete Suppliers of materials in the Supplier table.

2.3.6 Users Load Tab

2.3.6.1 Allow ability to change Customer Details

This will allow the user to access the "Change Customer Details on Load" in the completed loads page in Console. This form will allow the user to fix any customer names, addresses, class, pricing in the completed load that may be wrong.

2.3.6.1 Allow ability to change the Load Size

This will allow the user to change the incorrect load size in the "Change Customer Details on Load" form in the completed loads page in Console.

2.3.6.1 Allow ability to change the Recipe Code

This will allow the user to change the incorrect recipe code in the "Change Customer Details on Load" form in the completed loads page in Console.

2.3.6.1 Allow ability to change MISC Costs and Flat Charge

This will allow the user to change MISC Costs or Flat Fee in the "Change MISC Items" form in the completed loads page in Console.

2.3.6.1 Allow ability to change Comment / Order No / Project No

This will allow the user to change the Comment, Order Number or Project Number in the "Change Comments / Order No" form in the completed loads page in Console.

2.3.6.1 Allow ability to change Date and Time Completed

This will allow the user to change the Date and Time completed in the "Change Completed Date and Time" form in the completed loads page in Console.

2.4 Launching Console and Initial Setup

To start Console either click on the Console icon on the Desktop, or on AxiBatch select "Tools=>Start Console"

2.4.1 Setting up Console when running on the same machine as AxiBatch

Go to "Settings->Console Setup->Settings->Database".

Select "Local Connection" if Console is running on the same machine as AxiBatch.

Then set the Server Path, usually "C:\AxiBatch Data\Databases"
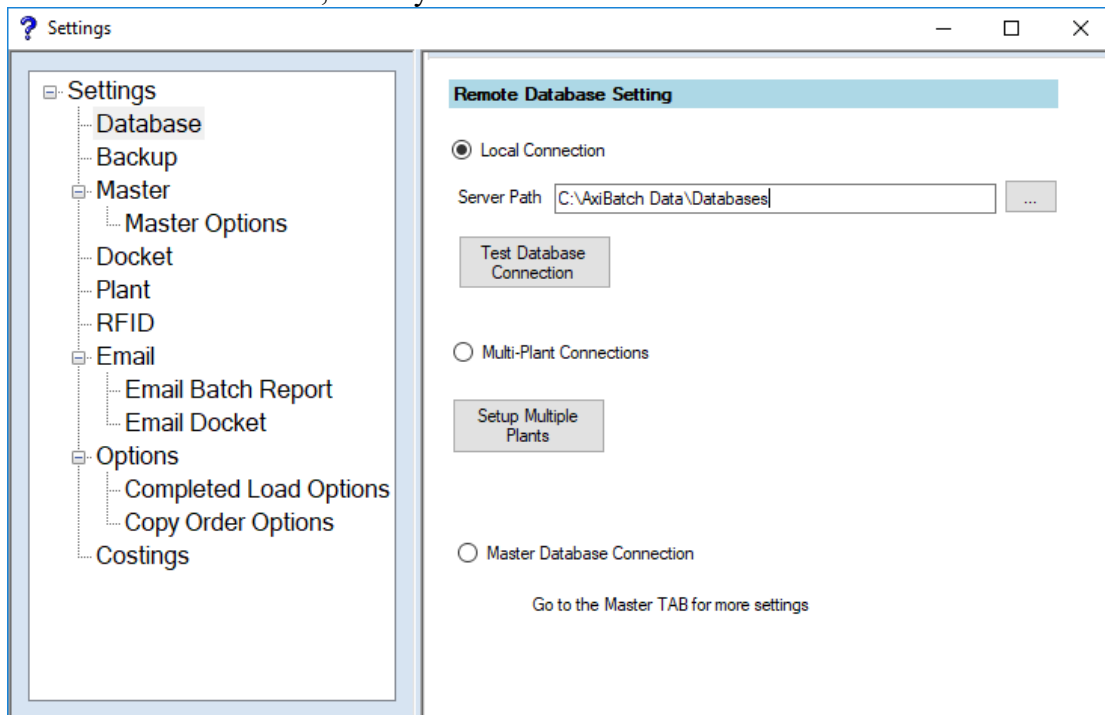
Close the Settings Screen. Closing will automatically save all the settings.

2.4.2   Setting Up Console so you can connect to a Plant from a list of Plants

Select "Multi-Plant Connections" if you are using Console to connect to any one of your plants.

Note that this method allows you to connect to one plant at one time. It is possible to run another instance of Console to connect to a different plant.

Press the "Setup Multiple Plants" button or select "Settings->Plant" to setup your plants.

When the Plant Information screen appears, you type the Plant Name in the left field (Plant Name) and the address of the Plant Database and path in the right field (Plant Address).

The format of the Plant Address is as follows …

<**IP Address of Computer** or **Computer Name**>:<**Database Path in Computer**>

Notes:
- the Full Column ":" between the IP address and the Database path.
- It is preferable to use a static IP address of the AxiBatch Computer, if this cannot be done use the Computer Name as a last resort
- Make sure your firewall on both the Console Computer and the AxiBatch Computer have the firewall (and or antivirus) exemptions for the Firebird Database engine and Ports 3050 and 3051.

Example

192.168.10.86:C:\AxiBatch Data\Databases

2.4.3   Setting Up Console using the Master Database

Select "Master Database Connection" if you are using the Master Database.

This method uses one Master Database to store Customers and Recipes in one database, usually stored on a server, that can be accessed by all Consoles and all AxiBatch databases.

If you make a change in a Customer Record, Console will update the Master Database and all Plant Databases that are connected. If a Plant Database has no connection (network down or computer is off, then next time that computer is started and AxiBatch starts, it will attempt to synchronise the Customer Table).

Restart Console.

Go to "Settings->Master" and type the IP address or the Computer name of where the Master Database will reside in the top field. Then type the path location on that computer where the Master Database will reside in the "File Path Location" field.
If the Master Database has already been created use the "TEST" button to see if you can connect to it. If it hasn't been created, use the "CREATE" button to create it. Once you create the Master Database, restart Console again, and go back to "Settings->Master" and press the "TEST" button to ensure you can connect to it.

2.4.3.1 Setup Plants in Master Database

If you can it is now time to setup all your Plants that will use the Master Database. Either press "Setup Plants" button from the screen where you just tested or select "Master Database->Plants" from the menu.

Enter the Plants in this table. Note that these plants are actually stored in the Master Database and will be accessible to all Consoles that connect to that Master Database.

Fields in this Table are
- **Plant Number**
- **Plant Code**
- **Plant Name**, this is a mandatory field and must be the same Plant Name as in the AxiBatch Settings "Settings->Plant->Plant Name"
- **Plant Description**
- **Plant IP Address**, IP Address of computer where the AxiBatch Database resides
- **Plant Path,** the pathname of computer where the AxiBatch Database resides

Other fields are for administration purposes. Refer to the Section 3.1 on how to add these records.

3   Database Setup

There will be some configuration before AxiBatch can be used properly.

In summary, you will first setup Materials, then allocate the materials to bins, hoppers or pumps. After that you will create the recipes.

The next step is to setup your Customers, Suppliers, Trucks.

Then you can setup your classes and pricing.

If you have full automation you will also need to configure the Discharge Profiles.

3.1 Using Database Features

These database buttons are universal and will have the same meaning.
In most cases, for example the "Add Record" may not work or may not be visible, then right clicking with a mouse will bring up options like Edit, Insert, Create New or Delete. Usually these features provide a more advanced and ascetically looking editing form.

An example of the Delivery Address Table, one of the few tables left that use the database buttons described below.
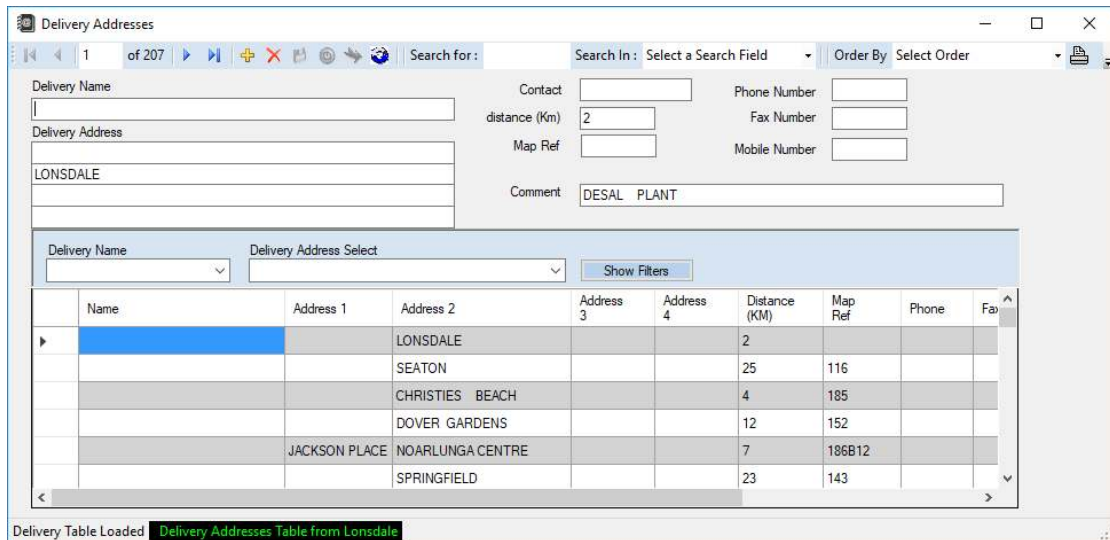
The navigator at the top of the page consists of the following objects.

First Record - Pressing this takes you to the first record.

Previous Record - Pressing this takes you to the previous record.
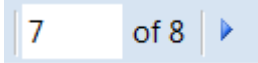
Record Number - This displays the current record number. Typing a number and then pressing enter will take you to the record number that you have entered.

Next Record - Pressing this will display the next record.

Last Record - Pressing this will display the last record.

Add Record - Pressing this will add a row to the bottom of the table. (You can also add a row manually by just typing in the last empty row that has a cursor on the left hand side of the screen).

Delete Record - This will delete the record selected. (Selected record has an arrow head located on the left hand side of the screen.)

Save - This will light up when editing has occurred. Otherwise will be greyed out. Pressing this will commit all changes to the database.

Cancel - Will undo any changes on the current record you are in.

Rollback - Will undo all edits before the last Save was done. It will prompt you with a Yes or No prompt.
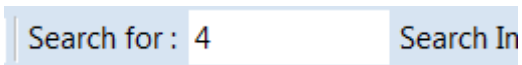
Search For - The search text

Search In : Product Code

Search In - The Field column you want to do the search in. You must select the field first, then type in the text in the Search For area. it will search part words. If a full match is found the whole row will be highlighted in blue.

Order By Select Order

Order By - Will refresh the database with the order you selected. If you want to reorder without refreshing the database, click on the column headers. This is much faster.

Refresh Product Table - Will refresh the data from the Database.

Print - Will print a report that have select from the "Select a Report" combo box.
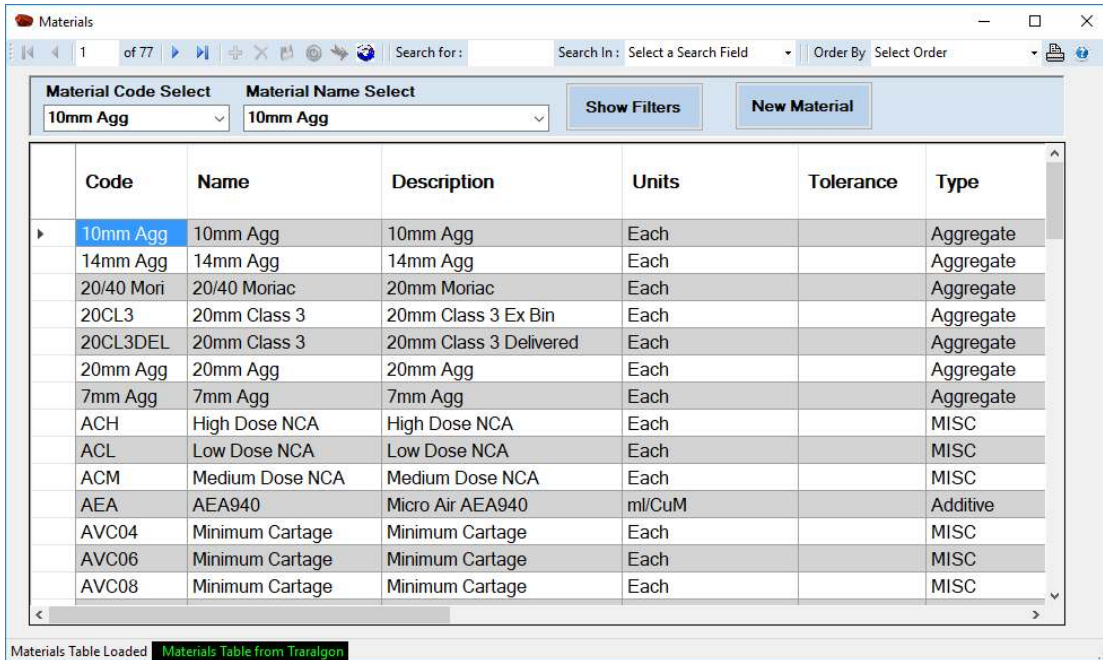
Notes

1. In some cases, some of the buttons are not enabled. Editing a record may be as simple as right clicking on the record and selecting an option from the context menu. Usually this method offers a more advanced and simplified form of editing or inserting a record.

2. Sometimes no or little information may appear in the grid table, this is because of the initial filter used to grab data from the database. This is to speed up the update time of the screen. Use the "Show Filters" button to make a popup appear that will filter and update data. Filters options change from table to table. Filters can include objects like date ranges, customer code etc.

3. Most tables are edited using the Console software. This software is provided with AxiBatch and can be run from AxiBatch via the Menu and Tools. Tables that are edited only in AxiBatch relate to the specific plant and include the Bin Setup Table, Discharge Table, Water Adjust Table. Also included are the editing of the Order and Progressive Order.

3.2 Adding, Editing or Deleting Materials

Materials must be added, before adding recipes and bin allocation.

In Console select Edit->Materials or press on the Rock icon [rock icon] to select the Materials table.

To be able to make material changes you must have the credentials to do this. To do this function you must have the credentials to do this. (User Table->Database->Allow Material Edits)

3.2.1 To add a material

Click your right mouse button and select "Create New Material" and a Form will appear with an Insert button that is greyed out. Type in the Code, then the Name and Description. (Each Field is described below in detail)

3.2.2 To edit an existing material

Select the material you wish to edit and either double click with the left mouse button or click once with your right mouse button and select "Edit Material" and a Form will appear with an Update button that is greyed out. This button will become alive once you edit something.

3.2.3 <u>To delete an existing material</u>

This cannot be done here and must be done in Tools->Material->Delete Material Code. This tool will automatically delete the material from the materials table and will also delete the Material from the Bin table and from any Recipes.

3.2.4 <u>Material Fields</u>

3.2.4.1 Code

Is the code of the Material.
If using a Remote display usually the first 6 characters are displayed on the Remote LED Display. Code is maximum 10 Characters. Some displays like Ezy Marquee are able to display 10 characters. AxiCab will display all characters. You must have a Material Code, this is used in all methods of searching.

3.2.4.2 Name

Is the name of the Material. Maximum 30 characters.

3.2.4.3 Description

Is the description for the Material (Max 40 Characters)

3.2.4.4 Units

Make sure you select the right units for the material.
For additives use ml/100Kg of Cement is the target for additives you use in based on cement or use ml/CuM if based on the load size.

3.2.4.5 Tolerance

This is the default tolerance that will be used for the material when creating a recipe. Tolerances can be altered in the recipe. The tolerances are always in per cubic meter. Note that AxiBatch has a setting to auto calculate the Tolerance for additives. In Settings refer to (Settings->Plant->Additives->Auto Generate Smart Tolerance for Additives)

The Tolerance is used to detect if the material is within a tolerance. If below the target minus the tolerance an Underweight alarm will be produced after the settling time has completed. If the final weight is above the target plus the tolerance then an Overweight alarm is produced after the settling time has completed.

3.2.4.6 Type

Make sure you select the correct type for the material. This is an important field.

3.2.4.1 SG

Specific Gravity of the material. Default is 1.0. Used to calculate the total Yield in a Recipe. This is shown in the Recipes Items table.

3.2.4.2 Select Base Filter

The material can be searched by filters. This is the base filter. Example a base filter could be called "Color". This would be mainly used for MISC items or any other items that are individually sold to customers. Base filter is optional.

3.2.4.3 Filter

This is usually the final filter that will be used for searches. Can be the primary filter but will usually be the Secondary filter. (Max 40 Characters)

3.2.4.1 Date and Time Last Updated

This is not editable and will show the last time the material edit was changed.

3.2.4.2 Raw Cost

This is the raw cost of the material per unit specified. Additives will always be in ml. The raw cost has up to 5 decimal places to ensure accurate costs. This field is used to calculate profits made from recipes when the actual values used are entered. This is used in Sales reports found in the Completed loads form.

3.2.4.3 Cost Type, Unit Amount and Cost

If this material is sold to the Customer as a separate item, then Cost Type, Unit Amount and Cost should be set up. Use Rate if the cost is to be calculated based on the recipe CuM load value, or otherwise use Fee.

Please note that this is not the pricing for recipes but only for the individual material if it is sold separately.

Example an additive accelerator is priced as follows 1000ml per $10 per CuM. Cost Type is set to Rate, Unit Amount is 1000, and Cost is $.01. Hence for a 5Cum Load and 2000ml was used per CuM, the cost charged to the Customer would be 2000*0.01*5 = $100, in this way the Quantity would be 2.
Or, Cost Type is set to Rate, Unit Amount = 1, Cost is $10, the cost charge to the Customer would be 2*10*5 = $100 and the Quantity would be 2000.

Example Bags of Color are used for some mixes, but the number of bags is not based on the CuM rate but is more based on customer requirement, the Cost Type would be set to FEE, the unit is 1, and the Cost is the price per bag charged to the customer. So, if it is charged at $55 per bag, then Cost = $55, then in the MISC charges in the order operator can enter the quantity (how many bags) and it will calculate the total cost for the bags.

3.2.4.4 Class Costs

This table is an extension to the previous "Cost Type, Unit Amount and Cost" but will have multiple entries but will be based on the Class. The Customer will have a default class for MISC items. This also must be enabled in AxiBatch settings (Settings->Accounting->Classes->Enable Class Operation on MISC Items).

To create a Price right click and select Create New Price. Enter the Class, Price Type and price. The Unit is taken from Unit amount in the previous Tab.

To edit the price right click and select Edit Price or double left click on the selection with the left mouse button.

To delete price, right click and select Delete Price.

3.2.4.5 Total Capacity

Use this to quantify the total storage capacity of the material. This field is used for stock controls. A material can be allocated to multiple bins. Each bin has a storage capacity. The bin's storage capacities for the one material should equal the storage capacity of the same material in the material's table.

3.2.4.6 Total Level

This is the Current Total level, you cannot set this. This is done automatically, and through the stock control methods. This shows the total stock level for that material.

3.2.4.7 Warning Level

When the Material falls below this level an alarm message is created.

3.2.4.8 Confirm this Material at Start of Batch

If this material is used in a Recipe or MISC Item, when the Batch is started it will ask the operator to confirm it has been added.

3.2.4.9 Confirm this Material at Dump

If this material is used in a Recipe or MISC Item, when the Batch Dump is started it will ask the operator to confirm it has been added.

3.2.4.10   Send this Material Requirement to Comment

If this material is used in a Recipe or MISC Item, then when creating the order a comment is added to show that item is to be added.

3.2.4.11   Use this MISC Material to adjust Additive Target

If checked and the type is MISC, and it is used in the recipe, any additive that uses the units ml/100kg will use this material's target. (E.g. could be a manually added cement)

3.2.5 <u>Create a Miscellaneous Material Group</u>

To create a Filter name for a Miscellaneous item, that will appear in the Filter Field in the materials table, select "Edit->Material Filters" in Console.

To create a new filter, right click with your mouse in the grid area and select "Insert Filter". Type in a new filter name. You can attach it to an existing Filter. This would make this Filter a sub filter of the Filter you are attaching it to.

To edit an existing filter, right click with your mouse in the grid area and select "Edit Filter".

To delete an existing filter, right click with your mouse in the grid area and select "Remove Filter". However, warning this does not remove the filter in the Material Filter field in the materials table. This will have to be done manually.

The filter is useful when trying to retrieve a Miscellaneous item when in the Order form. When you click on the Search Glass icon in the MISC tab in Orders, a popup will appear. Select a filter from a Base Filter (if available), then use the Search icon to obtain a list of Misc items that come from that filter.

3.3 Adding Recipes

In Console select Edit->Recipes or press on the bluish Flask icon to select the Recipes table.

Right Click on your right mouse button and select Edit Recipe to edit the selected Recipe.

3.3.1 Recipe Fields

3.3.1.1 Recipe Code

Mandatory! 40 Characters Max. Is used in all searches.

3.3.1.2 Recipe Name

40 characters Max

3.3.1.3 Recipe Description

40 characters Max

3.3.1.4 Recipe Type

Optional field to describe the recipe. Usually a field that can be used on the Docket. (Field 51 on the Docket)

3.3.1.5 Truck Discharge Type

Default discharge type used for Truck allocation timing

3.3.1.1 Slump

Slump Description. Typically used for Dockets.

3.3.1.1 Strength

Concrete strength, typically used on Dockets.

3.3.1.1 Agg Size

Aggregate Size used in recipe, typically used on Dockets.

3.3.1.1 Discharge Profile

This is the default Discharge profile number used for this Recipe. If nothing or 0 is selected, the batch will always start with the default discharge profile number that comes from the Truck. If greater than 1 is selected the Recipe will have priority of the Discharge Profile number. Please note that in the end the operator can always change the profile number in the order.

3.3.1.2 Use Cement to Water Ratio

If this is checked the Water target is always calculated as the ratio (value entered) to the cement target, however Adjust Water or Moisture control will have no effect on water. Values are between 0 and 1.00.

Adjust Water is the ability to allow the operator to adjust the water plus or minus per CuM

Moisture control will calculate the additional aggregate required to make the amount with the moisture calculated subtracted from the Water.

3.3.1.3 Water Source

You can select this Recipe to use Recycle or Town water as a default. If nothing is selected this will be same as any.

3.3.2 Recipe Item Fields

To access the actual Recipe items either right click with the mouse and select Edit Selected Recipe Items or double click with the left mouse button.

The Auto Order button automatically orders the materials as they appear on the screen, otherwise manually type in the order number, not forgetting to press the Save button when finished.

The order is important especially for aggregates, as they will be batched in that order.

Cement should always be before Additives, as additives may be calculated based on the Cement value.

When the form appears, you can add a new item by right click with the mouse button and select Add Material.

You can edit the selected material by either double left mouse click or right mouse click and select Edit Material

You can remove the material by right click with the mouse and select Remove Material.

Note the total yield will only calculate correctly if you enter the correct SG value in the materials table.

Select the Material Type first to be able to select the Material. Then select Material name or code from the list provided. The tolerance will be the default from the material table.

Add the Dry Target per CuM for the Recipe. The tolerance can be changed.

As guide tolerances should be around 10 kg for Aggregates, 5 kg for cement, 3 litres for water and 10-20ml for additives. You can use the auto tolerance generator for additives in AxiBatch, see Settings->Plant->Additives->Auto Generate Tolerance for Additives.

Press the Update or Insert button if new material.

3.4 Allocate the Materials to Bins/Pumps ect.

This needs to be done in order to be able to batch, regardless of the AxiBatch Mode. Hence even in docketing mode this must be done.

This is setup in the AxiBatch software as this is Plant related.

In AxiBatch you must log in as a Level 2 and must have the user credentials. Then select from the main menu "Edit->Bin setup".

The following screen will appear.

Note: When editing changes to a single Bin, pump you must press SAVE if you want to save your changes before editing another Bin/Pump.

Use the 'Type' combo box to select the type of Material you want to allocate. This will include Aggregate Bins, Cement Silos, Additive Tanks and Water Tanks.

On the right of that, use the Bin/Silo/Tank combo box or (up/down arrows) to select the Bin/Silo/Tank number.

Make sure you save before changing Bin/Tank or Silo.

3.4.1 General Tab

3.4.1.1 Enable this Material in this Bin

Use this to enable or disable the material. If disabled the material will be ignored and the system will think it is not in use.

3.4.1.2 Material Code

Use this to select the Material Code. You can use the Material Name as well to select the material.

3.4.1.3 Material Name

Use this to select the Material Name.

3.4.1.4 Moisture

Use this to set the moisture level for the material. Note that this can be changed later at any time using a simple wizard. (Edit->Moistures). This is usually used for aggregates and will automatically adjust the targets of the Aggregates and Water in the recipe when batching.

3.4.1.5 Absorption

Used in conjunction with Moisture and is the natural absorption of the material and is deducted from the moisture reading.

3.4.1.6 This Bin has Dual Gates

Check this if the Bin has dual gates. Used in Overhead Bin plants. If you are using a docketing system or a Front-End Loader plant this is irrelevant.

3.4.1.7 Gate Feedback Time

In seconds. Used in conjunction with the above Dual Gate.

3.4.1.8 Scale Factor

A scale divisor factor. Used only if you are automated. Used if your scale is greater than 32000, as the PLC has a limit of sending values no greater than 32000 to AxiBatch.

3.4.1.9 Rate

Used for Additives when using PLC Automation. Additive meters send a pulse to the PLC. Each pulse has a millilitre value. E.g. 100 ml/pulse. This is usually set on site during commissioning. (Water uses Litres per pulse)

3.4.1.10   This material can only go to Agg hopper 1

The material can only be used to batch into Aggregate Hopper 1

3.4.1.11   This material can only go to Agg hopper 2

The material can only be used to batch into Aggregate Hopper 2

3.4.2   Flow Alarm Settings Tab

only used if you have PLC or AxiSoft Automation.

3.4.2.1 Enable Flow Alarm Delay

Check this to enable the flow alarm for this Bin/Silo/Tank.

3.4.2.2 Initial Flow Alarm Delay

Initial time delay in seconds before the flow alarm can detect low flow for that bin.

3.4.2.3 Flow Alarm Delay

If the flow rate of this material is below the "Flow Rate Alarm Setpoint" for "Flow Alarm Delay" in seconds the flow alarm will be activated.

3.4.2.4 Flow Rate Alarm Setpoint

If the flow rate of this material is below the "Flow Rate Alarm Setpoint" for "Flow Alarm Delay" in seconds the flow alarm will be activated.

3.4.3   Inflights Tab

only used if you have PLC or AxiSoft Automation.

3.4.3.1 Enable Automatic Inflight Update

Check this to enable automatic calculation of the new Inflight after every batch. If not checked the system will use the Inflights as per in the Small / Medium / Large Inflight fields.

3.4.3.2 Small Inflight / Medium Inflight / Large Inflight

Inflight value for small / medium and large loads. (Load sizes are defined in the Settings section).

3.4.3.3 Inflight Percentage Change

Value used to calculate the new Inflight. E.g. Setting it to 20% will calculate the Inflight as follows ....

*If the Target was 100kg and the Actual was 90 kg and the Inflight was 20kg, then the new Inflight Value = (100 - 90) = 10 * 0.2 = 2kg and hence the new Inflight would be 18Kg*

3.4.3.4 Maximum Inflight

This is the maximum Inflight value. Inflight calculated in AxiSoft or the PLC will not go over this value.

3.4.4 Jog Settings Tab

This is only used if you have PLC or AxiSoft Automation.

This is used to jog material in, if the actual value falls below the Target - Tolerance.

3.4.4.1 Initial Jog Time

In milliseconds, and is the minimum time of the jog action.

3.4.4.2 For every amount in

Amount that is short (i.e. Target - Tolerance - Actual)

3.4.4.3 jog for

jog time in milliseconds for amount short

3.4.4.4 Maximum Jog Amount

max amount that can be used in the calculation

E.g.

Jog Time = Initial Jog Time + (Short Amount * Jog for Time)

Initial Jog Time = 250ms
For Every Amount in 1 kg short jog for 50ms
Max Jog Time = 2000ms
Max Jog Amount = 5 kg.

if (say 20kg short)
Jog Time = 250 + (5 * 50) = 500ms (max amount is 5 kg)

3.4.5 Level Tab

This is used to set the capacity and level warning of the Bin/Silo or Tank.

3.4.5.1 Capacity

Total Capacity of the Tank/Bin or Silo. Units usually are kg for cement or aggregates, ml for additives and litres for water.

3.4.5.2 Warning Level

If set to 0, the warning level is disabled, otherwise an alarm is activated to inform you need to order that material

3.4.5.3 Actual Level

This shows the actual level or amount of the material remaining. This level is automatically adjusted at the end of each load and can be altered with the "Add Stock" and "Fix Material Level" wizards.
Once the fields have been edited use the SAVE button to save the materials in the database.

When exiting the Bin Setup if you are automated it will ask you to send the values to the PLC, normally the response will be yes.

3.5 Allocate Trucks

This is required for both Docketing and Automated systems.

In Console select "Edit->Vehicles" or press the Concrete Truck icon.

The following appears.
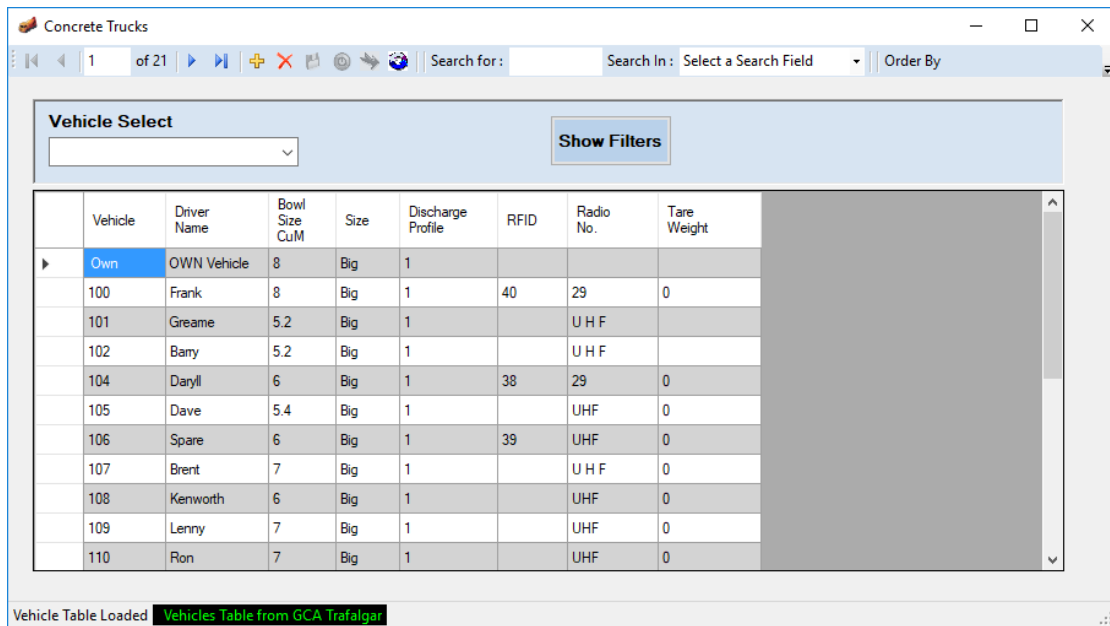
To edit a selected Truck either double lick with the left mouse button or right click and select Edit Truck.

To create a new vehicle, click once with the right mouse button and select Create New Vehicle.

To remove a vehicle, select the vehicle in the main grid and press the delete button , then press the Save button

3.5.1.1 Vehicle Number

This is what AxiBatch uses to select vehicle. It must be unique and has a maximum of 8 characters.

3.5.1.2 Driver

This is the default driver name that gets loaded when you select a truck in your batch. The Driver can be changed when batching. This is usually printed on the docket and stored in the completed load.

3.5.1.3 Bowl Size CuM

This is the bowl size of the Truck. This is used as a check to compare against the load size of the batch. If the Batch size is smaller than the truck load size the batch will not occur.

3.5.1.4 Default Discharge Profile Number

This is the default discharge profile number for the Truck. The discharge number can be changed at the time of batch. This is only used in an Automated system and has no relevance in a docketing only system. Must insert a value here even if it is not used.

3.5.1.1 Registration

This is optional and is used to store the Vehicle registration. This is maximum of 20 characters.

3.5.1.1 Type

This is optional and is used to store the type of Vehicle. Can be used in dockets.

3.5.1.2 Tare Weight

This is the Weight of the Concrete Truck without load. Not used for anything other than storage.

3.5.1.1 Truck Size

This is either Big or Mini. This is used in costing calculations.

3.5.1.2 2 Way Radio Number

This is used for Storage only, and is Radio number for that truck

3.5.1.3 RFID Identification

Only used in an Automated System. This field stores the RFID identification number of the truck. When a truck has entered the bay, the driver will scan the card. This will inform AxiBatch that there is a Truck ready to take the load and will automatically insert the correct truck number into the batch.

3.5.1.4 Truck Label

Description for Truck when used in Truck Allocation (Future)

3.5.1.5 Truck Status

Truck Status for Truck Allocation (Future)

3.5.1.6 Priority

Truck Priority number for Truck allocation (future)

3.5.1.7 Start KM

Truck start KM when bought in by the company

3.5.1.8 Total KM

Total KM done by Truck (Not Currently Used – Future)

3.5.1.9 Transfer Fee

The fee for the Contractor's Truck used in Truck Pay that costs the company to use if the Truck had to be bought in from another Plant.

3.6 Allocate Suppliers

This is optional and provides easy selection of the supplier when added stock information.

In Console select "Edit->Suppliers" or press the Office People icon (to right of Truck icon).

The following appears.
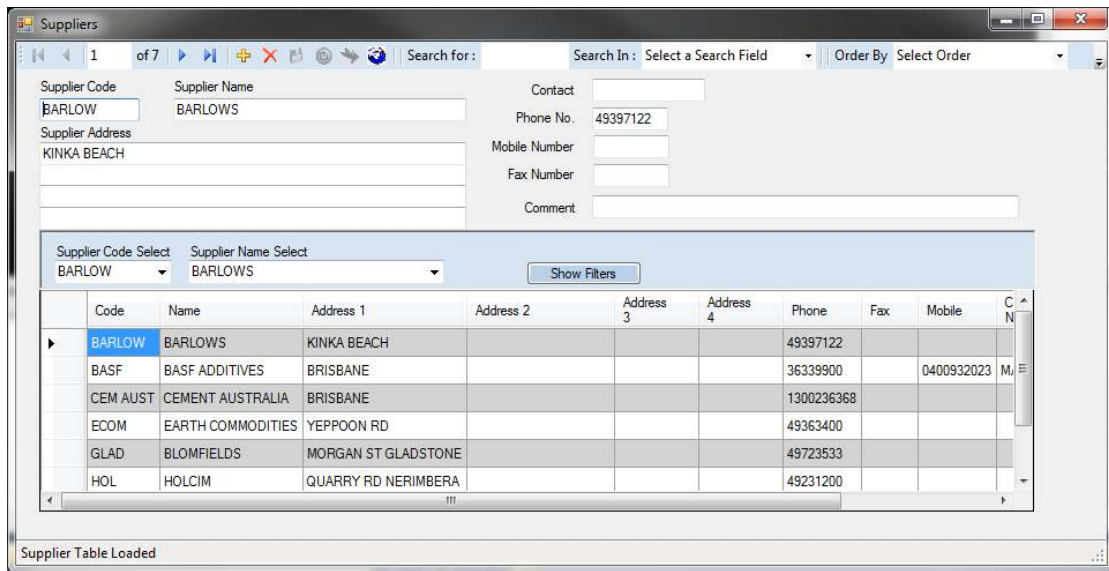
The supplier is available to be selected when adding stock. Hence the supplier's number is a field in stock table that appears in the Completed Loads database.

3.7 Setting up your Docket

AxiBatch uses Microsoft Word to print dockets. Hence your docket must be produced using Microsoft Word. When AxiBatch prints a docket, it activates the word document and passes the relevant data to word.

In the word document parameters that are required are in this format

<FIELDX> where X is the field number.

There is a separate document that describes all the fields in detail.

E.g. <FIELD3> is the Docket Number and <FIELD28> is the Load Size in Cubic Meters.

When installing AxiBatch a sample docket is supplied in the directory "C:\AxiBatch Data\Docket" called Docket.doc.

You give your docket any name you want. You must specify in settings the full path and filename of the docket in the "Docket File Pathname" field.
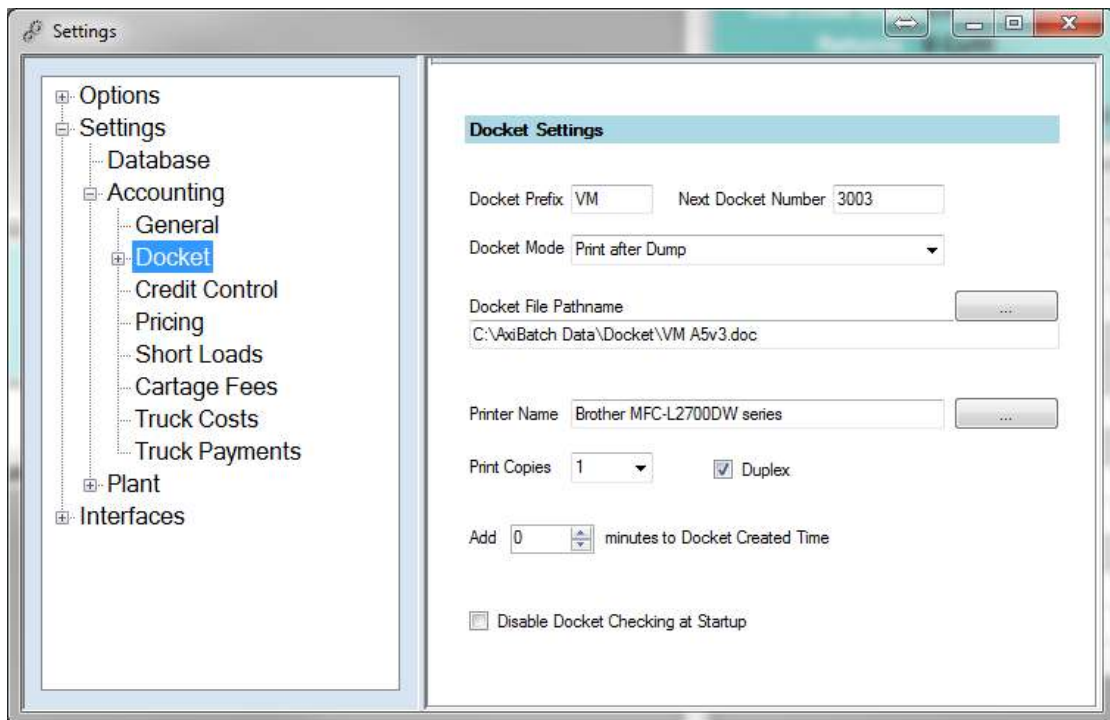
You will also need to set up other settings for the Docket.

Docket Prefix - This prefix (text) will appear before the Docket Number

Next Docket Number - This is the next Docket Number. when first installed should be set to 1. You can alter this at any time if required.

Docket Mode - When the Docket is printed. Default is "Print after Dump".

Docket File Pathname - full path and filename of the Docket. is printed. Default is "Print after Dump".

Printer Name - Select the printer you wish to use for the Docket.

Print Copies - Select how may copies of the docket you wish to print.

Add Minutes to Docket Created Time - Will add X minutes to the Time Out field in the Docket.

Duplex - Tick this if your printer can print in Duplex (Double Sided Printing), and your Docket has 2 pages (E.g. Terms and Conditions on the second page). AxiBatch will send a command to activate the Duplex printing.

3.7.1   Additive Docket Options in "Docket Additives" selection in Settings
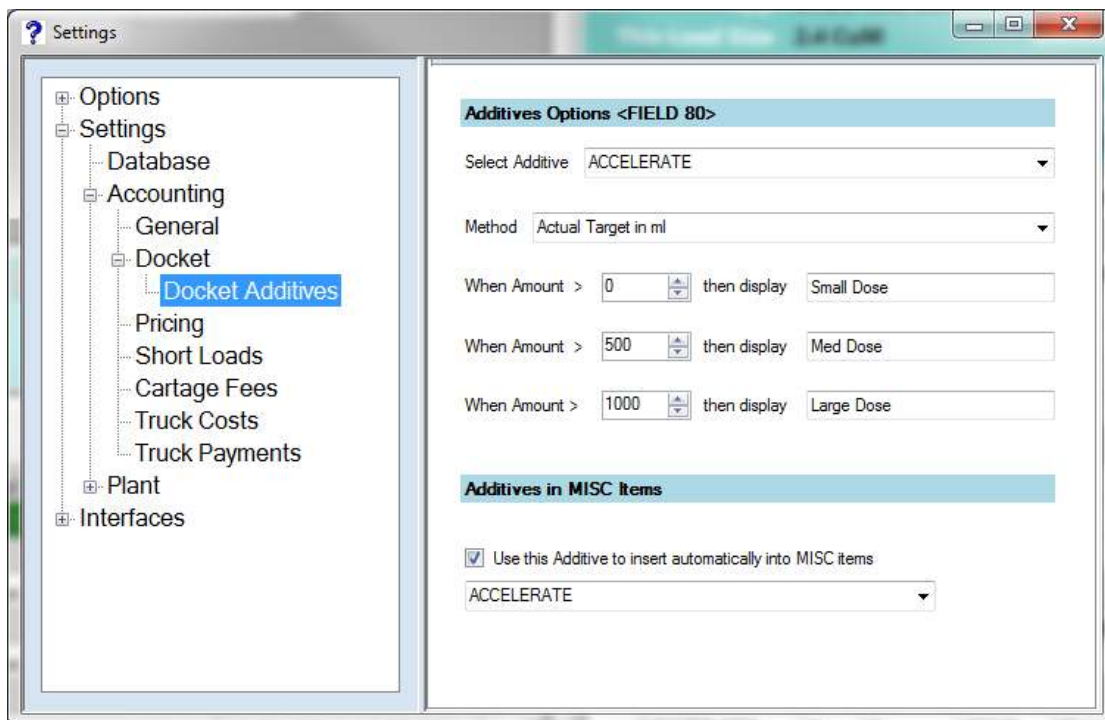
Additive Options <Field 80> on the docket, shows how the Additive selected can be displayed on the docket.

3.7.1.1 Methods Used (how Amount is calculated)

The method is how the Selected Additive will be displayed on the Docket through Field 80.

- **"Additive Target"** – the Amount is the Additive Amount as found in the Order Form under the Additives tab, then one of the 3 texts will display based on the Amount values set in the above form
- **"Additive Target / Load"** - the Amount is the Additive Amount as found in the Order Form under the Additives tab divided by the Load Size, then one of the 3 texts will display based on the Amount values set in the above form
- **"Additive Amount in ml"** - the Amount is the Additive Amount as found in the Order Form under the Additives tab, then one of the 3 texts will display based on the Amount values set in the above form
- **"(Additive Target / Cement Target) * 100"** – the Amount is the Additive Amount as found in the Order Form under the Additives tab / Total Cement Target) * 100, then one of the 3 texts will display based on the Amount values set in the above form
- **"Actual Target in ml"** - Will display the Additive Total Target in ml
- **"Actual Target in ml/CuM"** - Will display the Additive Total Target as in ml/CuM

3.7.1.2 Insert Additive automatically into MISC Items

Check the "Use this Additive to insert automatically into MISC items" to automatically insert the Additive as a MISC costed item when a Recipe is selected in the order form.

4   Pricing

This section shows how to setup the pricing of the Concrete. The price of a concrete mix is dependent on these items...

- Truck Size
- Load Size
- Customer

These 3 items are used to calculate the final Class. Once the Class is calculated it will search the Recipe to see if that Class exists. If that class exists in the recipe, the per CuM price will be extracted. If no price is extracted the Order Form will inform you of this.

The class is calculated as follows,

The Customer Table is searched. If the Load Size of the Batch is lower than the "for Loads <=" setting (see below excerpt from the Customer Table, Pricing tab) , then the Class from the "Class (Load Size)" setting is used as long as the Class is not blank, otherwise if the Truck size is Big the Class from the "Class (Big Truck) setting is used or if the Truck size is Mini the Class from the "Class (Mini Truck)" setting is used. If the final Class is blank, then the default Class from the AxiBatch settings (Big or Mini) will be used.

Class (Big Truck)	Standard
Class (Mini Truck)	
Class (Load Size)	
for Loads <=	0.0 CuM

To setup pricing you basically do the following, this will be detailed in the next sections.

1. Create Classes Structure
2. Create Areas (optional)
3. Set default classes for Customers
4. Add classes with their prices to Recipes
5. Configure Pricing Formulae's in AxiBatch Settings
6. Setup costs for miscellaneous items in the Materials Table, you have the option of having multiple prices for the same item using classes

This may take time to set if you have many recipes.

4.1 Create a Class Structure

You need to create a pricing structure to allow pricing of concrete to work for you.
This is done in the Class Table.

You can access this in Console by selecting "Edit->Classes"

This table has only 2 fields, a Code name and Description field.
You can create as many Classes as you want, however the more classes you create the more pricing you need to add in the Recipes.

As an example, you can create the following classes ...

Override - Will be used so that an operator can override the price (E.g. Special Price)
COD Max - COD Price for a Big Truck
COD Mini - COD Price for a Mini Truck
Std Max - Standard Price for a Big Truck
Std Min - Standard Price for a Mini Truck
Max Disc 10 - Big Truck Price with 10% Discount
Max Disc 20 - Big Truck Price with 20% Discount
Mini Disc 10 - Mini Truck Price with 10% Discount
Mini Disc 20 - Mini Truck Price with 10% Discount

This is an example only. You design the structure you need.

4.2 Add Classes to your Customers

After you have created all the Classes you now need to set the classes to the customers. If you have a common class that most customers use you can set that default in AxiBatch settings. So, if the customers do not have a default class it will use the default setting in AxiBatch settings.

4.2.1   Adding Default Classes in AxiBatch Settings
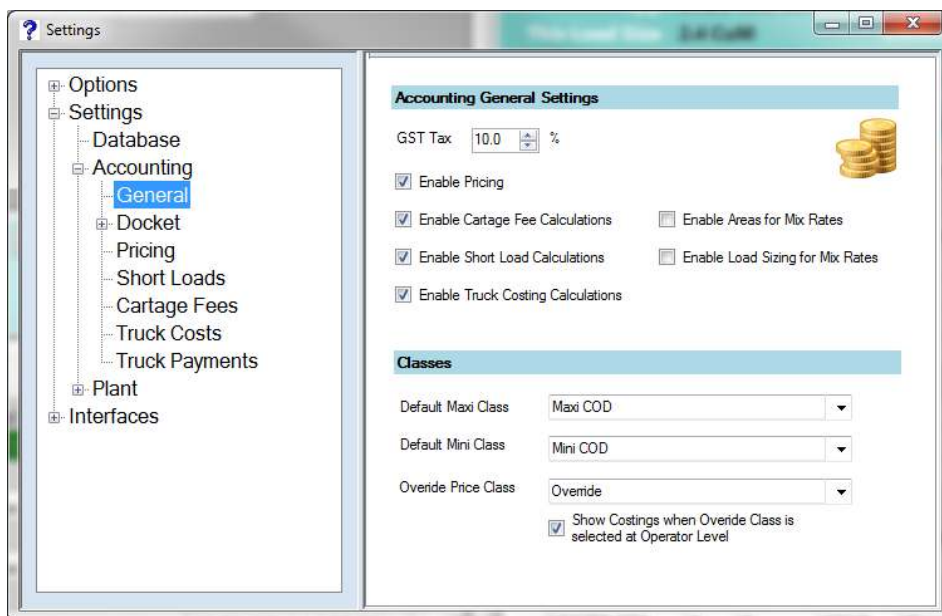
Set the Default Maxi Class field for the default Big Truck Class to use if you customer has not been allocated a Class for the Big Truck.
Set the Default Mini Class field for the default Mini Truck Class to use if you customer has not been allocated a Class for the Mini Truck.

Set the Override Price Class to set which class will be used as a Special Price. This will allow operators to set the Price when placing an order.

4.2.2   Adding Classes in the Customer Table

In Console, go the Customer Table and select the Customer you wish to edit the classes.

Note: Use either Show Filters or select the Customer from the Customer Code or Name drop down box.

Right click and select "Edit Customer".

Select the Pricing tab.

Select the class for Big Truck and Mini Truck. If you leave them blank the system will use the default ones in the Settings.

Class for a Load Size is used when the operator selects a load size less than what is specified here. E.g. if the load is 2CuM and you have specified 3Cum than the Class (Load Size) will be used.

4.2.3   Adding a COD in the Customer Table

In Console go the Customer Table. Insert a new Customer called COD.

Hence

Code = COD
Name = CASH SALES

also set the classes as well.

When you create an order and you Select the COD a COD form will appear that requires certain fields to be filled. It won't do this unless you create a Customer as above.

4.3 Adding Classes with their Pricing to Recipes

In Console go the Recipes Table. Right click on the Recipe you wish to add pricing to and right click and select "Edit prices for Recipe".

For each record add a class with a price per cubic meter. (Right click and select 'Create New Price'.)

If you just want to change the price just type the price directly in the cell, but make sure you press the "Save" icon.

If you run a batch and a recipe used does not contain that class that came from the customer, then AxiBatch will complain!

Min Price Field - Use this to have a minimum price.

Flat Price Field - Adds a flat price to the overall concrete cost.

Note: There are other options available (areas and load size pricing). Using this will add more time in setting up and be harder to maintain. Contact Axion for further information

4.4 Setting up Miscelleaneous Items Cost

This has already been described when setting up the Materials table.

Here we are setting up Miscellaneous items with costs. These items can be added to your batch in addition to your concrete batch. Make sure the "MISC" type is used.

E.g. Black Oxide is sold in bags, and sold for $20 a bag (Fee cost type is used)

E.g. Mesh is sold based on a CuM size at $10 per CuM (Rate cost type is used)

This is done in the Costs tab. If you want to add more pricing to that item, you can do that in the Class Costs tab and add prices based on classes.

4.5 Settings to finish of the Pricing

Now some settings will be required to finish off our pricing structure. This is found in AxiBatch settings.

In the Settings->Accounting->General tab you will need to setup some parameters.
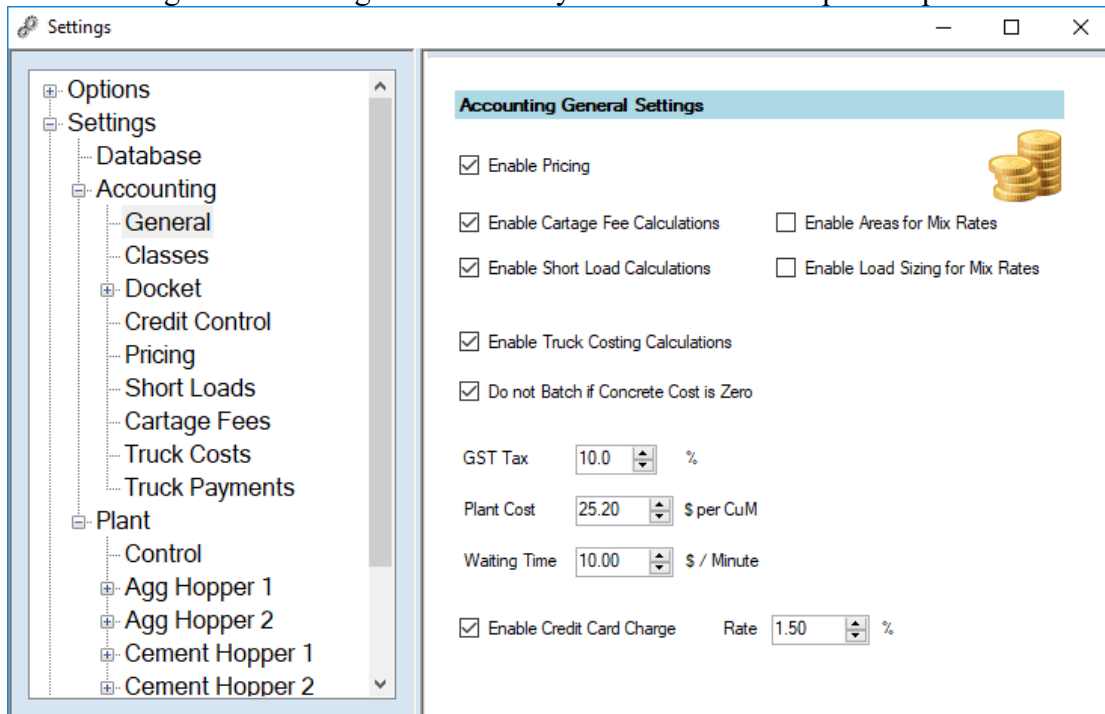
GST Tax - Set the GST Tax as a percentage. Default is 10%.

Check the boxes you require.

4.5.1.1 Enable Pricing

This will enable the recipe pricing to be calculated

4.5.1.2 Enable Cartage Fee Calculations

This will enable extra cartage fees to be calculated on top of the recipe pricing (more info on this to come below)

4.5.1.3 Enable Short Load Calculations

This will enable extra charges to be added because of short loads (more info on this to come below)

4.5.1.4 Enable Truck Costing Calculations

This will enable Truck costs to be calculated

4.5.1.5 Enable Areas for Mix Rates

This will enable the use of Areas for pricing. Usually used in lieu of KM pricing calculation. Not the Areas table needs to be populated for this.

4.5.1.6 Enable Load Sizing for Mix Rates

This will enable the use of pricing based on different load sizes.

4.5.1.7 Do not Batch if Concrete Cost is Zero

If this is enabled it will not allow the operator to batch if the Concrete Cost is zero.

4.5.1.8 Enable Credit Card Fee

If enabled will additionally charge a percentage of the total cost. This can be turned on or off in an order and must have the credentials to do this.

4.5.1.9 Plant Cost

This is the Plant Cost in CuM Should not include the cost of raw materials. This is used in Sales reports to calculate margins.

4.5.1.1 Waiting Time

This is the default Waiting Time cost per minute. To add Waiting time to an existing docket you must know the Docket Number. This can be done via AxiBatch (Add->Waiting Time to Docket) and Console (Tools->Insert Waiting Time or in Completed Loads on a right click on a Docket)

4.5.2 Pricing Formulae Options

Here you select the pricing option. If you don't find one that suits contact Axion do add another pricing option.
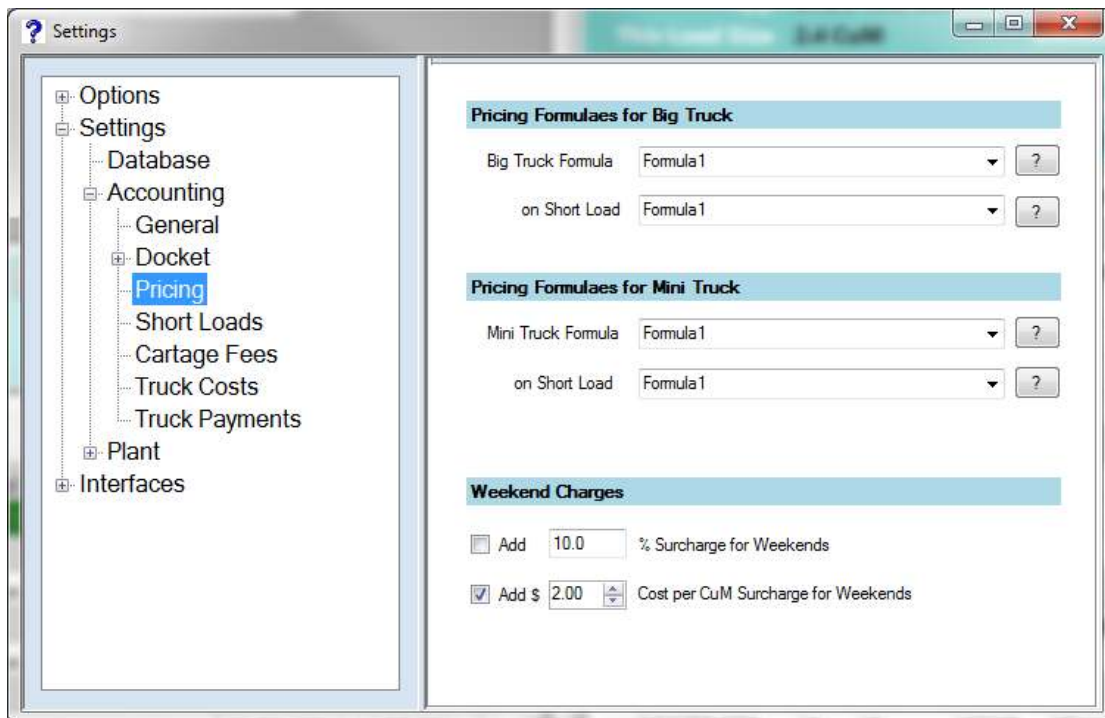
Select a pricing formula for each of the four scenarios. Note that short load is set in the "Short Loads" tab. Hence if the Load Size is smaller than the short load setpoint the short load formulae is used.

4.5.2.1 Big Truck Default Formula with Short Load is

```
Formula description for a Big Truck with a short load and using the Default
Formula


CARTAGE (If RATE selected & Per CuM Box ticked)
= Cartage Min CuM Charge + ((KM - Cartage MinKM) * Cartage Charge * Load)

CARTAGE (If FEE selected & Per CuM Box ticked)
= Cartage Min CuM Charge + (Cartage Charge * Load)

CARTAGE (If RATE selected & Per CuM Box NOT ticked)
= Cartage Min CuM Charge + ((KM - Cartage MinKM) * Cartage Charge)

CARTAGE (If FEE selected & Per CuM Box NOT ticked)
= Cartage Min CuM Charge + Cartage Charge

SHORTFALL FEE (RATE)
= ShortFall Charge + ((KM - Cartage Min KM) * Cartage Charge)) * (Short Fall
Load - Load)

SHORTFALL FEE (FEE)
= ShortFall Charge

Total Cost (If Cartage CuM Box Ticked)
= (Concrete Rate + CARTAGE) * Load + Flat fee + Shortfall Fee

Total Cost (If Cartage CuM Box NOT Ticked)
= Concrete Rate * Load + CARTAGE + Flat fee + Shortfall Fee
```

4.5.2.2 Big Truck Default Formula Normal (NO Short Load) is

```
Formula description for Big Truck with a normal load using the Default Formula

CARTAGE (If RATE selected & Per CuM Box ticked)
= Cartage Min CuM Charge + ((KM - Cartage MinKM) * Cartage Charge * Load)

CARTAGE (If FEE selected & Per CuM Box ticked)
= Cartage Min CuM Charge + (Cartage Charge * Load)

CARTAGE (If RATE selected & Per CuM Box NOT ticked) =
Cartage Min CuM Charge + ((KM - Cartage MinKM) * Cartage Charge)"

CARTAGE (If FEE selected & Per CuM Box NOT ticked) =
Cartage Min CuM Charge + Cartage Charge

CARTAGE (If KM =< Cartage Min KM) = 0

Shortfall Fee = 0

Total Cost (If Cartage CuM Box Ticked)
= ((Concrete Rate + CARTAGE) * Load) + Flat fee + Shortfall Fee
```

Total Cost (If Cartage CuM Box NOT Ticked)
= (Concrete Rate * Load) + CARTAGE + Flat fee + Shortfall Fee

4.5.2.3 Mini Truck Default Formula (with Short Load) is

Formula description for Mini Truck with a short load and using the Default
Formula

CARTAGE (If RATE selected & Per CuM Box ticked)
= (Cartage Min CuM Charge + ((KM - Cartage MinKM) * Cartage Charge * Load)

CARTAGE (If FEE selected & Per CuM Box ticked)
= (Cartage Min CuM Charge + (Cartage Charge * Load)

CARTAGE (If RATE selected & Per CuM Box NOT ticked)
= (Cartage Min CuM Charge + ((KM - Cartage MinKM) * Cartage Charge)

CARTAGE (If FEE selected & Per CuM Box NOT ticked)
= Cartage Charge

CARTAGE (If KM =< Cartage Min KM) = 0

Shortfall Fee (if RATE selected)
= Shortfall Charge * (Shortfall Load - Load)

Shortfall Fee (if FEE selected) = Shortfall Charge

Total Cost (If Cartage CuM Box Ticked)
= ((Concrete Rate + CARTAGE) * Load) + Flat fee + Shortfall Fee

Total Cost (If Cartage CuM Box NOT Ticked)
= (Concrete Rate * Load) + CARTAGE + Flat fee + Shortfall Fee

4.5.2.4 Mini Truck Default Formula (NO Short Load) is

Formula description for Mini Truck with normal load and using the Default
Formula

CARTAGE (If RATE selected & Per CuM Box ticked)
= (Cartage Min CuM Charge + ((KM - Cartage MinKM) * Cartage Charge * Load)

CARTAGE (If FEE selected & Per CuM Box ticked)
= (Cartage Min CuM Charge + (Cartage Charge * Load)

CARTAGE (If RATE selected & Per CuM Box NOT ticked)
= (Cartage Min CuM Charge + ((KM - Cartage MinKM) * Cartage Charge)

CARTAGE (If FEE selected & Per CuM Box NOT ticked)
= Cartage Charge

```
CARTAGE (If KM =< Cartage Min KM) = 0

Shortfall Fee  = 0

Total Cost (If Cartage CuM Box Ticked)
= ((Concrete Rate + CARTAGE) * Load) + Flat fee + Shortfall Fee
Total Cost (If Cartage CuM Box NOT Ticked)
= (Concrete Rate * Load) + CARTAGE + Flat fee + Shortfall Fee
```

4.5.2.5 Big Truck Formula 1 (with Short Load) is

```
Formula description for a Big Truck with a short load and using Formula 1

CARTAGE
= (Short Load - Load) * (Short Load Charge + ((KM - Minimum KM) * KM Charge))

Total Cost
= ((Concrete Rate + KM Rate) * Load) + CARTAGE + Flat Fee + ShortFall

Notes :
Shortfall is always Zero.
Km rate = (Km - Min KM) * Cartage Charge (Km will never be lower than Min Km)
```

4.5.2.6 Big Truck Formula 1 (NO Short Load) is

```
Formula description for Big Truck with a normal load and Formula 1

CARTAGE = 0  (Cartage will always be zero)

Total Cost
= ((Concrete Rate + KM Rate) * Load) + CARTAGE + Flat Fee + ShortFall

Notes :
Shortfall is always Zero.
Km rate = (Km - Min KM) * Cartage Charge (Km will never be lower than Min Km).
```

4.5.2.7 Mini Truck Formula 1 (with Short Load) is

```
Formula description for Mini Truck with a short load and using Formula 1

CARTAGE
= (MinKMCharge + (KM - Min KM) * KMCharge

Total Cost
= (Concrete Rate * Load) + CARTAGE + Flat Fee + ShortFall


Notes : Shortfall is always Zero.
```

4.5.2.8 Mini Truck Formula 1 (NO Short Load) is

Formula description for Mini Truck with normal load and using Formula 1

CARTAGE = (MinKMCharge + (KM - Min KM) * KMCharge

Total Cost = (Concrete Rate * Load) + CARTAGE + Flat Fee + ShortFall

Notes : Shortfall is always Zero.

4.5.3 Short Load Settings

The following settings are for Short Load

Note that the Shortfall is the Short Load Setting as above minus the Load Size, if the Load size is smaller than the Short Load.

See the formulas to see how these settings are calculated.

4.5.3.1 Short Load Options - No Short Load Fee on Last Load when QTY > 10 CuM

Check this if there is no short load to be calculated on the last batch if the total job size is greater than 10 (changeable) CuM.

4.5.3.2 Short Load Options - Enable Operator to be able to Enable/Disable the Short Load Fee in the Order Form.

Check this if you want the operator to enable or disable the Short Load Fee when in the Order Form. If enabled, the User itself must be enabled in the Users Credentials. In AxiConsole you need to set "Allow Short Load Override" in the Order tab of the Users Form.

4.5.4 Cartage Fees

The following screen is the Cartage Settings

See formulas to see how these settings are used in the calculations.

4.5.5 Classes

The following Screen is the Classes settings.
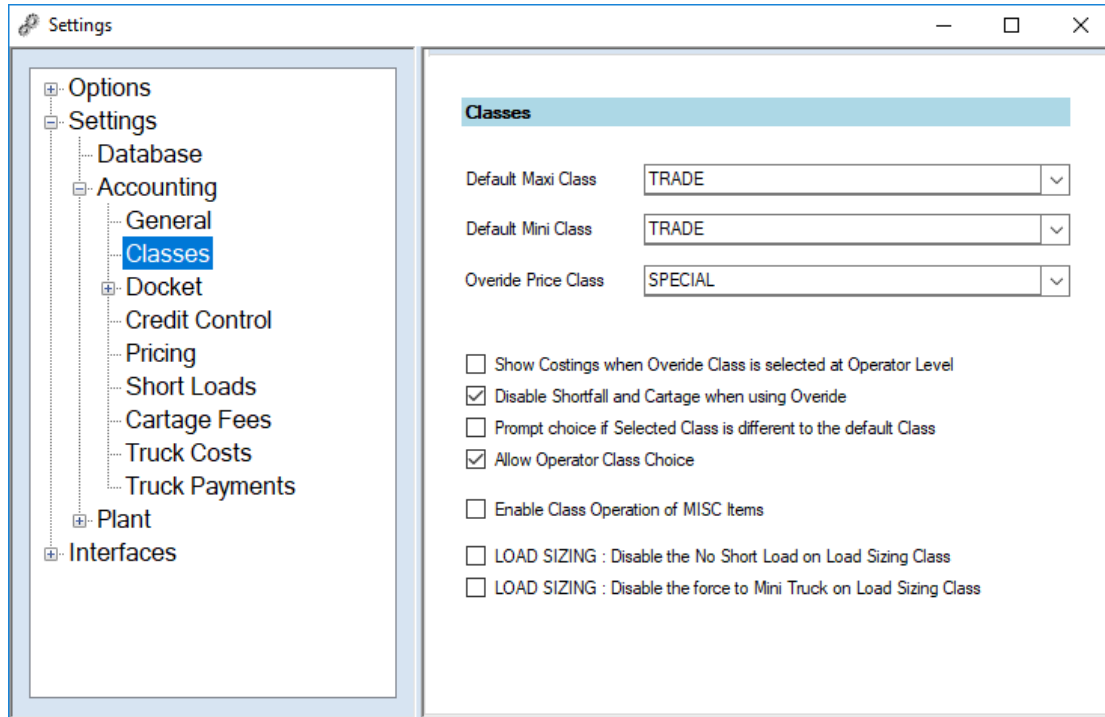
Select the default Class for a Maxi Truck (Big) and Mini Truck. This is used if the Customer does not have a default class.

The Override Price class is the class that is used to directly type in the per CuM concrete cost in the order itself.

4.5.5.1 Show Costing when Override Class is selected at Operator Level

If this is checked it will show costings if the operator logged in is at level 1.

4.5.5.2 Disable Shortfall and Costing when using Override

If checked Shortfall and Cartage will not be calculated when Override is used.

4.5.5.3 Prompt choice if Selected Class is different to the default Class

If enabled this will let the operator know that the class is different to the default class and will have an opportunity to correct this before batch is started.

4.5.5.4 Allow Operator Class Choice

If enabled will ignore the class checking and accept whatever the operator changes it to. This will also ignore the above prompt.

4.5.5.5 Enable Class Operation of MISC Classes

If enabled will enable the use of classes within the MISC items, other than just the default cost.

4.5.5.6 Load Sizing : Disable the No Short Load on Load Sizing Class

If Load Sizing in the Customer Table has a class and a load size greater than 0, and the current batch load is less than the Load Size value, then Short Load will be disabled for that batch.

4.5.5.7 Load Sizing : Disable the force to Mini Truck on Load Sizing Class

If Load Sizing in the Customer Table has a class and a load size greater than 0, and the current batch load is less than the Load Size value, then this will disable the auto selection of the Mini Truck

5   Orders

This section describes the process of creating an editing an Order.

It is assumed that the database is now setup correctly.

5.1 Create an Order

This can be achieved in AxiBatch itself, or from Console locally and remotely.

In AxiBatch press the "New Order" button near the top left of the screen or select "Add->New Order" from the menu.
To edit an order in AxiBatch in the Top left grid (PreOrders), select the order and either double click with the left mouse button or right click with mouse button and select "Edit order".
To edit an order in AxiBatch in the bottom left grid (Progressed Orders), select the order and either double click with the left mouse button or right click with mouse button and select "Adjust Load Size".

In Console, press the Orders Icon   or select "View ->Orders" from the menu. Console shows a larger grid with more information, so useful to view on a second display or monitor.

To edit an order in Console, select the order in the grid and either double click with the left mouse button or right click with mouse button and select "Edit this order".

If you wish to start batching an order you need to transfer it to the bottom left grid. To do this select an order in the top left grid and either press the "Transfer to Batch" button or right click with the mouse button and select "Transfer to Batch".

5.2 Edit an Order

Open an order it will appear as such

5.2.1 Order Number

An Order Number is usually given by the Customer and usually ends up on the Invoice. It can also be used to search for Dockets. There is a setting available that won't allow the operator to batch unless an order number is typed in. This setting is found in Settings->Options->Batch->Stop Batch on no Purchase Order, there is alos another setting called Settings->Options->Batch->Stop Transfer to Batch on no Purchase Order.

5.2.2 Project Number

This is number that is project related. This is used in search facilities.

5.2.3 Internal Order Number

An Order Number is usually given by the Concrete Company and is used for search facilities.

5.2.4   Date and Time Required

This is the Date and Time required to start the next batch. Use the Set button and type in the minutes from now and the Date and Time will be automatically set from this.

This field can also be automatically update by the Truck Scheduler if it is enabled or by the Batch Interval time.

If the Batch is completed then the time for the next batch will be calculated by this offset. To enable this, go to Settings->Batch->Batch Request->Auto Increment Date and Time Required using Interval. There are other settings that are related such as forcing the operator to select the next time when the batch is finished plus color coding for when the Batch is required to run. (Hint, hover the mouse over the stings for hints)

5.2.5   Agg Hopper

This cannot be edited but will always show which hopper was last used on this order.

5.2.6   Ticket Number

This is the number that is generated by the Command Series back office. This is only used if you are communicating to the back office. Contact Axion for further information on this.

5.2.7   Weekend Rates

Select YES if you wish to use Weekend rates for this order. Weekend rates are all found in the Accounting section of the Settings.

5.2.8   Comment

Type a comment for this order. Maximum of 100 characters is allowed. Comments can be viewed on the front top and bottom grids via Options->Display->Display Batch View->Display Batch Column for the bottom Progressive grid or Options->Display->Display Orders View->Display PreOrder Columns for the top grid. If the width is set to 0 then the width will be automatic otherwise will set to size prescribed.

Must be enabled for the bottom grid by Options->Batch->Batch View->Show Comment in Front Batch Screen.

5.2.9   Recipe Code (Recipe Tab)

This drop-down selection box will have a list of all the **ENABLED** Recipes. Selecting a code will automatically fill the Recipe Name, Recipe Desc, Slump, Agg Size and Strength fields. The non-greyed out fields can be overwritten if needed.

You can also select from the Recipe Name box, this will perform the same action.

5.2.10 Truck Discharge Type

Select the Truck discharge type. This is optional but may be used to calculate the site time for the Truck allocation software.

5.2.11 Quantity

This is the total Quantity in CuM for the job. This can be updated at any time.

5.2.12 Load Size

This is the Load Size for the next batch. This is changeable from batch to batch. This can also be modified directly on main AxiBatch screen grid.

5.2.13 Order Status

This will either have a "+" or be empty.

The "+" means that once the progressive load has reached the quantity, the order will stay in the Progressives screen until manually removed.

If the field is empty and once the progressive load has equalled the quantity the order will disappear from the progressive's screen.

To remove the order manually, you must select that order and with aright click of the mouse select "Delete Batch and Send to Completed Orders".

5.2.14 Water Adjustment

This is the water adjustment for the Batch. This is usually set before you dump. The adjustment can be negative, e.g. -10 Litres per CuM.

Note: Water adjustment does not have any affect if the Recipe has the "Use Cement to Water Ratio" checked.

The water adjustment can be invoked as a small poup screen, by selecting the order(batch) and with the right click of the mouse selecting "Adjust Water".
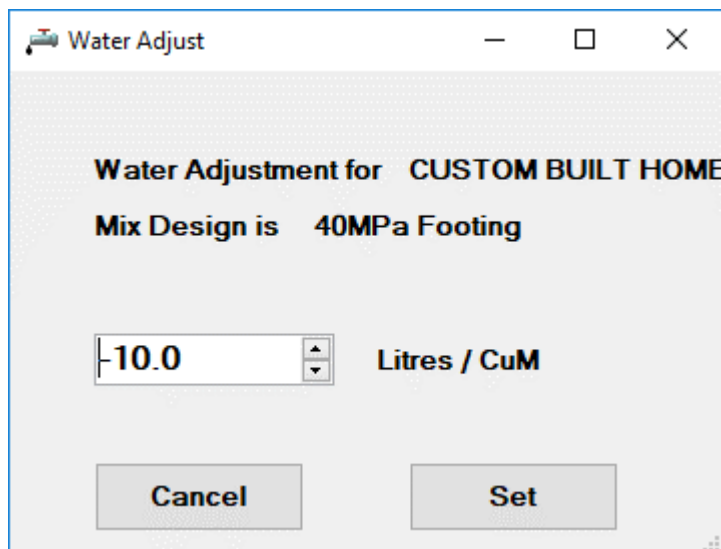
The following screen appears

5.2.15 Returns

This field is used before the start of the Batch.

If you have a 5CuM load and a Truck has returned with the same recipe and has 1 Cum in the Truck, you can set 1 CuM in this field.

The system will batch 4CuM, but the docket will show 5 Cum and prices will be based on 5 CuM

5.2.16 Progressive

This field is usually not changeable unless the User has been given that privilege. This figure is usually automatically updated by AxiBatch, however in unusual circumstances may need to be readjusted.

5.2.17 Add to Last Docket

If you check this field before you batch. It will add this batch to the last docket with the same order. Hence all values will be accumulated and prices recalculate as if it was 1 batch.

5.2.18 Truck Tab

Usually you don't need to set anything in the Truck tab if you have the option setting that will make the Truck Selection happen when you press dump.

Select the Truck Number and Truck size in this tab if required.

5.2.19 Customer Code (Customer Tab)

Select the Customer Code from the drop-down list or press the COD button. Customer Name has the same affect.

If you have trouble finding the customer you can click on the magnifying glass icon to the left of Customer Code, and this will invoke a form to help you find the Customer. If you have found the customer, select it and press the Accept button. The search functions on this form use the LIKE function to search.

5.2.20 Class

This is auto selected when you select the Customer. However, it can be changed. This list here will be the list associated with the Recipe. If the default Customer Class does not appear in the Recipe a warning message will appear!

5.2.21 Delivery Address

This is the site address to where the Concrete Truck must go.

If google places autocomplete is enabled with a valid key, addresses will appear in a list as you type the address. Select the correct address when you see it.
You can disable this list if you check "Disable Google Places".

5.2.22 Docket Pricing

If this is checked then prices will be printed on the docket, if price fields appear on the docket. Normally the default "Docket Pricing" value from the Customer table will appear when the Customer is selected.

5.2.23 Print Docket as a "CASH SALE"

If this is checked the docket will not print the Customer Code and Name, instead will print COD and CASH SALE.

5.2.24 Distance in KM

This is the distance to the site. It can be manually entered or can be automatically calculated using the "Google Map KM Calculation" button.

With this button you can avoid tolls (check "Avoid Tolls") and type in the addresses that you wish to go via (by placing the addresses in the text box).

KM is used for pricing.

5.2.25 Instructions for Docket (Instructions Tab)

Here type in the instructions you wish to appear on the Docket. There are two fields of 30 characters each.

5.2.26 Email Address for Batch Notification

These email addresses will be notified for Batch status if enabled in settings
Normally that are automatically filled when you select the customer and come from the Customer table but can be overwritten.

5.2.27 SMS Number used for Batch Notification

These mobile numbers will be notified for Batch status if enabled in settings. Normally that are automatically filled when you select the customer and come from the Customer table but can be overwritten.

5.2.28 Email Address used in Invoicing

These email addresses will be used for emailing invoices from the Invoicing software. Normally that are automatically filled when you select the customer and come from the Customer table but can be overwritten.

5.2.29 Additives Tab

These Additive amounts are automatically filled from the Recipe whenever you select the Recipe. They can be edited directly will remain throughout the batch.

Only additives that are in the recipe will be shown here.

You can only modify the amounts before you Dump.

One of the additives can be set up to automatically price itself to a MISC field. Check the AxiBatch Settings->Accounting->Docket->Docket Additives->Use this Additive to insert automatically into MISC items. Then select the additive to do this to. So as you type the amount the MISC field will automatically populate with the additive and set the price.

5.2.30 MISC Tab

Here you can add up to 10 Misc items for costing to that order.

Use the Drop-Down box to select an MISC Item or use the Magnifying Glass icon to search for the item. Update the Quantity in the Qty field. Reselect the class if required and is available.

Use the clear button to clear the entry if re1quired.

5.2.31 Costing Tab

This shows the costing summary.

If the class is an Override class the Concrete Base Rate can be written to, depending on the user.

Short Load calculation may be able to be turned off depending on the user.

Credit Card Charge can be checked if it is enabled.

The flat fee can be altered directly or by using the calculator button to calculate the fee needed to achieve the final cost.

6   Batching

6.1 Batching

This section describes settings related to the Batching of ingredients so that they will be ready for discharge.

Batching of Aggregates will usually start straight away. Cement will usually be batched at a point in time based on how much aggregate is already batched if you have Cement Silos that feed into a Cement Hopper.

Water is usually batched at the start if you have a Water Hopper.

6.1.1   Batching of Overhead Weigh Bins

These settings are found in AxiSoft->Control->Aggregate Bin(s)->BinX.
These are used if you have Storage Bins that Weigh up into Weigh Bins that have scales, that ultimately go to a Surge Hopper.

6.1.2   Batching of Cement from Silos to a Cement Weigh Hopper

These settings are found in AxiBatch->Plant->Cement Hopper 1 and 2.

If you check "Hold Cement Batching until 1st Aggregate is Batched" then Cement will not start until at least the first ingredient is Batched. Do not use this option if you have overhead bins that go directly to a Surge Hopper.

Another setting mostly used and especially if you have overhead bins is the "Start Cement Batching when Aggregate Hopper is > X % Full". Hence if you put 50%, then 50% of the material must be batching into the Weigh Bins or aggregate hopper, before Cement can start to be batched.

6.1.3   Batching of water into a Water Hopper

These settings are found in AxiBatch->Plant->Water.

Water Type is set to either Hopper Top Up or Hopper Batch.

6.1.4   Starting, Pausing or Aborting a Batch

This is done by selecting and Order that resides in the bottom left grid and pressing the START button.

Pressing the TEST button will test the order, displaying the Ingredients in Agg1 or Agg2 grid on the right-hand side.

If you have a 1 Material Hopper system, then you can only start one batch at a time. If you have 2 Hoppers you can start in either Hopper, unless you change the setting in AxiBatch->Settings->Plant->Agg Hopper Mode.

If mode is set to "Prompt", then the operator can select either Hopper if both available, otherwise the choice is the remaining one.

If mode is set to "Agg1 Hopper First Always", then Agg1 will always batch first if both are available

If mode is set to "Agg2 Hopper First Always", then Agg2 will always batch first if both are available

If mode is set to "Alternate Hoppers", then Agg1 will always batch first if both are available, then next time Agg2 will batch if both are available.

Press the "PAUSE" button to pause the batch. When pausing all outputs are turned off, sequences will still continue however will appear paused but still respond to weights.

Press the "START" button to restart and return from a paused state.

Press the "ABORT" button to abort a load. This will only happen if you are paused first. The Abort screen will ask the operator which Agg Hopper operation to abort, as you may have multiple batches running or even a separate discharge running (Surge Hoppers). Also, it can ask the operator if he wishes to not print a docket and not record the load (this will only happen before Dump is pressed). This setting to give the operator the option is found in AxiBatch Settings->Options->Batch->Batch 2->when aborting a Load before Dumping prompt if you do not want to complete the docket. If not checked will always print and record.
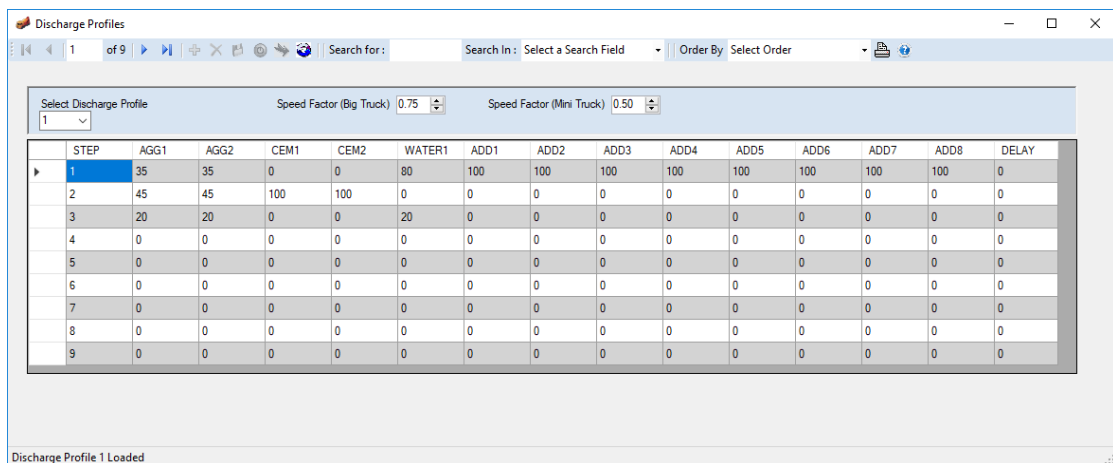
6.2 Discharging (DUMP)

This process is the sending of all materials to the Truck. This is mainly governed by the Discharge Profile. There are up to 10 different discharge profiles that can be configured. These profiles are identified by their numbers that are 1 to 10 inclusive.

The profile number is usually triggered by the Truck, this is set in the Vehicle table. However, it can be set by a recipe as a priority but this may be for rare circumstances.

Each discharge profile has up to 10 steps, and each step can be finished off with a delay where nothing happens. You do not need to use all steps. Each column (Hopper or Main Material) must add up to 100%.

Each profile has a field for a reduced speed factor for a Large Truck and a Mini Truck. This is a percentage of the main speed setpoint.

e.g. if the Aggregate Hopper speed for a Large Load is 80kg/sec and you are using a Big Truck, then the above will set the speed to 0.75 * 80 = 60kg/sec. If the Truck was a mini, then the speed would be 0.5 % 80 = 40kg/sec

Notes
- If you have a Surge Hopper this is governed by AGG1 column.
- The next step will not start until all the ingredients have dispatched the appropriate percentage in the previous step and the delay has completed

6.2.1 Discharging Aggregate

This will apply to Aggregate Hoppers discharging on to Conveyor.

The gates will not open until
- The Discharge Sequence is requesting it (AGG1 or AGG2) at the particular step it is at
- the Conveyor is Running (note Conveyor may be delayed by a warning siren first)
- The gate delay on setting has completed after the conveyor was detected running (AxiBatch Settings->Plant->Agg Hopper 1->Gate Delay On Time (Sec)) or (AxiBatch Settings->Plant->Agg Hopper 2->Gate Delay On Time (Sec))

This will apply to Surge Hoppers discharging directly into the Truck.

The gates will not open until
- The Discharge Sequence is requesting it (AGG1) at the particular step it is at
- The gate delay on setting has completed after the conveyor was detected running (AxiSoft Settings->Control->Surge Hopper Control->Gate Delay On Time)

6.2.2 Discharging Cement

Cement will be discharged when

The Cement Hopper Discharge gates will not open until
- The Discharge Sequence is requesting it (CEM1 or CEM2) at the particular step it is at
- A percentage of the Aggregate has been dispatched (AxiSoft Only) (AxiSoft Settings->Control->Cement Discharge->Cement Hopper 1 Discharge->Start Discharging Cement when the Aggregate Hopper has less than X% remaining) or (AxiSoft Settings->Control->Cement Discharge->Cement Hopper 2 Discharge->Start Discharging Cement when the Aggregate Hopper has less than X% remaining)
- The gate delay on setting has completed after the conveyor was detected running (AxiBatch Settings->Plant->Cement Hopper 1->Gate Delay On Time (Sec)) or (AxiBatch Settings->Plant->Cement Hopper 2->Gate Delay On Time (Sec))

6.2.3   Discharging Water

Water will be discharged

- The Discharge Sequence is requesting it (WATER) at the particular step it is at is requesting it

If you are using an ME995-7 for the Water Flow Control, it may take up to 3 seconds before it is sent a Start signal, as a Reset signal is usually sent first. The software will not usually send the START until it detects an accumulated zero value.

6.2.4   Discharging Additives

Additives will be discharged

- The Discharge Sequence is requesting it (ADD1 or ADD2 or ADD3 or ADD4 or ADD5 or ADD6 or ADD7 or ADD8) at the particular step it is at is requesting it

6.2.5   Start Discharge

If you have 1 or 2 Aggregate Hoppers, the display will show "Ready to Dump" and the DUMP button will appear.

Before pressing the Dump button, you can alter the Water adjustment by selecting the batch record right click and select "Adjust Water".

Before pressing the Dump button, you can alter the Additives by selecting the batch record right click and select "Change Additives". This will take you staring that order's Additive tab.

Pressing the Dump button will initiate some checks based on settings, before the Discharge Profile and any Recipe Settings are updated and sent to either the PLC or AxiSoft.

Some prompts may require operator input before discharge commences.
(These can all be found in AxiBatch Settings->Options->Dump section)

1. "Confirmation for Dumping", checking this will prompt the operator if he is sure he wants to dump?
2. "Force Truck ReSelection", checking this will run a pop-up screen to force the operator to reselect the Truck

3. "Force KM ReSelection", checking this will run a pop-up screen to force the operator to enter the KM

4. "Truck Reselect at Sep Discharge", checking this will run the pop-up screen to force the operator to reselect the Truck when in the Separate Discharge Tab. This is used when you have a Surge Hopper and will allow you to release the Batch so you can start another Batch.

5. "Confirm MISC Items in Recipe", when checked will prompt the operator if he has physically added the Misc items to the Truck, if the Recipe has MISC items in it.

6. "Prompt on Mini->Big Truck Change", when checked will ask the operator he requires to change the Truck Size to a Big because the Class used if for a Big.

7. "Prompt for Additives and Water Target Check", when checked will prompt the operator if he needs to review the Water and Additives before starting the Dump.

The start of a discharge will also initiate the printing of the docket.
The Docket is set up in AxiBatch Settings->Settings->Accounting->Docket->Docket Mode.
If you want the docket to print at discharge (most common) then set the Docket Mode Setting to "At After Dump".

When the discharge is completed, a database record is created in the Completed Loads database that can be accessed by using AxiConsole.

6.3 Handling Alarms while Batching

6.3.1 Zero Band Error

This alarm indicates that weight of the hopper in question is more that the empty band setting. Two buttons will appear "Ack" and "Use Weight". The "Use Weight" button will only appear if you enable it in AxiBatch Settings->Options->Batch->Enable Zero Band Alarm to accept Weight.

The Zero Band Settings for various Hoppers can be found as follows:

Aggregate Hopper No 1	AxiBatch Settings->Settings->Plant->Agg Hopper 1->Zero Band (kg)
Aggregate Hopper No 2	AxiBatch Settings->Settings->Plant->Agg Hopper 2->Zero Band (kg)
Cement Hopper No 1	AxiBatch Settings->Settings->Plant->Cement Hopper 1->Zero Band (kg)
Cement Hopper No 2	AxiBatch Settings->Settings->Plant->Cement Hopper 2->Zero Band (kg)
Water Hopper	AxiBatch Settings->Settings->Plant->Water->Zero Band (kg)

Surge Hopper	AxiSoft Settings->Control->Surge Hopper Control->Zero Band (kg)
Aggregate Weigh Bins (1 to 8)	AxiSoft Settings->Control->Aggregate Bin(s)->BinX->BinXOptions->Zero Band (kg)

6.3.2 Flow Error

A flow error alarms indicates that the normal flow of the material was not detected. This will appear at the top above the 1st Hopper Banner. The Alarm will feature with two buttons, "Ack" and "Abort". Note that the "Abort" is by default disabled for Cement Low flows but can be enabled in "AxiBatch Settings->Options->Batch->Batch Controls".

The "Ack" button normally allows you to retry. In the case of Manu Flow meter, it will send a RESET to the meter to clear the alarm and allow the Meter to try to start the Additive or Water pump again.

The "Abort" will basically allow you to completely skip the Material, to allow the sequences to continue.

Flow Alarm Setpoints can be set for the following devices

Aggregate Hopper No 1 Discharge	AxiBatch Settings->Settings->Plant->Agg Hopper 1->Agg 1 Flow Settings
Aggregate Hopper No 2 Discharge	AxiBatch Settings->Settings->Plant->Agg Hopper 2->Agg 2 Flow Settings
Cement Hopper No 1 Discharge	AxiBatch Settings->Settings->Plant->Cement Hopper 1->Cem 1 Flow Settings
Cement Hopper No 2 Discharge	AxiBatch Settings->Settings->Plant->Cement Hopper 2->Cem 2 Flow Settings
Water Hopper Batch	AxiBatch Settings->Settings->Plant->Water
Weigh Bin 1 to 8 Discharge to Surge Hopper	AxiSoft Settings->Control->BinX->BinXOptions
Surge Hopper Discharge	AxiSoft Settings->Control->Surge Hopper Control
Weigh Bin 1	AxiBatch->Edit->Bins->Aggregate Bins->Flow Alarm Settings

to 8 Batch	
Cement Silos Batch to Cement Hopper	AxiBatch->Edit->Bins->Cement Silos->Flow Alarm Settings
Water Discharge	AxiBatch->Edit->Bins->Water Tanks->Flow Alarm Settings
Additives Discharge	AxiBatch->Edit->Bins->Additives->Flow Alarm Settings

6.3.3   Underweight

An underweight alarm will appear after the settling time has completed and has detected that the material weight is below the Target minus the Tolerance.

Underweight alarms for Aggregates only can be automatically accepted if you enable this in AxiBatch Settings->Options->Batch->Auto Accept Underweight Alarms.

This Alarm will feature with two buttons, "Retry" and "Continue". If you press RETRY the system will try to jog in the material based on the Jog Settings if automated. In the case of a Front End Loader placing aggregate into a hopper this will be manual. Pressing the Continue button will skip and go to the next material.

6.3.4   Overweight

An overweight alarm will appear after the settling time has completed and has detected that the material weight is above the Target plus the Tolerance.

Overweight alarms for Aggregates only can be automatically accepted if you enable this in AxiBatch Settings->Options->Batch->Auto Accept Overweight Alarms.

Overweight alarms for Cement only can be automatically accepted if you enable this in AxiBatch Settings->Options->Batch->Auto Accept Cement Overweight Alarms.

This Alarm will feature with two buttons, "Ack" and "Add to Sector". If you press ACK the sequence will continue. If you press "Add to Sector", the sequence will continue and will attempt to deduct the overweight amount off the target of the next material.

The "Add to Sector" is only available for Aggregates and must be enabled in "AxiBatch Settings->Options->Batch->Enable OverWeight Add to Next Sector" Prompt.
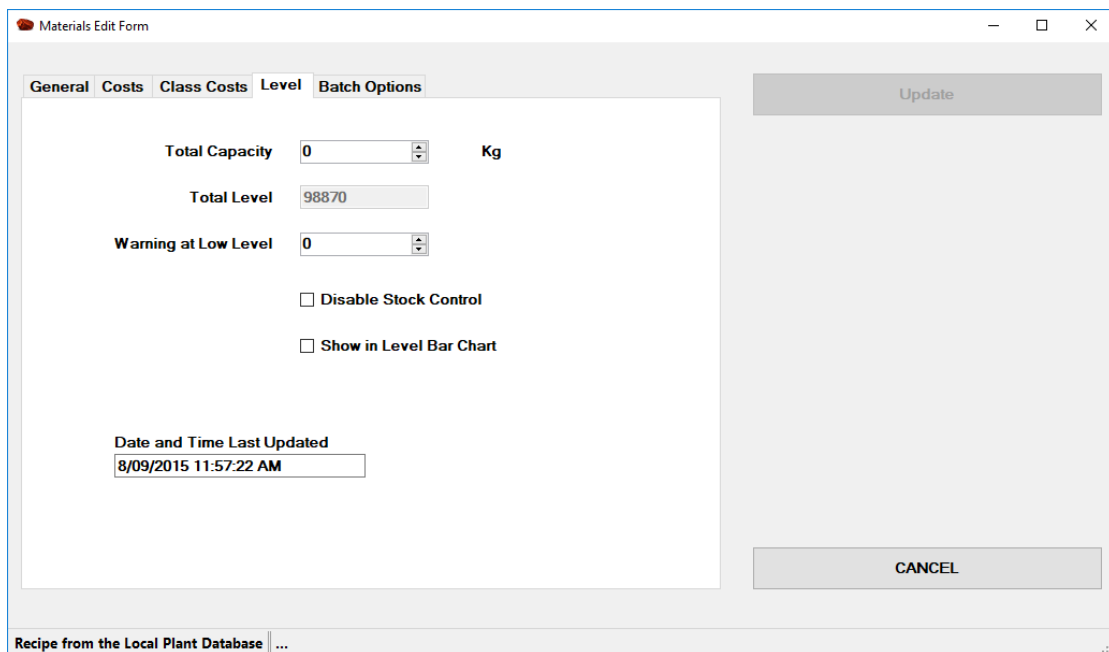
7　　　　　　Stock Control

This section describes setting up your stock control. It is important to note that this will never be 100% accurate and will be dependent on how clinical the operator is in supporting this system. However, an automated system will usually be more accurate than a non-automated system.

In summary, the stock level is automatically reduced when a batch is completed. If you are not automated, the materials stock level is reduced by the Target value.

Stock control is available for every material, however can be disabled for individual materials.

Stock capacity is the amount of stock the Plant can store for the material as a total. The capacity is set in the Materials table. (The "Total Capacity" field in the Level Tab).

The Materials table stores materials that need to be allocated to Bins, Tanks and Silos. Each Bin, Tank or Silo also has a capacity that needs to be set. You can allocate the same material to multiple Bins, Silos or Tanks.

In the Bin Setup you can allocate up to 48 Aggregate materials to Bins. If you have overhead Storage Bins that are weighed into Weigh Bin(s), you must use the first 8 Bins. You can allocate up to 4 Cement materials to 4 Cement Silos. You can allocate up to 4 Water type materials to Water Tanks. You can allocate up to 8 additive materials to 8 Tanks. You do not setup Miscellaneous materials in the AxiBatch Bin Setup section.

For example, if you have the material of type Aggregate, called 10MM. This could be allocated to Aggregate Bin 1 and also Bin 12. Bin 1 capacity could be set to 100,000 kg and Bin 12 could be set to 250,000 kg. In the Materials table this would be set to 350,000 (the combined total). If the Level in Bin 1 is 55,000 and the level in Bin 12 210,000, then to total level in the Materials table will be shown as 265,000 kg.

7.1 Enable Recipe Materials Stock Control

This includes Aggregate, Cement and Additive material types that are found in Recipes.   To enable stock control, make sure that "AxiBatch Settings->Options->Batch->Batch Level->Disable Stock Checks when Batching" is unchecked.

If you wish to disable Low Level Alarms, then check "AxiBatch Settings->Options->Batch->Batch Level->Disable Low Stock Level Alarms"
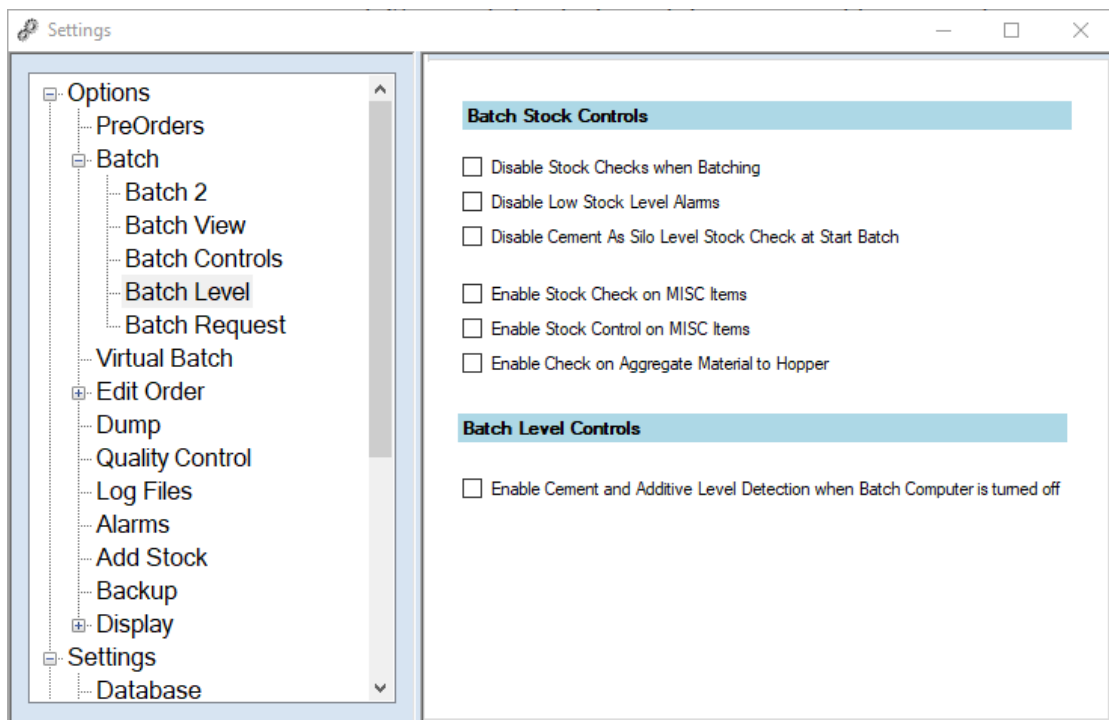
7.2 Enable Miscallaneous Materials for Stock Control

This includes any Miscellaneous Material.   To enable stock control for Miscellaneous materials, the check "AxiBatch Settings->Options->Batch->Enable Stock Control on MISC Items".

If you wish to disable a particular Miscellaneous item, you can do this in Console in the Materials Table, in the "Level" tab, just check "Disable Stock Control".

If you wish not to Batch or create dockets if there is an insufficient amount of the Miscellaneous item then check "AxiBatch Settings->Options->Batch->Enable Stock Check on MISC Items"

If you wish to view the Miscellaneous item in a bar chart format, you can do this in Console in the Materials Table, in the "Level" tab, just check "Show in Level Bar Chart". You can view the Bar Chart Levels for Miscellaneous items by selecting "View->Materials Stock->Misc" in Console.

7.3 Add Stock on Delivery

You can add Stock on delivery by selecting in AxiBatch->Add->Stock or Console->Tools->Add Stock.

When the form appears you first select the Material Type. Then a list of materials will appear in the Material Code or Material Name selection box.

If the incorrect Bin Number is showing and that material is allocated to multiple Bins, then select the correct Bin Number.

Select who your supplier is.

Select the units you prefer to use, then type in the amount delivered that matches your units. (I.e. Aggregates will have either Kg or Tons).

Enter any of the remaining data.
Date and Time Received, will usually be the current time.
The Vehicle number or registration.
The amount paid.
The Docket Number.
The Courier.

You can force fields that must have an entry by setting the options in AxiBatch settings. Go to AxiBatch Settings->Options->Add Stock to check what fields you must have entered. Options are Cost Amount, Docket Number, Vehicle Number, and Courier.

Other options for the Add Stock screen are the ability to keep the screen open after adding the first stock, otherwise will automatically close when you press the "Add Stock" button. Check "AxiBatch Settings->Options->Add Stock->Keep Screen open after adding stock".

Another option is to auto add the the Raw Cost (in Materials Table), to the Amount Paid field. These are normally the same. Check "AxiBatch Settings->Options->Add Stock->Auto add Raw Cost to Price Field" to do this. It can still be overriden if different.

Another option is to make Tons the default unit for Aggregate and Cement types. Check "AxiBatch Settings->Options->Add Stock->Make Tons default units for Aggregate and Cement".

If you wish to credit a Docket, because it was enetered incorrectly or twice, simply enter the same details and select "This is a Credit" and then press "Add Stock". When you perform a Stock Report, this will be taken into account as a reversal.

7.4 Adjust the Stock Level

Sometimes the amount of matarial in stock needs to be adjusted, Ie. In a Stock Take, or material was used in Manual mode (not via the automated system).

To adjust the level in AxiBatch select from the AxiBatch menu, "Edit->Stock Level". To adjust the level in Console select from the Console menu, "Tools->Adjust Stock Level".

Select the Material Type first, to polulate the Material Code and Material Name selections. When you select the material, the levels are shown for each of the

Bins/Silos/Tanks that that material is allocated to. The total should be the total of all the allocations. Use the up down arrows or just type in the new level to adjust. The "SET" button will appear. Once you are happy, press the SET button to update. The Total should be automatically updated. Pressing the SET button will enter a record into the "Material Reciepts" table. The idenfication in the Table for this record is that the Docket field is set to "MANUAL ADJUST".

7.5 View the Material Receipts and Stock Reports

To view the material receipts, you go to Console and select from the menu, "View->Material Receipts".

Use the "Show Filters" button to filter your data to be viewed. You can filter using a date range as well as filtering by the material. Press the "Update Material Recipts Table" button to view the data based on the filters.

The table will show all the entries that were added by "Add Stock" and "Adjust Stock".

7.5.1 Stock Report

Select "Stock report" from the Select a Report selection to view the Stock Report. This is based on one material, so you must filter the material. The reports will detail all entries where that material was added, adjusted and even used.

7.5.2 Stock Summary Report

Select "Stock Summary Report" from the Select a Report selection to view a summary of all the materials. This report will show how much was added and used for each material.

7.6 View Report to assist with Ordering Stock

This can be viewed in Console by selecting "View->Future Stock".

The report will show all materials with the current level and the amount required for the remaining batches and orders. The "Order" column indicates how much you will need to order as a minumum to satisfy the orders in the system.

Before the report is opened, there are some options, like the date range for orders and if you want to exlude the batches that haven't been batched in the progressive area.

8   Reviewing Completed Loads

8.1 Viewing Loads

This is achieved by running AxiConsole.

Either press the Completed Loads icon   or select View->Completed Loads
from the menu.

By default, all todays load or last 10 dockets are shown.

Pressing the "Show Filters and Report Options" button you will be able to show a
selection of dockets based on your selection.

You can filter with Recipe, Customers, Trucks, addresses etc.
You can use the Like feature if you are not sure of how to spell the item, it will then
return dockets with like text.

Press the bottom "Update Load Table Using Filters" button to view your loads.

If you select a docket you can use the "Show Associated Dockets" button to show all
the dockets from the same order as the one you selected.

8.2 Load Type Reports

There are several reports available here that are based on the selection of Loads you
have.

8.2.1 Docket

This simply reprints the Docket.

Docket settings for Console are unrelated to AxiBatch. These are found in Settings-
>Console Setup->Settings->Docket. You will need to enter the File Path of the docket
file and include the file name. You will also need to select the Printer.

8.2.2 Load Report

This is a Load Summary Report, summarising the total Loads and Total CuM.

8.2.3 Load Sales Report

This is a Load Summary report but emphasising the costs, summarising the total loads and total payable.

8.2.4 Sales by Customer

For this report you must select a Date Range first! This will summarise the totals costs per customer. It will also indicate the total quantity and number of loads. It will spell out the Margin and the average margin per CuM

Note the Sales reports have some options like subtracting Plant Cost if it is setup and subtracting Truck Costs or Pays from the Margins or Sales. Also Short Load and Cartage can be subtracted from Sales. This applies to Sales by Customer, Sales by Recipe and Sales by Load

8.2.5 Sales by Recipe

For this report you must select a Date Range first! This will summarise the totals costs per recipe. It will also indicate the total quantity and number of loads. It will spell out the Margin and the average margin per CuM
Useful for telling if you are making money on a Recipe.

8.2.6 Sales by Dockets

For this report you must select a Date Range first! This will summarise the costs per load. It will also indicate the total quantity and number of loads. It will spell out the Margin and the average margin per CuM.

8.2.7 Truck Summary

This report summarises per Truck the number of loads, Truck Payments, Cartage costs, number Loads and total KM travelled.

8.2.8   Truck Pay Report

This report summarises payments that need to be paid to Truck contractor. You must select the Truck for each report.

8.2.9   Waiting Time Group Report

This report summarises the Waiting time per Customer group, showing worst waiting times from the top of the report.

8.2.10 Waiting Time Line Report

This report shows the individual Waiting times.

8.3 Fixing up Dockets

From time to time a Docket needs to be fixed as the operator may have put in the wrong address or wrong customer name.

There is the ability to fix the Recipe Code and to change the Load Size, but this must be enabled in Console Settings and only by a Technician.

8.3.1   Changing Customer or Recipe Type Details

When viewing the completed loads select the Docket you wish to fix. With the mouse right click and select "Change Customer Details on the Load". This must be enabled for the user to perform this function. In User->Load you will need to check what functions the operator will be able to perform.

When the form appears, the left-hand side shows the current information as was saved. The right-hand side are the changes.

Most items are transferred from the left to right, except for the Customer Code and Name.

Reselect the correct Customer Code. All other features that are not greyed out can be changed. Once this is done press the "Calculate Cost" button. If MISC is found it will ask if you want to remove it, most likely not in most situations. Press the UPDATE button if you are happy.

8.3.2   Change or Add or Remove a MISC Item from a Load (Docket)

Right click on the Load and select "Change MISC Items".

Use the drop-down arrow on the code to reselect another MISC item like Waiting Time.

Use the drop-down arrow on the Class to reselect another class cost for the MISC item. This may be greyed out as MISC Classes might be disabled.

Press the Clear button to completely clear the MISC Item.

Use the Calculator button to alter the Flat Fee if not greyed out.

Press the UPDATE button to update the MISC items for that load or docket.

8.3.3   Add Waiting Time to a Load (Docket)

Right click on the Load and select "Add Waiting Time".

The Docket number will automatically appear at the top.

Use the Up/Down arrows to obtain the total minutes.

As you are doing this the cost will be automatically calculated.

You can override the cost before you search.

Press the SEARCH button to search for the Docket.

The Details for the Docket will appear.

Press the Enter Data button to enter the Waiting Time to the Misc Costs of the Docket or press the X button on top right to cancel.

8.3.4   Change the Comment or Order/Project Number to a Load (Docket)

Right click on the Load and select "Change Comments/OrderNo".

Type the updated details on the right-hand side of the screen.

Press the UPDATE button to overwrite.

8.3.5   Change the Completed Date and Time on a Load (Docket)

Right click on the Load and select "Change Completed Date and Time".

Change the Date and Time, Press the "Set & Close" button to update.

8.3.6   Change Truck Payment on a Load (Docket)

Right click on the Load and select "Change Truck Payment".
(this is the payment to the Contractor Truck)

Either type the New Payment directly or type the KM and press calculate.

Press the "Set Truck Pay to Docket" to save the amount to that load.

9   Slump Water System

9.1 Intro

The Slump water system can consist of the following components ...
1. RFID Reader (optional but recommended for accuracy)
2. Valve Control (optional but recommended for accuracy and quality control)
3. Water Meter Kit (Required)

The RFID reader is used to identify the Truck adding Slump Water.

When working correctly, Slump water is recorded in to the slump water field in the completed load (docket). This will appear in the Batch Report.

9.2 Settings

Settings are found under Settings ->Plant->Water->Slump.
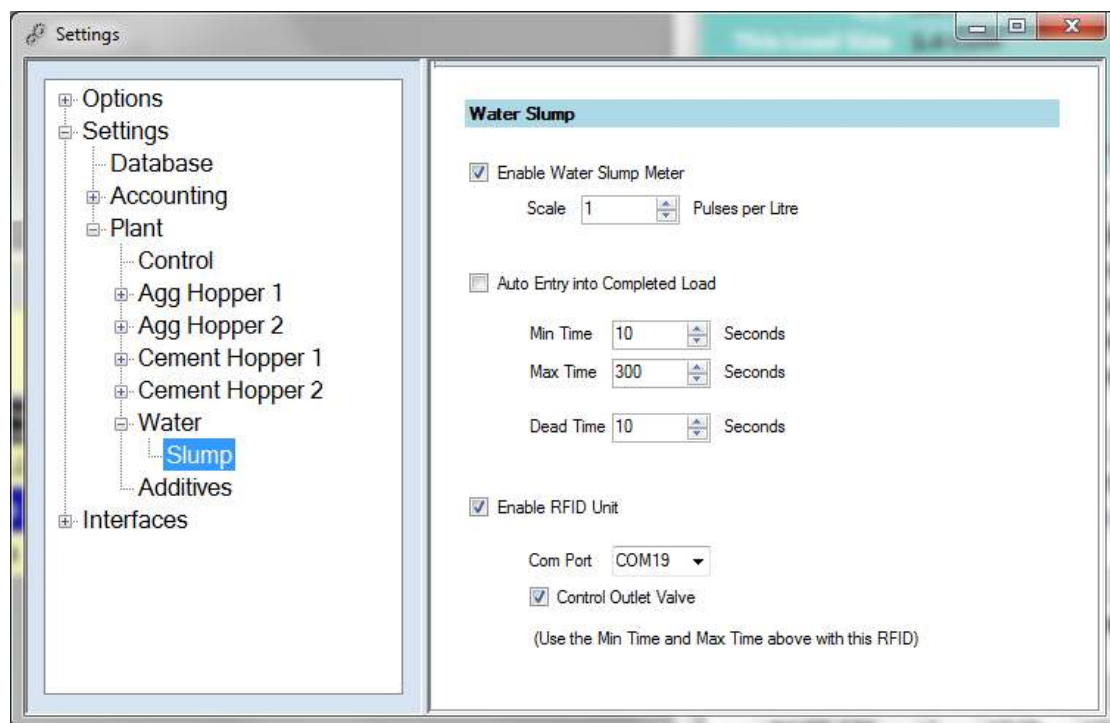
9.2.1   Enable Water Slump Meter

Check the 'Enable Water Slump Meter' to enable the Meter to operate. The meter must have a pulse input to the PLC or AxiSoft Input Counter module.

Set the Scale units to X pulses per Litre. This will perform the Scaling.

9.2.2   Without the RFID Reader

If you do not use the RFID reader, the system will try to place the Slump read into the last docket created.

Check the 'Auto Entry into Completed Load' only if you do not have RFID.

Set the Min Time, to the time you would think it would take for the truck to get to the Slump Water Bay from when the load is completed.

Set the Max Time, to the max time it should be at the Bay.

Set the Dead Time to a time when there is no meter activity to complete the Slump recording.

Hence Slump recording will be completed when the Dead Time or Max Time is completed.

9.2.3   With the RFID Reader

If using an RFID Reader then

Check 'Enable RFID Unit' and set the Communication Port to which the RFID Reader will communicate to.

Do **NOT** Check 'Auto Entry into Completed Load'.

Check 'Control Outlet Valve' is you have a Slump Water Valve connected to your system.

Set the 'Max Time' as the timeout to when reading was Started. This will complete the reading if the Truck driver has not rescanned the Card to complete.

9.3 Control and Status

When running following are the Status codes used

when RFID is used

1. "Reading" - Truck RFID card is scanned
2. "Stopped" - Truck RFID card is scanned for the second time
3. "Completed" - Slump Water has been recorded to a Load
4. "Failed" - Failed to record Slump Water to a Load
5. "Waiting" - Between Stopped and Completed (attempting to record Slump Water)

Last Completed

Truck 12 has scanned his card. Slump Water valve is open. Timer is running.

Truckie has added 18 Litres

Truckie has scanned is card a second time. (Waiting) would have appeared momentarily will trying to find the last docket to write to. It is now completed and the Meter reset to zero. Completed indicates it is ready for the next scan.

Note, if the truck driver does it a second time it will add to that field.

9.4 Overide Tools

Tools->Slump Water RFID->Reset Slump Water RFID Status

This will reset the Status in the Status Bar.

Tools->Slump Water RFID->Reset Slump Water Meter

This will Reset the Meter back to zero in case of an error

Tools->Slump Water RFID->Enable Slump Water Valve

This will turn on the Slump Water valve.

Tools->Slump Water RFID->Disable Slump Water Valve

This will turn off Slump Water valve.

10   Master Database

This section describes the Master Database and how to use and set it up.
Refer to the Setting up Console section for how to set up the Master Database.

The Master Database is used for common Customers and Recipes between all plants connected to it.

The Recipes include the following tables
Recipe Table
Recipe Item Table (stores recipe materials and their target weights per CuM)
Recipe Prices Table (stores pricing for the Recipes)
Materials Table
Classes Table
Material Filters Table

Other tables that are not related to Customers and Recipes are the
Users Table
Plant Name Table

The Master Database is usually located on a Server Computer.

To continue on with Customers and Recipes you must have configured the Plants in the Plant Table in the Master Database. (Refer to Console Startup section)
Ensure the Plant Name matches the Plant Name in the Plant AxiBatch settings.
Ensure you allocate a Plant Number that is different for each plant.

10.1 Customers

Setting up Customers for the first time, pick a plant that has most of the Customers you want to bring into the Master.

In Console select "Master Database->Synchronise->Customers" to display the Customer Synchronisation form.

Select "From Plant to Master Database" for the Synchronise Method.

Select the Plant that you want to bring in the Customers from in the Select Source Plant selection.

Set Customer Code for Synchronise ID.

Set the Plant Name field to "ALL" if you want these Customers to be available to all plants. If you select "Source Plant Name" these Customers that you bring in will only be available to that Plant. You can alter this individually for each Customer later.

Press the "Start Synchronization" button to bring in all the Customers from the Plant you selected into the Master Database. Note that any duplicated customers will be overwritten.

Once completed you should be able to view theses Customers in "Master Database->Customers".

By default, you should not be able to edit Customers in the normal fashion (I.e. directly to each plant, by using the Customer icon).

You can repeat this process, by bringing in Customers from other plants, however if the same Customer Code is detected, it will be overwritten.

This process in only done one.

10.1.1 Master Database Access

For an operator to have Master Database access, then check the User Credential in the Batch tab to Allow Master Database Access. To do this use must use the Master Database->Users.

10.1.2 Setup AxiBatch to synchronise with Customers from the Master Database

Doing this will perform the following …

- When AxiBatch starts it will check with the Master Database if it missed out on any Customer Updates, if so will start synchronising the Customer Table with the Plant's own database.
- AxiBatch will set a flag to anyone using Console that the Customer Table is synched to the Master Database, hence will be difficult to directly edit the plant's Customer Table, unless you change a setting in Console under the Technician level

The setup the Master Database in AxiBatch select "AxiBatch->Settings->Interfaces->Master Database".

Check "Enable communications to Master Database".

Set the location path of the Master Database. You do not need the filename. The Filename is always "MASTERAXIBATCH.FDB". Press the "TEST" button to test if you have connection to the Database.

Check "Auto Synch Customers on Startup" to automatically connect to the Master and check if Customer synchronisation is need. If it is Synchronizing will start.

Check "Auto Exit on no Synch" to automatically exit the synch pop up if synchronization was not required.

10.1.3 Directly edit Customers in the Plant

To be able to directly edit Customers in the Plant Database, you must check "Console->Settings->Master->Master Options->Allow Direct edit of Customers in Plant". You can only do this using the Technician level. This should only be relegated to certain admin people.

10.1.4 Edit or Insert a Customer in the Master Database

To edit or insert or even delete an existing Customer in the Master Database, in Console select "Master Database->Customers.

The standard Customer form will appear. Refer to the section in this manual regarding Customers as editing, inserting and deleting a Customer will be the same.

The only thing that will be different is the Plant field. It will either have the Plant Name that Customer is associated with, or it will have "ALL" which means that Customer is available to all Plants.

When you UPDATE information to the Customer record, it will update the Master database Customer table first, then it will update the Customer in all plants if the Plant name is set to "ALL", or otherwise will update the Customer to the Plant specified.

If it fails to make a connection to the Plant, a connection error will appear (may take up to 30 seconds). However, it will set a flag so that next time the Plant's AxiBatch restarts it will resynchronise the Table. Once the synchronisation is done that flag will reset.

In a new update you can select that Customer to appear in any plant. This is indicated by the Plant Number field in plants. Use the Select Plants button when editing the Customer to add or clear plants that will use that customer. In the Main form you will see only the plant numbers with a comma after it.

11   Appendix A - Inching Gates

11.1 What are Inching Gates

Inching gates will consist of gate that is operated via 2 ram cylinders. One cylinder is to open the gate, the other is to close the gate. They are rigged up so that whilst the solenoid for the cylinder is energised the ram will extend one way. If both solenoids are energised at the same time the ram will not move. If one solenoid is energised for a very short time (E.g. 100ms) the ram will extend a short distance.

11.2 Manually testing the Inching Gates with PLC

You can test and partially tune your inching gates in manual mode.
Set switch to Manual and start the Conveyor.

Set the position switch to LOW (or 33%).
Select the Gate 1 or Gate 2 switch to open. (Swing to open position and hold)
The Gate should open to approximately 33% of full open position.

Set the position switch to MEDIUM (or 66%).
Select the Gate 1 or Gate 2 switch to open. (Swing to open position and hold)
The Gate should open to approximately 66% of full open position.

Set the position switch to HIGH (or 100%).
Select the Gate 1 or Gate 2 switch to open. (Swing to open position and hold)
The Gate should open fully.
It should take between 1.5 to 2 seconds to fully open.

11.3 Manually testing the Inching Gates with AxiSoft

In AxiSoft double left click on the module where the inching gates reside.
In the pulse times field set the time to approx. 700 (ms). Right click and select
"Output Pulse". This will send a 700ms to the Solenoid you have selected. If it is the
Open Solenoid and the gate was previously close it should open it approx 30%. Now
set the field to 100 and do the same it should progressively inch the gate open.

The same can be said with the Close Gate Solenoid.

	Name	Description	Status	Count	Override
▸	**Inputs**				
	1	SurgeHopper1Gate1Closed	False		
	2	Bin1Gate1Closed	False		
	3	OKToDumpButton	False		
	4	Bin2Gate1Closed	False		
	5	Bin6Gate1Closed	False		
	6	None	False		
	Outputs			**Pulse Times**	
	1	CemHopper1GateOpen	False	1000	
	2	CemHopper1GateClose	False	1000	
	3	CemHopper2GateOpen	False	1000	
	4	CemHopper2GateClose	False	1000	
	5	Bin1Gate1Close	False	1000	
	6	Bin1Gate1Open	False	1000	
*					

IO Module Status

Module Name   Cem : Model = E1214
IP Address   100.0.0.72
Status   Comms Good

☐ Read Counter Status   Print
Input Scan Time (ms) 1000   Ping

Operation Period

	Last	Ave	Peak	
Inputs	13.00 ms	43.23 ms	420.00 ms	Reset
Outputs	35.00 ms	12.25 ms	35.00 ms	Reset

Cycle Period

	Last	Ave	Peak	
Inputs	1004.00 ms	1025.26 ms	2134.00 ms	Reset
Outputs	0.00 ms	0.20 ms	304.00 ms	Reset

11.4 Settings

These settings will affect how your gates will operate in Auto mode.

- Settings for Agg1 Hopper Inching Solenoids are found in AxiBatch Settings->Plant->Agg hopper1->Agg1 Flow Settings
- Settings for Agg2 Hopper Inching Solenoids are found in AxiBatch Settings->Plant->Agg hopper2->Agg2 Flow Settings
- Settings for Cem1 Hopper Inching Solenoids are found in AxiBatch Settings->Plant->Cem Hopper1->Cem1 Flow Settings
- Settings for Cem2 Hopper Inching Solenoids are found in AxiBatch Settings->Plant->Cem Hopper2->Cem2 Flow Settings
- Settings for the Surge Hopper Inching Solenoids are found in AxiSoft Settings->Control->Surge Hopper Control->Surge Hopper Flow Control
- Settings for the Overhead Bins Inching Solenoids (1 to 8) are found in AxiSoft Settings->Control->Aggregate Bin(s)->Bin X->BinXFlowSetpoints
- Settings for the Water Hopper Inching Solenoids are found in AxiSoft Settings->Control->Water->WaterHopperDischargeFlowControlSetpoints
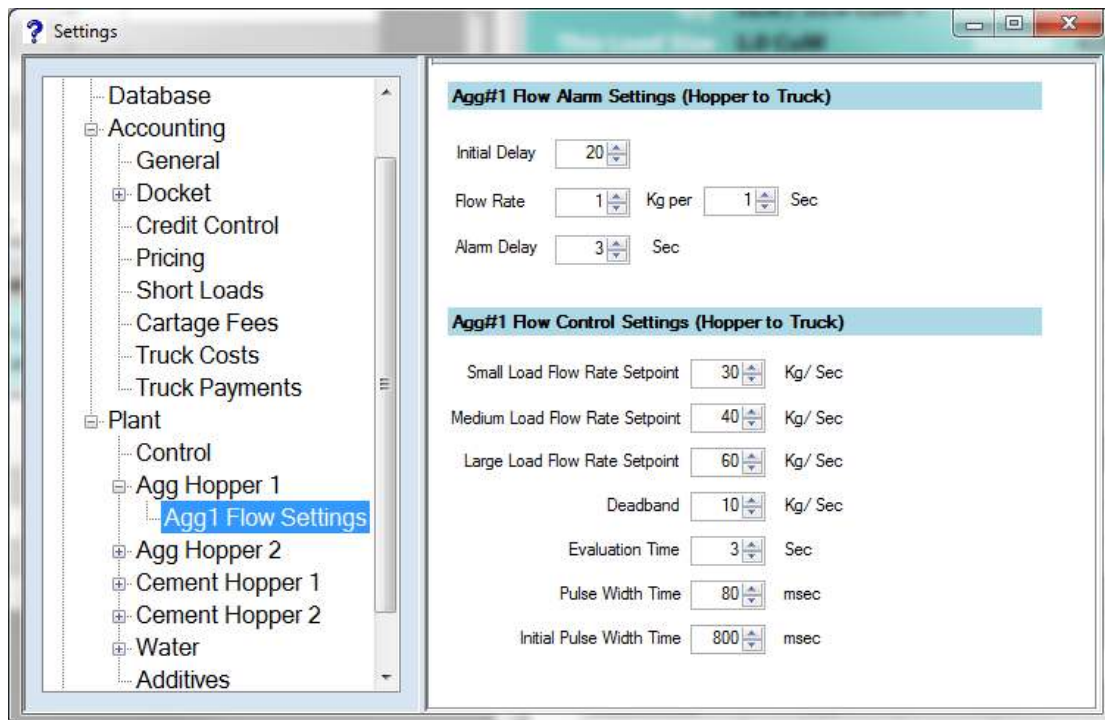
11.4.1 Flow Rate Setpoint

Flow Setpoint in Kg/sec for Small, Medium and Large loads.

11.4.2 Deadband

The flow comparison compares the Setpoint to actual flow using a dead band value. E.g. If actual flow is below the setpoint minus the dead band value the system will try to open the gate more. If the actual flow is above the setpoint + dead band then the system will try to close the gate.

11.4.3 Evaluation Time

The cycle time of how often the flow rate comparison is done. Units are in seconds.

11.4.4 Pulse Width Time

Every time the system tries to open or close the gates, this is the time the electrical signal stays on for to energise the open or close solenoid. The longer the time the more the ram extends or retracts. A usual value is around 50 to 100ms.

11.4.5 Initial Pulse Width Time

The time in milliseconds that the Solenoid will energise when first starting to dump the material. After this, the Pulse Width Time will take effect.

11.5 Possible Issues

Conveyor Overloads

- Conveyor Motor Windings stressed (Get electrician to test your motor windings)

- Close solenoid not working correctly (Check for air leakage) (does Gate close at end of dump?)

- Sand full of moisture and at bottom (change recipe so that stones are the first ingredients) This will break up the sand

12   Appendix B - Settings

This section describes all settings.

12.1 Settings->Options

This allows the operator to auto complete

12.2 Settings->Options->PreOrders

These settings relate to the PreOrders section of AxiBatch (Top Left Grid)
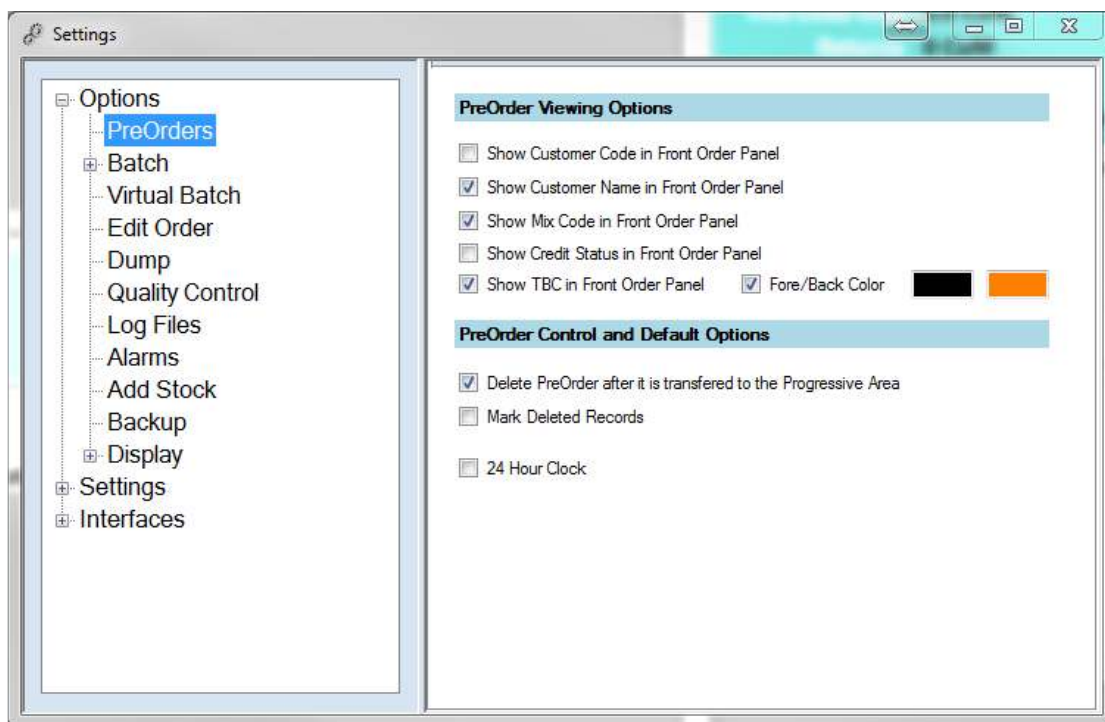
12.2.1 Show Customer Code in Front Order Panel

If checked will show the Customer Code column field in the PreOrder's Grid. To set the width go to Options->Display->Display Orders View->Display PreOrder Columns, and set Customer Code width. Setting the width to 0 will make the width automatic.

12.2.2 Show Customer Name in Front Order Panel

If checked will show the Customer Name column field in the PreOrder's Grid. To set the width go to Options->Display->Display Orders View->Display PreOrder Columns, and set Customer Name width. Setting the width to 0 will make the width automatic.

12.2.3 Show Mix Code in Front Order Panel

If checked will show the Recipe Code column field in the PreOrder's Grid. To set the width go to Options->Display->Display Orders View->Display PreOrder Columns, and set Recipe Code width. Setting the width to 0 will make the width automatic.

12.2.4 Show Credit Status in Front Order Panel

If checked will show the Credit Status column field in the PreOrder's Grid. To set the width go to Options->Display->Display Orders View->Display PreOrder Columns, and set Credit Status width. Setting the width to 0 will make the width automatic.

12.2.5 Show TBC in Front Order Panel

If checked will show the "To Be Confirmed" column field in the PreOrder's Grid. If an order is to be confirmed, TBC will appear in this field. If "Fore/Back Color " is checked the TBC Cell will the colors set if the field is set to TBC.

To change the colors, double click on the color box, and a color dialog will appear.

12.2.6 Delete PreOrder after it is transferred to the Progressive Area

If checked, when an order is transferred from the PreOrder area to the Batch area (Bottom Left) it will be deleted from the PreOrder section. Leaving it unchecked will always leave a copy in the PreOrder Area.

12.2.7 Mark Deleted Records

If this is checked and a PreOrder is manually deleted, it will be marked deleted but still be in the Database. It will not show in AxiBatch. To view these deleted orders, use Console to view them when you set the filter to "Deleted Orders". You can then Re-instate a deleted order or completely delete it.

12.2.8 24 Hour Clock

If this is checked, a 24 Hour clock is used for the Requested Batch time.

12.3 Settings->Options->Batch

These settings are for the Batching operations.
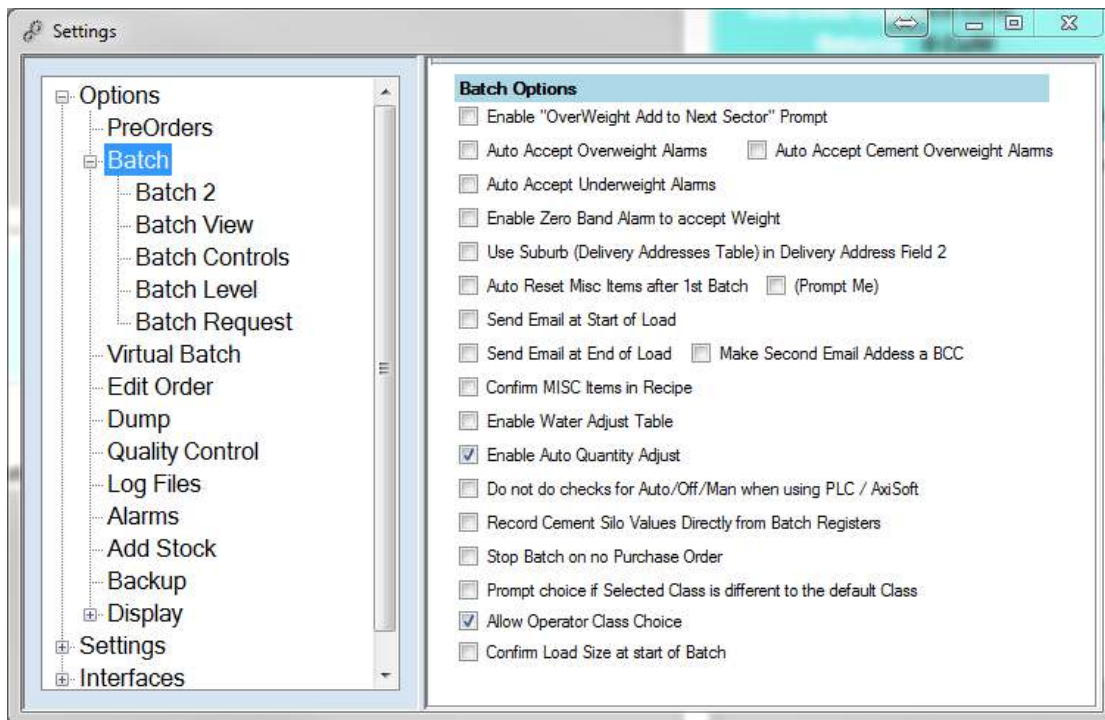
12.3.1 Enable 'OverWeight Add to Next Sector" Prompt

If this is checked, this will enable a button with the same title to appear when an Aggregate is overweight. Pressing this will automatically acknowledge the

Overweight but change the Target for the next Aggregate to compensate for the overweight in the first.

Example if we are overweight by 100kg, the next target will have 100kg subtracted from it.

12.3.2 Auto Accept Overweight Alarms

If this is checked, AxiBatch will automatically acknowledge overweight Aggregate alarms. Handy when you have a one-man operation.

12.3.3 Auto Accept Cement Overweight Alarms

If this is checked, AxiBatch will automatically acknowledge overweight Cement alarms. Handy when you have a one-man operation.

12.3.4 Auto Accept Underweight Alarms

If this is checked, AxiBatch will automatically acknowledge underweight Aggregate alarms. This will allow the Batching to continue to the next Aggregate. Handy when you have a one man operation.

12.3.5 Enable Zero Band Alarm to accept Weight

If this is checked, AxiBatch will display a button with this title, when Cement starting weight is above the Zero band. (See Settings->Plant-> Cement Hopper 1, Zero Band Setting). Pressing this button will use the weight as the actual weight. If this option is not enable the only way to start the Cement is to zero the scale. This also applies the both the Aggregate Hopper scales as well.

12.3.6 Use Suburb (Delivery Addresses Table) in Delivery Address Field 2

If this is checked, AxiBatch will enable a drop down selection box for the 2nd address field that will come from the "Delivery Address 2" field from the table "Delivery Addresses" in the Order form.

This can be used to store all the suburbs, and the operator can then just select a suburb in the 2nd Delivery Address field.

12.3.7 Auto Reset Misc Items after 1st Batch

If this is checked, AxiBatch will automatically reset all MISC items at the end of the Batch. If you check "Prompt Me", it will ask.

12.3.8 Send Email at start of Load

If this is checked, AxiBatch will send an email(s) to the customer to inform that his/her load is about to commence. This will only happen if there is a valid email address in the "Instructions->Email for Batch Notification" section of the order form.

12.3.9 Send Email at end of Load

If this is checked, AxiBatch will send an email(s) to the customer to inform that his/her load has been batch and about to commence delivery. This will only happen if there is a valid email address in the "Instructions->Email for Batch Notification" section of the order form.

Check "Make Second Email Address a BCC" if you want the 2nd email address to be a blind copy.

12.3.10   Confirm MISC Items in Recipe

If this is checked, AxiBatch will enable the confirmation process of any Miscellaneous items that appear in the Recipe.

You must also enable the Misc Material to be able to be confirmed on the Material table, and that the Misc Material must also appear in the Recipe.

12.3.11   Enable Water Adjust Table

If this is checked, this will enable the Auto Water Adjustment table to be used.

This table is accessed via the Main Menu , Edit->Water Adjustment Table.
Make sure the Maximum load size equals the Minimum load size of the next row.

When a load size is entered the water adjustment is automatically calculated from this table based on the load size used.

To override this, you can manually enter the water adjustment yourself by right clicking on the Batch / Progressive grid area and selecting 'Adjust Water'.

12.3.12 Do not do checks for Auto/Off/Man when using PLC or AxiSoft

If this is checked, AxiBatch will not test for the Auto or Manual control panel switches. This is used if they are not wired in, or for those older PLC Programs that do not have these functions programmed in.

12.3.13 Record Cement Silo Values Directly from Batch Registers

When this is unchecked

When in PLC mode , the actual cement weight is calculated from what is remaining in the hopper.

When checked, the actual Cement weight is calculated from the actual weight when batching. This should be checked if your PLC has not been updated to record the remaining weight (usually in the older PLC's).

If in AxiSoft mode the Cement Weight is calculated from the actual weight in Batching.

13   Appendix B - Interfaces

13.1 Google Interfaces

AxiBatch uses two google interfaces to obtain data. Google Maps is used to obtain directions for the delivery address and the kilometres to site. AutoComplete is used to obtain the correct delivery address.

13.1.1 Setup your Google Account and Billing Account to obtain your Key

The first thing you need to do to get these features working is to set up an account with google. The next thing is you must setup a billing account, even though you may never be billed.

Go to "https://code.google.com/apis/console/?noredirect" to sign in or set up your new google account.

Use the following guide to obtain your google maps key
https://www.wpgmaps.com/documentation/creating-a-google-maps-api-key/#create

Copy your key and paste into a safe location in maybe a Word document. This key will be used in the Key field in AxiBatch settings for google.

Call your project something similar to your company name.

Add the following services to your project …
"Google Places API"
"Google Maps Directions API"
"Google Maps Distance Matrix API"
"Google Maps Geolocation API"

Or Select the key items Routes and Places. That will add most API's in automatically.

These can be found in the google maps menu (Menu button is Top Left and its icon is 3 parallel lines) in the APIs & Services section.
The Dashboard shows your list of API services, and your current connection traffic.
The Library enables you to find your service. Use the search field and type for example "Directions" and it will find the Directions API. When you select it you will see an ENABLE button to enable it.

13.1.2 Setup Google to Retrieve Directions and kilometres

To set this up select "AxiBatch Settings->Interfaces->Google".

Check "Enable interface to google maps".

Enter the key, this could be the same key as for AutoComplete.

Check "Make 'Avoid Tolls' default" if you wish to avoid Tolls.

Insert the minimum KM you want returned.

Check "Make KM returned whole and always round up" if you want whole numbers for km.

Add a KM Offset if required.

Check "Replace Delivery Address with Google address" if you want to replace what the operator has typed in with what Google has returned.

Once this is setup correctly then you will be able to use the Use Google Maps to calculate the KM Distance" button when you are in the Customer Tab of the Order Form. This will return the KM distance and also provide a list of directions that you can print on the spot for the driver.

13.1.3 AutoComplete Delivery Addresses

This allows the operator to auto complete delivery addresses in order forms.
As the operator types addresses a list below the text box will appear and update after every character change. The operator can then select the correct address to populate the delivery address fields.

To set in the AxiBatch Settings …
Check "Enable google places AutoComplete" to enable AutoComplete.
Enter your key in the Key text field.
Enter your location (Latitude, Longitude), use the GET button on the right of the Location field to obtain these, make sure the Plant Address is set correctly)
Enter Radius (in meters).
Enter Minimum characters before auto complete list starts appearing.

13.2 AxiCommand
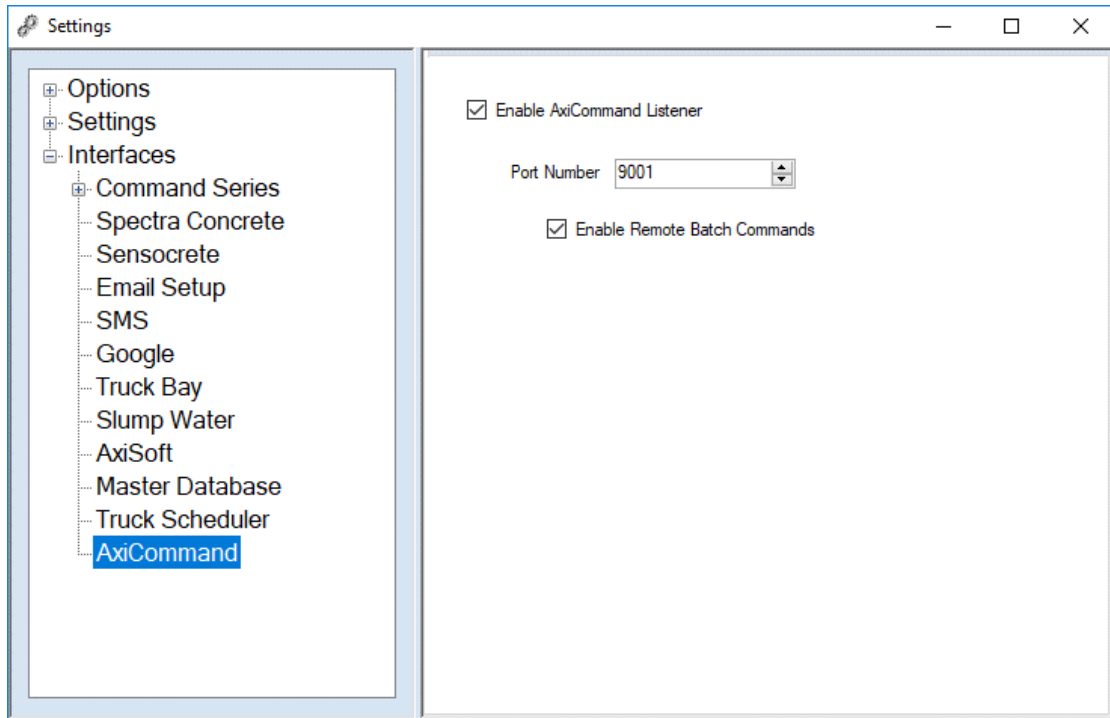
AxiCommand is an Axion Protocol designed to talk to various products. One of those products is AxiCab and provides the ability to perform some remote functions.

To enable AxiCommand enable the AxiCommand Listener. It will start next time you start AxiBatch.

Set the port number for communications and enable remote Batch commands to allow control.

If using AxiCab set the same port number as here in the AxiCab configuration. This will enable AxiCab to send commands such as Starting a Batch, if you have "Enable Remote Batch Commands" checked.

14   Appendix C – Fault Handling

14.1 Docket not Printing

14.1.1 Docket does not print when batching?

Is the Word Document Icon open in the task bar?
If so open it and see if there any messages.
Typical messages are margin error, you need to get a license.
If you get a margin error, you will need to rebuild your docket so that fields don't go over the margins.
If it asking you to register, then you will need to.

14.1.2 Are you getting the Unable to cast COM object of type Micrcrosoft.Office.Interop.Word.ApplicationClass'?

If this is repeating, it is an issue with the registry settings. May have been cause by a windows update or Word update. Easiest thing to do here is to go to Add/Remove programs and try to repair Word or remove it, and then reinstall it.

14.1.3 Is the printer valid?

Reselect the printer by going to AxiBatch Settings->Settings->Accounting->Docket->Printer Name. Use the ellipsis button to reselect the printer. Sometimes the printer name can change!

14.1.4 Is it on random dockets?

It may be a customer setting. In the Customer table there is a setting that will dictate how many dockets will be printed for that customer. This is found in the Batching tab of the customer table. If set to -1 then it will print to what is dictated by AxiBatch (AxiBatch Settings->Settings->Accounting->Docket->Print Copies). If set to 0, no dockets will be printed. If set to 1 to 5, then 1 to 5 dockets will be printed.

14.2 Flow Faults

14.2.1 Agg Hopper Flow Error

This is a flow fault for the discharge of the Aggregate materials from the aggregate hopper onto the conveyor and then ultimately in the truck.

No or Low flow is usually caused by

14.2.1.1   Conveyor not running

Check the alarm banner for a Conveyor fault. If you have this fault, then you can acknowledge the alarm to clear it. Click on where it says "Alarms Active" and the alarm screen will appear. Select the Conveyor Fault alarm, right click with the mouse and select "Ack". If the alarm clears hopefully the conveyor will start running. If does not and the alarm appears again, you will need an electrician to fix this major issue. It could be with the overload has tripped, or even faulty feedback wiring.

14.2.1.2   Gates not opening

Conveyor is running, but gates are not opening.
Is there air pressure to the solenoids? Is the air compressor running?
Is 1 gate opening and not the other? Faulty Solenoid?
No gates opening? Maybe a faulty module or fuse group has blown.

14.2.2 Additive Flow Error

No additive flow at all.

Are you getting a Low Flow and beeping alarm on the Additive Meter?

If yes then is the pump trying run (few seconds)? If no get an electrician to look at it. If the pump is running at the beginning do you have enough head in the pipe. You might have to ack on AxiBatch a few times to retry the pump, otherwise may have manually fill pipe.

If No flow alarms on ME2008, then it may not be getting the signal from the AxiSoft module or the PLC Output module. Get the electrician to check the fuse, voltages and wiring.

14.2.3 Water Flow Error

Are you able to control water manually using the meter?

If Yes, then it may be a connection issue between the PLC or AxiSoft module. Check fuses, voltage and wiring.

If No, then it may me after the meter, get an electrician to check from the meter. The meter should be also giving you a low flow alarm.

14.2.4 Surge Hopper Flow Error

This is a flow fault for the discharge of the Aggregate materials from the Surge hopper to the truck. The only devices involved here are the outlet gates.

No or Low flow is usually caused by Gates not opening.

Is there air pressure to the solenoids? Is the air compressor running?
Is 1 gate opening and not the other? Faulty Solenoid?
No gates opening? Maybe a faulty module or fuse group has blown.

14.2.5 Bin Hopper Dump Flow Error

This is a flow fault for the discharge of the Aggregate material from the Weigh Bin to the conveyor and then ultimately to the Surge Hopper.

No or Low flow is usually caused by

14.2.5.1   Conveyor not running

Check the alarm banner for a Conveyor fault. If you have this fault, then you can acknowledge the alarm to clear it. Click on where it says "Alarms Active" and the alarm screen will appear. Select the Conveyor Fault alarm, right click with the mouse and select "Ack". If the alarm clears hopefully the conveyor will start running. If does not and the alarm appears again, you will need an electrician to fix this major issue. It could be with the overload has tripped, or even faulty feedback wiring.

14.2.5.2   Gates not opening

Conveyor is running, but gates are not opening.
Is there air pressure to the solenoids? Is the air compressor running?
Is 1 gate opening and not the other? Faulty Solenoid?
No gates opening? Maybe a faulty module or fuse group has blown.

14.2.6 Bin Hopper Flow Error

This is a flow fault for the discharge of the Aggregate material from the Storage Bin to the Weigh Bin.

No or Low flow is usually caused by the Gates not opening.
Check …
Is there air pressure to the solenoids? Is the air compressor running?
Is 1 gate opening and not the other? Faulty Solenoid?
No gates opening? Maybe a faulty module or fuse group has blown.

14.2.7 Cem Silo Flow Error

This is a flow fault for the discharge of the Cement material from the Silo to Cement Hopper.

No or Low flow is usually caused by the Gates not opening.
Check …
Is there air pressure to the solenoids? Is the air compressor running?
Is 1 gate opening and not the other? Faulty Solenoid?
No gates opening? Maybe a faulty module or fuse group has blown.

14.2.8 Cem Hopper Flow Error

This is a flow fault for the discharge of the Cement material from the Cement Hopper to the Truck.

No or Low flow is usually caused by the Gates not opening.
Check …
Is there air pressure to the solenoids? Is the air compressor running?
Is 1 gate opening and not the other? Faulty Solenoid?
No gates opening? Maybe a faulty module or fuse group has blown.

14.3 *AxiBatch Starting Errors*

When AxiBatch starts it can encounter various errors, some are self-managed.

Note that the settings file for AxiBatch is of a type config file stored in the Users directory. The settings file is user scoped. So, if you logged in the computer as a different user, the settings would be completely different!

The following 3 files you will find in the default C:\AxiBatch Data\Settings directory.

"AxiBatchConfig.config" file is a copy of the settings file which is saved whenever you leave the Settings form.

"AxiBatchDefaultSettings.xml" file is a file that contains some critical settings like registration information and is saved when leaving the Settings form and if any of the fields have changed value.

"Settings.config" is a backup of the settings file since you last exited AxiBatch.

14.3.1 Check 1 - AxiBatch Instance

The first check that is made is whether there is another instance of AxiBatch running. If it is already running a message will appear

```
There already is an Instance of AxiBatch running!
If you cannot see it Press 'YES' to kill it and you will need Restart AxiBatch
again!
Otherwise press 'No' and this Instance of AxiBatch will Shutdown
```

If you cannot see it as a minimised icon and cannot open that icon press "YES" to kill the hidden instance. (It may have not closed correctly previously).

If you see it and able to open it, press "NO" and the current new instance will close.

14.3.2 Check 2 – Corrupt Settings File

The next check that is done is to see if the settings file can be reloaded.

If this fails a Restore prompt will appear. Press YES to point to the last suitable settings file to restore. Normally this will point to the C:\AxiBatch Data\Settings file for you to select the "settings.config" file. Use this if you think it is not corrupted (Ie. You have already exited AxiBatch having the same problem), otherwise use the "AxiBatchConfig.config". Otherwise you may have to resort to using a backed-up

settings file from days ago. You will have to restart AxiBatch. AxiBatch should automatically repair the next docket number. If you get a docket number error when you start the next batch, restart AxiBatch, and then start the Batch.

14.3.3 Check 3 – Semi Corrupted Settings File

If the settings file is loaded ok, a check is done to compare the registration fields from an xml file to the settings file. If there is a difference, then the following "Corrupt User Settings" message will appear.

```
AxiBatch has detected that your                                    "
user settings file has defaulted.
This may be due to a crash or improper exiting
of the program. AxiBatch must reset your
user settings in order to continue.
Click Yes to reset your user settings and continue.
Click No if you wish to attempt manual repair
or to rescue information before proceeding.
```

If Yes is pressed the "C:\AxiBatch Data\Settings\AxiBatchConfig.config" is copied and overwritten to the settings file.

"AxiBatchConfig.config" file is saved automatically when you where last in settings and saved them.

You must exit AxiBatch now, and restart so it loads the backed-up settings.

14.3.4 Check 4 – Database Check

The last main test is for the Database. If this fails you will get the following message.

```
AxiBatch was unable to connect to the AxiBatch Database!
Possibilities are ...
The Firebird Database Engine has not started, so you will need to Restart
AxiBatch. This usually happens if you have started AxiBatch to early after a
Computer Startup.
Or you have not configured the Database connection Path correctly if setting up
for the First Time. Go to Tools->First Time. Then Restart.
```

So, possibilities are
- Configuration Path to the Databases is incorrect
- 32bit Firebird Database Engine is not running
- Database is corrupted

The database engine can be found in Services. You may need to stop it and restart it.

Use Flamerobin to try to connect to the database, if Flamerobin cannot connect it could be a corrupted database. Manually copy a previous version the C:\AxiBatch Data\Databases directory. Make use it is named AxiBatchg.gdb or CompOrders.gdb.

14.3.5 Check 6 – Docket Check

Other checks that are done are to test the next docket number makes sense. So, it compares the setting to the completed loads database. AxiBatch will automatically attempt to fix the next docket number.

14.3.6 Check 7 – Printer Check

The Printer name set for the docket is checked with the system. If this is different a warning message will appear. You will then need to go to settings and reselect the printer or sort it out.