

ADVANTAGE+

SNOW & ICE SYSTEM



CONFIGURATION MANUAL

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OPERATION SCREENS

Navigation

Cycle Screens – Depress the Auger or Spinner knob to cycle screens.

Adjustments – Tap the appropriate touch screen button to change settings. Hydraulic performance settings can be adjusted in the configuration menu.

Operation – Use the appropriate buttons and rotary knobs to control the spreader operation.

Main Operating Screen - Spreader

Air Temp / Road Temp – Displays air and road temperatures. Temperatures will only display if IR temperature sensor is installed.

Totals – Displays the material and liquid totals per trip. Simply tap to reset. Keep in mind that resetting these totals do not reset the spreader datalog.

Joystick Mode – Displays the current piece of equipment the joystick is controlling.

Wi-Fi Strength – Displays the Wi-Fi signal strength.

System Pressures – Displays the Pump and Load Sense Pressures.

Message Bar – Displays error messages.

Spinner Rate – Displays the spinner rate as a percent.

Pre-Wet Rate – Displays the Pre-Wet Rate.

Product Type – Displays the material being spread. Tap to change products.

Auger Rate – Displays the auger rate. In manual mode, the setting is displayed as a percent until a groundspeed signal is detected. Once the vehicle begins to move, the controller will approximate the material discharge rate in Lbs / Mile. Keep in mind that in manual the output is constant, but the material rate is changing as ground speed changes.

In Auto Mode, the rate is displayed as Lbs / Mile. Keep in mind that this value will be constant since the material discharged varies per vehicle speed to keep a constant output per mile.

Mode – Displays the mode of operation. Toggle button to change between Auto and Manual.

Hot Buttons – Buttons can be configured on the touchscreen for additional system functionality.

Main Operating Screen – Anti Ice

Air Temp / Road Temp – Displays air and road temperatures. Temperatures will only be displayed if IR temperature sensor is installed.

Liquid Rate – Displays the Liquid Rate. Use the Auger Rate Knob to control the speed of the liquid output.

Mode – Displays the mode of operation. Press to toggle between Auto and Manual.

System Pressures – Displays the Pump and Load Sense Pressures.

Message Bar – Displays system error messages.

Boom Controls – Press appropriate boom controls to actuate. When a boom is actuated, the button will latch orange to indicate that it is “on”.

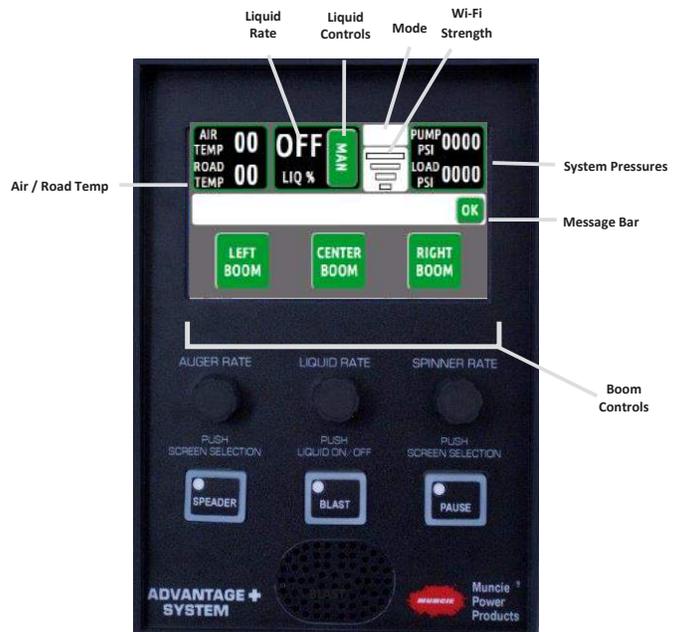
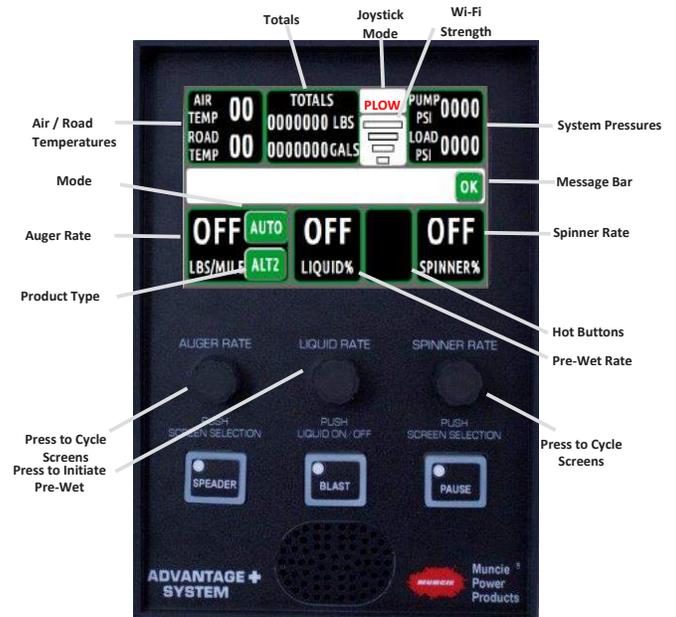
Wi-Fi Strength – Displays the Wi-Fi signal strength.

Button Assignments

Spreader – Press to initiate the spreader system.

Blast – Press to “Blast” or increase the granular rate to a configurable set point for a preset time.

Pause – Press to pause the auger operation.



OPERATION SCREENS

Operator

Brightness Setting – First, select Day or Night under the brightness setting. If the brightness is not satisfactory, adjust the button and screen settings as needed.

Screen Brightness – Select to adjust the screen brightness.

Button Brightness – Select to adjust the button brightness.

Volume – Select to adjust the volume of the controller.

Configuration Menu – Reference page 6 to access the configuration menu and make adjustments. This menu allows a maintenance supervisor to make setting adjustments to the system. It is password protected to limit access to unauthorized personnel.



Spreader Log

Totals – Displays the following:

GRAN – Displays the total amount of granular material discharged since log last cleared.

LIQ – Displays the total amount of liquid pre-wet discharged since log last cleared.

AUTO – Displays the total distance spread in Auto Mode.

MAN – Displays the total distance spread in Manual Mode.

Speed – Displays the current Speed of the truck in MPH.

Granular Averages – Displays the following:

GRAN - Displays the average spreader rates in Lbs / Mile.

LIQ – Displays the average pre-wet rate in Gallons / Ton.

SPEED – Displays the average speed of the vehicle while spreading.

Truck ID – Displays the truck ID.

Time / Date – Displays the Time and Date. Press Box to adjust. The following menu will appear:



Wireless Download Options:

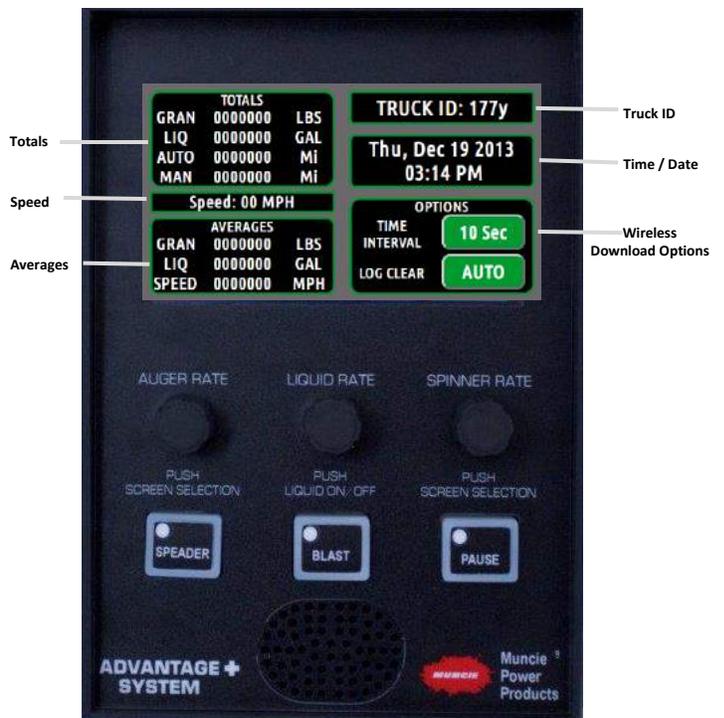
Time Interval - used to set how often the system records data points.

Log Clear – The log clear selection allows the user to set when the datalog is cleared.

AUTO - clears the datalog after download.

DAILY - means that the logs are cleared once a day.

NEVER - allows the controller to continue recording unless manually cleared through the configuration menu.



OPERATION SCREENS

Transfer Files/Real Time Support

Flash Drive Status – Displays the status of the flash drive. To connect, simply plug a flash drive in the top USB port and press the USB DISCONNECTED button. When it is detected, it will read USB CONNECTED. *It can take 10-20 seconds for the controller to recognize the USB device.

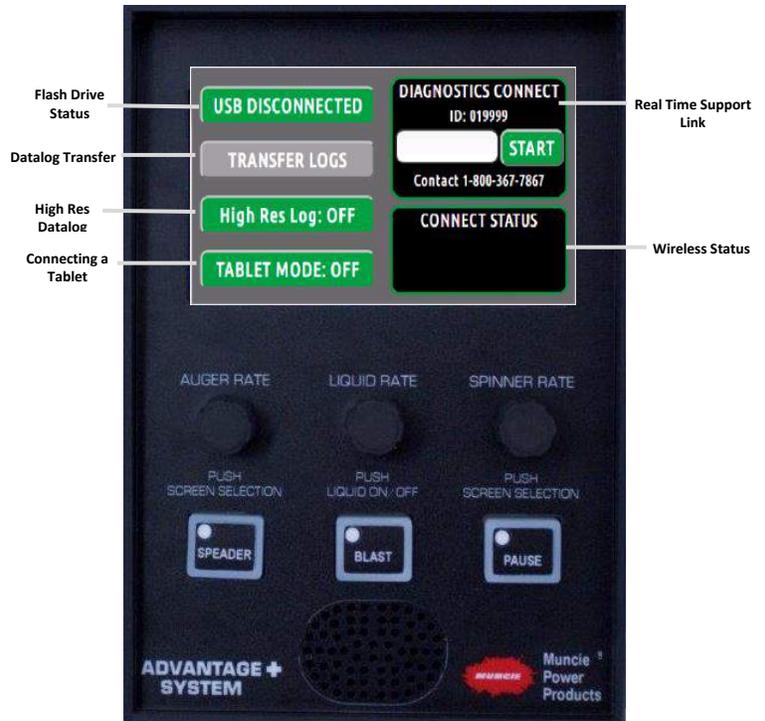
Datalog Transfer – When the flash drive is connected, push the transfer logs to download files. These files can be imported into the Data Analysis (desktop program) to view the spreader logs.

High Res Datalog – For diagnostic purposes, initiating the High Res Log will capture all controller functionality down to the processor level. See the service manual for more information.

Tablet Mode – Actuate “on” to connect system to a tablet or smart phone. See pages 13-14 for instructions on using the Muncie App.

Connect Status – Displays the current state of the wireless connectivity. (Muncie Use Only)

Diagnostics Connect – This feature allows the user to connect to Muncie for Diagnostic Purposes. Simply connect to a Wi-Fi network, input the diagnostic key in the white box, and press Start button to connect to Muncie for Diagnostic help. Contact Muncie for the diagnostic Key.



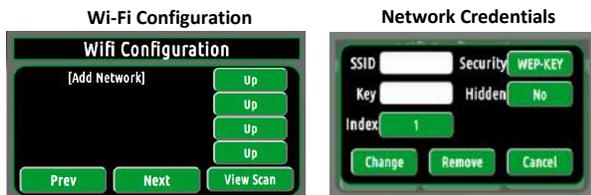
Connecting to a Wireless Network

Viewing Networks: This page will display the networks in range. The Next and Prev buttons can be used to scroll through the list of available networks.

To Connect to an Available Network:

1. Select the available network on the Wi-Fi Configuration screen.
2. The Network Credentials Screen should popup. The SSID field and Security type should auto-populate.
3. Select the white box next to “Key” to input the network passcode.
4. If applicable, the network can be prioritized using the index field.
5. Once entered, press change to connect to network or remove to disconnect from the network.

*Once connected, the network name will turn yellow on the Wi-Fi Configuration Page. This process can take up to a minute to connect.



Note: Networks in range may take a couple of minutes to show up after the panel is turned on.

To Manually Add Network – If the network is unavailable or hidden, the user may have to manually connect to the network.

1. Click [Add Network] on the Wi-Fi configuration screen and populate the appropriate fields.
2. If network is hidden, select this option on network credentials page.
3. Push “Change” to Save Entry and Connect.



CONFIGURATION MENU

Accessing the Configuration Menu

This menu is passcode protected to limit access to non-authorized personnel. It is recommended to change the passcode from the default value to limit access and prevent unintentional system adjustments.

Follow the steps below to enter the menu:

1. Using the touch screen, press the white box under Configuration Menu. A keyboard should appear to enter the passcode.



2. Using the on screen keyboard, enter the passcode. Toggle the Caps button to change the case and enter numerical values.

(Default Pass Code = 1)



3. Once the passcode has been entered, press the "OK" button. The keyboard will close.
4. The passcode should show in the menu below, press "OK" again to access the configuration menu.



System Information – Page 1

Truck ID: To change, select the truck ID box. The truck ID allows the user to keep the datalog information separate between trucks.

Flash Drive Status: Displays the status of the flash drive. To connect, insert a USB flash drive in the top USB port and push "USB DISCONNECTED" button.

Firmware Update: If instructed by Muncie, connect flash drive with the appropriate firmware files and hit the "Update Firmware" button to update.

Note – This process can take up to 10 minutes to complete. Do not shut off controller during this process.

Save and Exit: Click the "SAVE & EXIT" button when you are finished making adjustments. This will return you to the main operating screens.

Software Versions: Displays the current version of software installed (Muncie Use Only)



CONFIGURATION MENU

System Profile – Pg. 2

System Profile – The system profile contains all of the calibration settings, button mapping, and more. The user is able to download a profile to a flash drive or load a profile from a flash drive to mirror settings.

Flash Drive Status: This box indicates the status of the connected flash drive. Simply connect a flash drive in the top USB port and press the “USB DISCONNECTED” button. The flash drive may take up to 10 seconds to initiate.

Load Profile: The load profile button allows the user to transfer the truck profile from the flash drive to the spreader controller. (Upload)

Download Profile: The download profile button allows the user to transfer the truck profile from the controller to the flash drive.

Sync Profile: Whenever a new module is exchanged on the system, press “Sync Profile” to download to the truck profile to the new module.

Truck Profile Name: This number is generated by Muncie. The value is a “system number” that helps Muncie identify which components and software are included with the system.

Pass Code: Select this box to change the Configuration Menu Pass Code.

Flash Drive Status



Global Settings – Pg. 3

Pump Type: Select the appropriate pump type by toggling the button. Gear or Piston

PWM Freq G1: Muncie Use Only - The frequency of the electrical current to the valves can be tuned per output.

PWM Freq G2: Muncie Use Only - The frequency of the electrical current to the valves can be tuned per output.

Main Relief Pressure: Select to adjust the Main Relief Pressure. The system can be set to a maximum of 3,000 PSI. Deadhead the plow angle to view the main relief pressure.

Transducer: The pump and load pressures are displayed for the user to set the main relief.

Main Relief Ramp: A ramp time can be set for the main relief setting. This ramp time helps dampen the shock loads to the actuators.



CONFIGURATION MENU

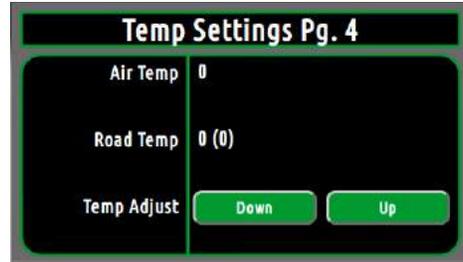
Temperature Settings – Pg. 4

Temperature Offset: This adjustment allows road temperature to be tuned if it is slightly off.

1. To check the accuracy of the road temperature, insert a cup of ice water under the IR sensor. The temperature should read 32.
2. If the temperature is off, use the up and down buttons to tune the temperature.

* The air temperature cannot be adjusted. Keep in mind that the air temperature is slow to adjust since it is a function of the sensor housing. Adjust the road temperature until the display reads 32 degrees.

*Keep in mind that the air temperature can be slow to adjust due to the sensor housing.



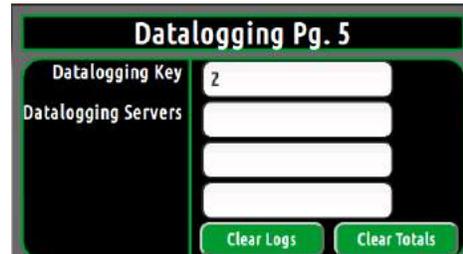
Datalogging – Pg. 5

This screen allows the user to setup the wireless downloading

1. The Spreader Panel must be connected to the same network as the server. (See Connecting to a Wi-Fi Network above for instructions)
2. Locate the IP address of the network. This can be located within the datalogging server desktop software.
3. Once the IP address has been located, enter it into one of the datalogging server Windows proceeded with an open port. Example: 192.168.1.1:80. Typically, port 80 is open for this type of traffic. Contact your IT department for further information.

Clear Logs: Press this button to clear the logs.

Clear Totals: Press this button to clear the totals.



Spreader – Pg. 6

Warning: The spreader motors will initiate when the speed settings are adjusted.

Auger Speeds: Select the Auger Speed “Min/Max” button to adjust the speeds. The min setting needs to be adjusted so that the auger is barely turning. The max setting is the maximum preferred auger speed.

Spinner Speeds: Select the Spinner Speed “Min/Max” button to adjust the speeds. The min setting needs to be adjusted so that the spinner is barely turning. The max setting is the maximum preferred spinner speed.

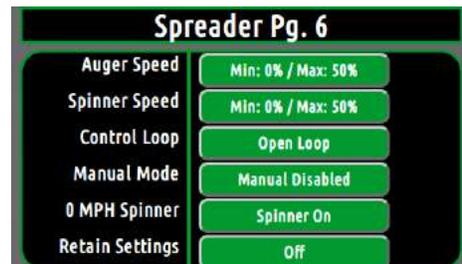
Control Loop: The Control Loop can be adjusted from open loop to closed loop by pressing the button. Closed loop requires that the auger has a feedback sensor installed. Open Loop doesn’t require a feedback sensor.

Manual Mode Lockout: Manual Mode can be enabled or disabled by toggling the push button. Disabling manual mode will prevent the operator from accessing this mode above 7 MPH.

0 MPH Spinner The 0 MPH Spinner determines if the Spinner operation continues when the truck comes to a complete stop. If it is set to “on,” it will remain spinning. If it is off, it will stop spinning when the truck stops.

Retain Settings: The retain settings button allows the system to retain the Auger, Liquid, and Spinner rates when the system is turned off.

Caution: This will cause the spreader controller to retain the settings after the controller has been powered off. Be aware that simply pressing the Spreader button “on” will actuate the hydraulic motors.



CONFIGURATION MENU

Spreader – Pg. 7

Blast Level - The Blast Level sets the auger speed when the blast button is pressed. This is adjustable from 0 – 100%

Blast Duration - The Blast Duration can be adjusted from 0-25 seconds.

Take Off Timer - Take-Off Timer is adjustable from 0-7 seconds. Turning this setting above 0 seconds will cause the auger to blast material for the set increment of time after the truck has accelerated from a stop.

Preset Mode (Range) – If range is selected, the user has the ability to set the Low and Hi auto rates. This will give the operator a range of auto mode settings (Lbs/Mile).

Preset Mode (Fixed) – If fixed is selected, the user has the ability to dial in the exact auto mode settings available to the operator. Up to six pre-wet rates are available. Therefore, the spreader rate can be limited to one or two settings if desired.

Spreader Pg. 7	
Blast Level	50%
Blast Duration	0.0 Sec
Take-Off Timer	0.0 Sec
Preset Mode	Range
Preset Low	0 Lbs/Mi
Preset High	250 Lbs/Mi

Spreader Presets Pg. 7a	
Fixed Preset 1	0 Lbs/Mi
Fixed Preset 2	0 Lbs/Mi
Fixed Preset 3	0 Lbs/Mi
Fixed Preset 4	0 Lbs/Mi
Fixed Preset 5	0 Lbs/Mi
Fixed Preset 6	0 Lbs/Mi

Spreader Calibration – Pg. 8

Prod Name: The “Prod Name” allows the user to change the text for the primary spreader material. Select box to change.

Cal (OL) – Calibration Value (Open Loop) – This value is mathematically generated whenever a spreader calibration has been performed. This value can be plugged into other trucks with identical hydraulic setups to prevent having to do multiple calibrations.

Cal (CL) – Calibration Value (Closed Loop) – This value is automatically generated whenever a spreader calibration has been performed. However, it will only populate if a feedback sensor is installed on the auger. Again, this value can be plugged into different trucks to prevent having to do multiple calibrations.

Ground Speed Calibration

Option 1– The ground speed can be set two different ways. First, if the pulses per mile are known for the chassis, simply input the value in the Ground Speed box. (Allison Transmission are typically around 32000 Pulses Per Mile)

Option 2 – Drive the truck to 20 MPH and simultaneously press the “Calibrate” button.

Spreader Calibration Pg. 8	
Prod Name	MAIN
Cal (OL)	20
Cal (CL)	20
Spreader Cal	Calibrate
Ground Speed	1
Ground Speed Cal	Calibrate 00 MPH



CONFIGURATION MENU

Spreader Calibration – Pg. 8

Purpose: The spreader calibration is recommend for Auto Mode Accuracy. It allows the controller to accurately discharge material at the rate shown and accurately log how much material is discharged.

1. Load the spreader with the primary material and weigh the truck. Before beginning the unloading process, increase and hold the engine at 1,000 RPM.
2. Press the Spreader Cal button on page 8 to begin the spreader calibration process.
3. Use the up and down buttons to select a drive current. We recommend setting this between the min and max auger settings for best accuracy. Press Start to begin the offloading process.
4. Allow the spreader to unload for 5-7 minutes. During the unloading process, hit "Stop" to pause and "Resume" to continue the offloading process.
5. When the offloading process is complete:
 - a. Press the "stop" button
 - b. Reweigh the truck and calculate the amount of material dumped.
 - c. Use the up and down buttons to enter the weight of material dumped
 - d. Press the Save button.

***The recall button will recall the offloading time and % drive of the last session. If the process gets interrupted or the truck shuts off, simply press these buttons to recall these values.**

Prod Name	MAIN
Cal (OL)	20
Cal (CL)	20
Spreader Cal	Calibrate
Ground Speed	1
Ground Speed Cal	Calibrate 00 MPH

Run Spreader for desired ammount of time then hit the stop button below and enter the weight dumped.

Start Recall

Down 0% Drive Up

Ok Cancel

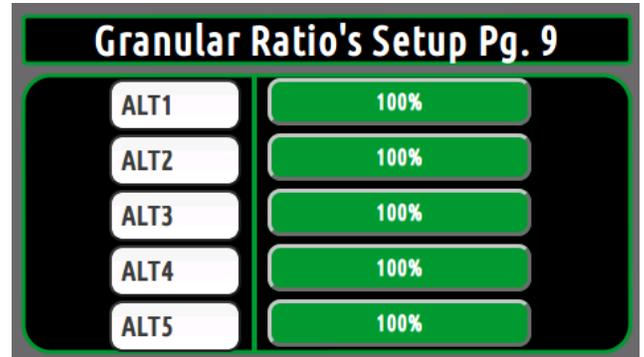


CONFIGURATION MENU

Granular Ratio Setup – Pg. 9

Product Name – Select the white boxes to change the alternate product names.

Granular Ratios – If multiple products are used, setting product ratios will increase the accuracy of the material spread. For example, if the user spreads sand as an alternate product, he could input the material name in the Alt 1 Box. In addition, he could input the product ratio to know the difference in weights of the materials. To calculate the ratio: Take a 5 Gallon Bucket of Alternate Product's Weight and Divide by a 5 Gallon Bucket of Salt Weight: (52 Lbs/45 Lbs) = 1.15 or 115%



Pre-Wet – Pg. 10

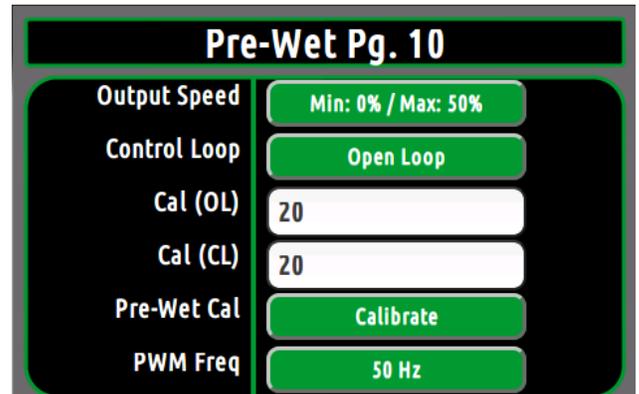
Output Speed – Select the button to adjust the min and max pre-wet speeds. Next, toggle the up and down buttons to adjust the settings.

Control Loop - The “Control Loop” can be adjusted from open to closed loop by pressing the button. Closed loop requires a feedback sensor (turbine).

Cal (OL) – Open Loop Calibration Value - The open loop pre-wet calibration is displayed in this box. This value is automatically generated when a calibration is performed. This value can be input into identical setups to prevent having to perform multiple calibrations.

Cal (CL) – Closed Loop Calibration Value - The closed loop pre-wet calibration is displayed in this box. This value is automatically generated when a calibration is performed. If the pulses per gallon are known, directly input the value into this field.

PWM Frequency – The “PWM Frequency” can be adjusted for electrically driven pumps and hydraulically driven pumps. 50 hZ is recommended for electric pumps, while 200 hZ is recommended for hydraulically driven pumps.

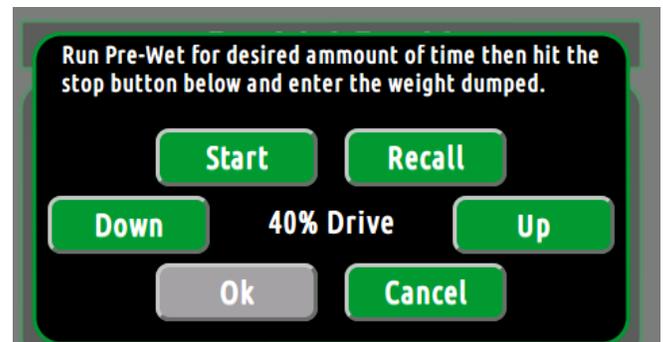


Pre-Wet Calibration Process

Pre-Wet Cal – Performing a pre-wet calibration increases the accuracy of the pre-wet output.

1. Place a 5 gallon bucket or other known volume container under the pre-wet nozzle.
2. Press the “Calibrate Button” to initiate the process.
3. Use the up and down buttons to select a drive current. We recommend setting this between the min and max pre-wet settings for best accuracy. Press Start to begin the calibration process.
4. Allow the pre-wet to spray until the 5 gallons bucket is full. During the process, hit “Stop” to pause and “Resume” to continue.
5. When the 5 Gallon Bucket is full:
 - a. Press the “stop” button
 - b. Use the up and down buttons to enter 5 gallons
 - c. Press the Save button.

***The recall button will recall the offloading time and % drive of the last session. If the process gets interrupted or the truck shuts off, simply press these buttons to recall these values.**



CONFIGURATION MENU

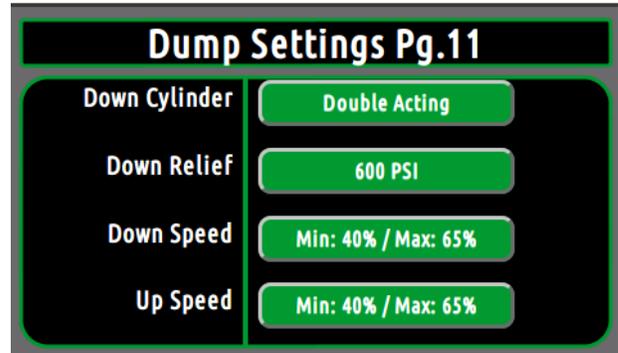
Dump Settings – Pg. 11

Down Cylinder – This setting determines the cylinder type.

Down Relief – Adjust setting to control the downside relief pressure. Keep in mind that the downside relief is disabled when the cylinder is set for Single Acting.

Down Speed – Adjust setting to control the down speed of the Dump. The Min % is used to control the minimum cylinder speed when using the joystick. The Max % controls the cylinder speed when the joystick is fully deflected and when the cylinder panel buttons are pressed.

Up Speed – Adjust this setting to control the up speed of the Dump. The Min % is used to control the minimum cylinder speed when using the joystick. The Max % controls the cylinder speed when the joystick is fully deflected and when the cylinder panel buttons are pressed.



Plow Settings – Pg. 12

Down Cylinder – This setting determines the cylinder type.

Down Float – Enable if the cylinder is SA. This enables plow float.

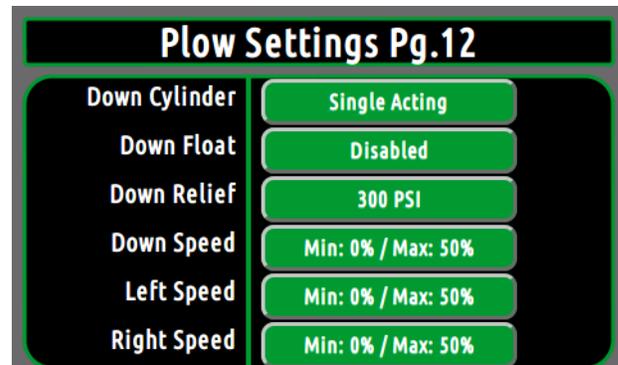
Down Relief – Adjust this setting to control the downside relief pressure. Keep in mind that the downside relief is disabled when the cylinder is set for Single Acting.

Down Speed – Adjust this setting to control the down speed of the plow. The Min % allows the deadband to be removed from the joystick operation. The Min % doesn't effect the cylinder panel buttons. The Max % controls the cylinder speed when the joystick is fully deflected. The max speeds also control the push button speeds.

Left Speed – Adjust this setting to control the left speed of the plow. The Min % allows the deadband to be removed from the joystick operation. The Min % doesn't effect the cylinder panel pushbuttons. The Max % controls the cylinder speed when the joystick is fully deflected. The max speeds also control the push button speeds.

Right Speed – Adjust this setting to control the right speed of the plow. The Min % allows the deadband to be removed from the joystick operation. The Min % doesn't effect the cylinder panel pushbuttons. The Max % controls the cylinder speed when the joystick is fully deflected. The max speeds also control the push button speeds.

Up Speed – Adjust this setting to control the up speed of the plow. The Min % allows the deadband to be removed from the joystick operation. The Min % doesn't effect the cylinder panel pushbuttons. The Max % controls the cylinder speed when the joystick is fully deflected. The max speeds also control the push button speeds.



*Keep in mind that the screens are configurable for the specific application. For example, if Wings or Scrapers are being utilized, multiple screens will be added to adjust the additional functionality.



TABLET MODE

Through a Wi-Fi connection broadcasted from the Advantage+ controller, users are able to connect their tablet or smart phone to observe the system functionality in real time, adjust system parameters, and more.

Downloading the App (Android Device)

1. **With the Tablet – Enable non-Market apps:**
Settings -> Security -> Device Administration:
Select: Unknown Sources -> Allow Installation of non-Market Apps



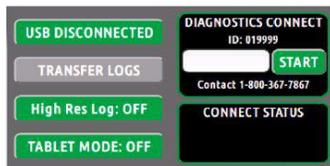
2. Go to the following URL to download the App:
<https://riversidemfgutilities.com/src/Advantage+.apk>

3. Allow the app to install:



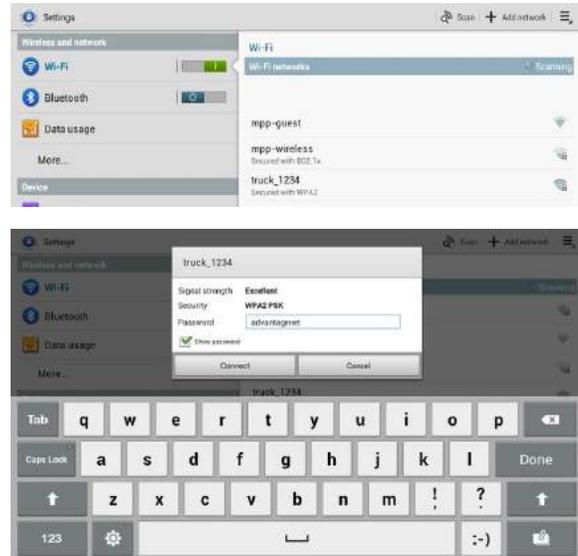
Using the App:

1. **Enable Tablet Mode on Controller** - On the spreader controller, navigate to the following screen and toggle tablet mode “on” to begin broadcasting the Wi-Fi signal from the controller.



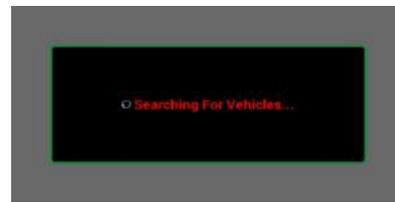
2. **Connecting to the controller’s network** - With the tablet (or smartphone) – Go to Settings -> Wi-Fi - Connect to the “Truck Network” proceeded by the truck number (Ex. Truck_1234). You will be prompted to enter a password, which is “advantagenet”

*Network Password is (advantagenet)

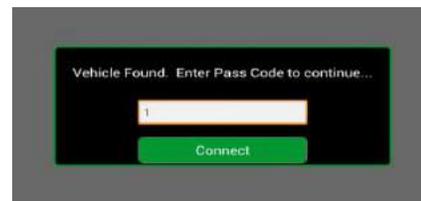


3. **Launch App** – After connected to the controllers Wi-Fi network, launch the Muncie App from the controller.

The following screen will show if the controller is NOT in Tablet Mode or connected to the appropriate Wi-Fi network.



The Following screen should show if the controller IS in tablet mode and connected to the truck network:



4. **Enter the pass code and press connect**

*The password will be the same as the controller’s password. (default password is “1” unless changed).

**Repeat steps 1-3 if the following screen does not show.



TABLET MODE

Using App:

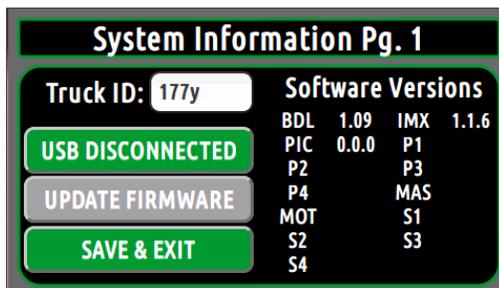
1. Swipe left or right to change pages
2. **Entering the Configuration menu:** To enter the configuration menu, go to the following screen and hit the OK button:



3. **Adjusting Settings** - To adjust spreader speeds or perform a spreader calibration, the spreader control must also be in the configuration menu.

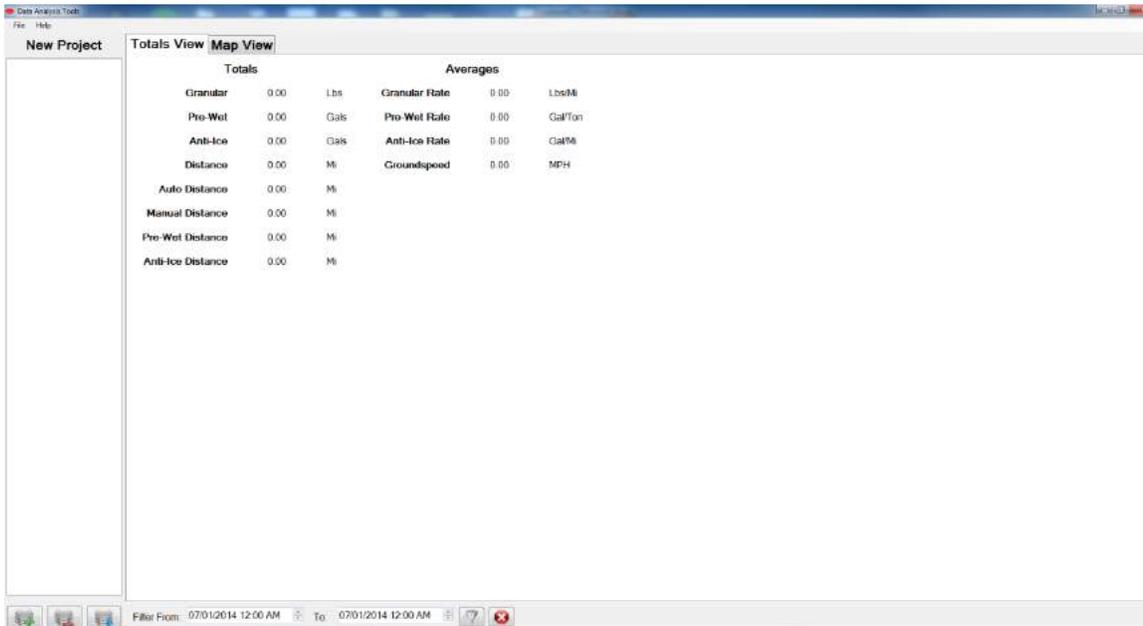
 Be aware that adjusting spreader settings will engage the auger, spinner, or pre-wet motors.

4. Exiting the Configuration Menu – Navigate to the following screen and press “Save & Exit”.



DATA ANALYSIS TOOLS - SETTINGS

1. Launch the Program by going to Start/All Programs/Muncie Power/Data Analysis Tools
2. The following screen will be displayed:

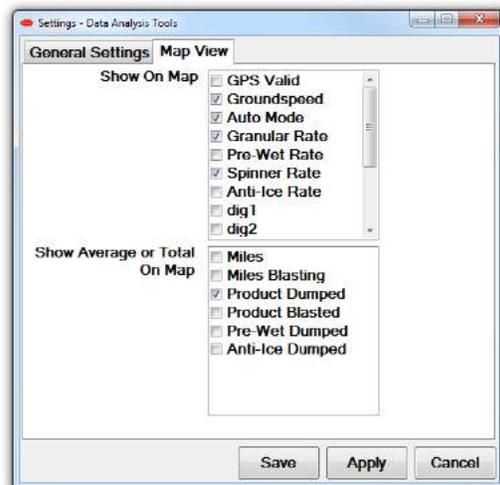
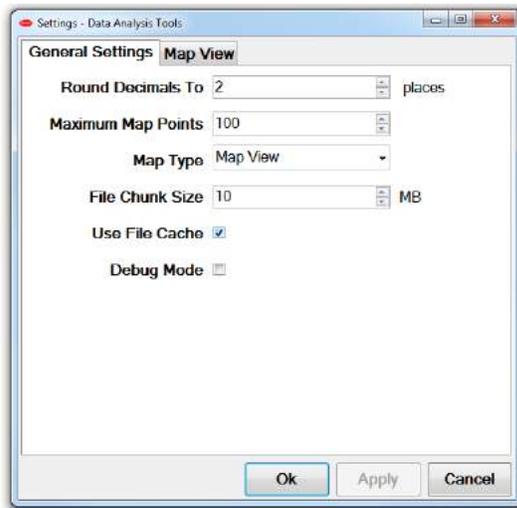


3. (Initial Startup) - Set the Program Settings:

- a. Go to File -> Settings
- b. General Setting Tab allows the user to adjust Decimals Place, Maximum Map Point, Map Type, and Maximum Cached File Size (file chunk size).

Note: Increasing the decimals and maximum map points may cause the program to run slower. Selecting the use file cashe option will cause the files to read slower into the program but should increase overall performance once they are loaded.

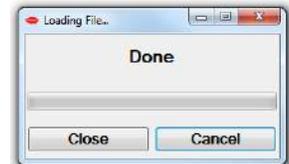
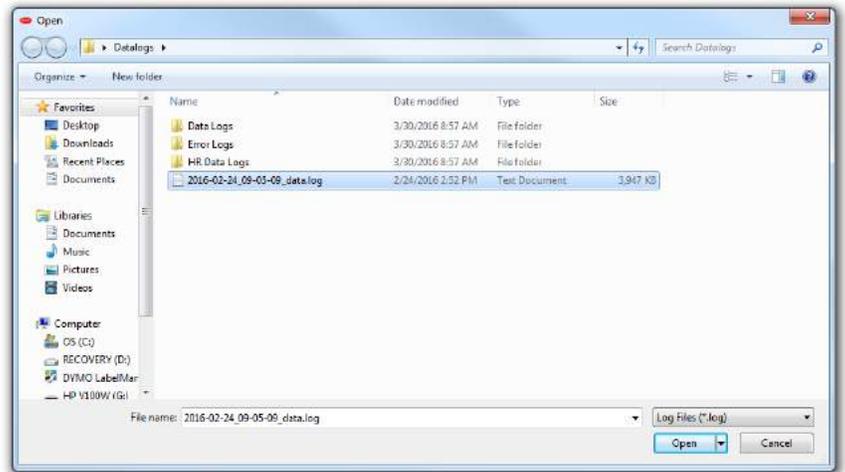
- c. Map View Tab allows the user to select which type of data will be displayed on the map view.
- d. Once completed with both settings tabs, click "Apply" and "Save" buttons.



DATA ANALYSIS TOOLS - IMPORTING FILES

Importing from Flash Drive

1. To import a file, select the “Add Truck File” button at the bottom of the program.
2. Access the datalog file by navigating to the files location on the flash drive. Once located, select the file.
3. Press the “Open” button to add the file to the program.
4. After pressing the “Open” button a pop-up box should appear with the current progress of loading the file. When this is complete, press the “Close” button.
5. After the file is loaded, the file should show up in the tab on the right for New Project with the truck number.
6. To add files from a second truck or add multiple files from the same truck, repeat steps 1-5.

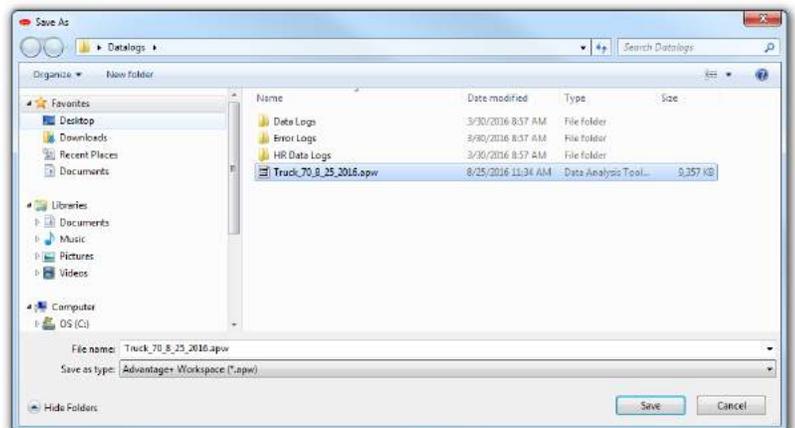


Importing E-mailed Files

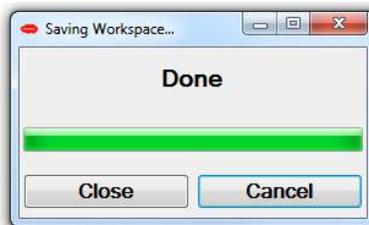
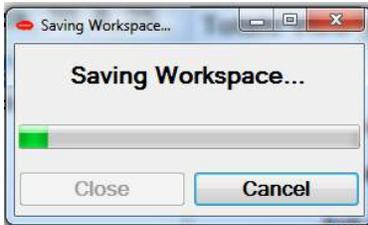
1. For information on setting up e-mail file transfer, see section titled **Data Analysis Tool – E-mail File Transfer**.
2. After the files are successfully received via e-mail, save the files to a location on your computer. To do this with Microsoft Outlook, right click the attachment and select “Save As”. It is recommended that each truck have a separate folder to help reduce any confusion with the files.
3. After the files are located on your local computer, follow steps 1-5 from Importing from Flash Drive.

Saving Project

1. This allows all current files to be saved to a single .apw file. This allows the creation of accumulative totals for truck/trucks.
2. To save the current file(s) to a project select File -> Save Project As.

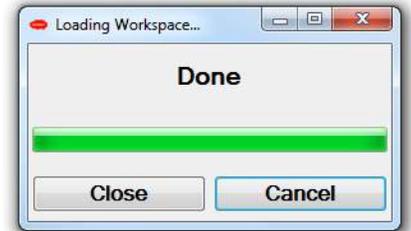
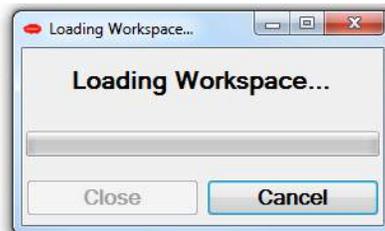
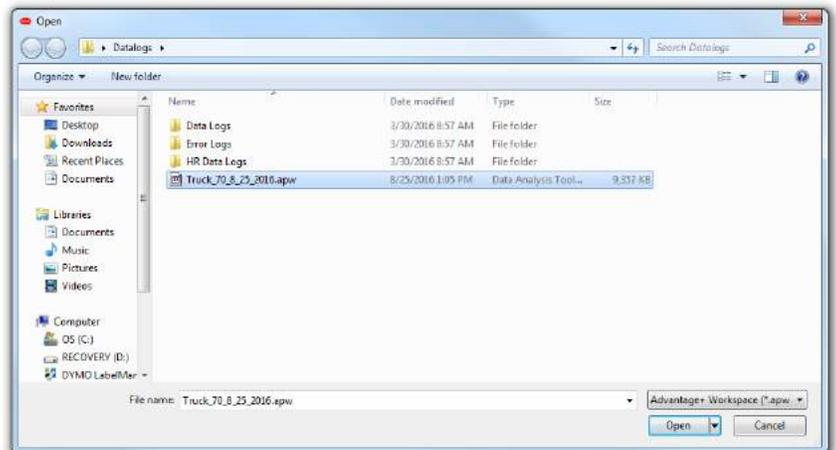


3. Select the folder that you want to save the file to and select a descriptive name for the file.
4. Press the “Save” button. This will bring up a pop-up window showing the progress of the save. Once the save is complete press the “Close” button.



Loading Project

1. Previously saved files can be loaded back into the program by using the load project option. This allows the addition of more files to previously saved projects.
2. To load a project, select File -> Load Profile
3. Select the file you wish to load and press the “Open” button. This will bring up a pop-up window showing the load progress. Once the load is complete press the “Close” button.



Removing a Source File

1. To remove a file from the list, select it from the New Project frame and click the “Remove Truck Data” button at the bottom of the screen.

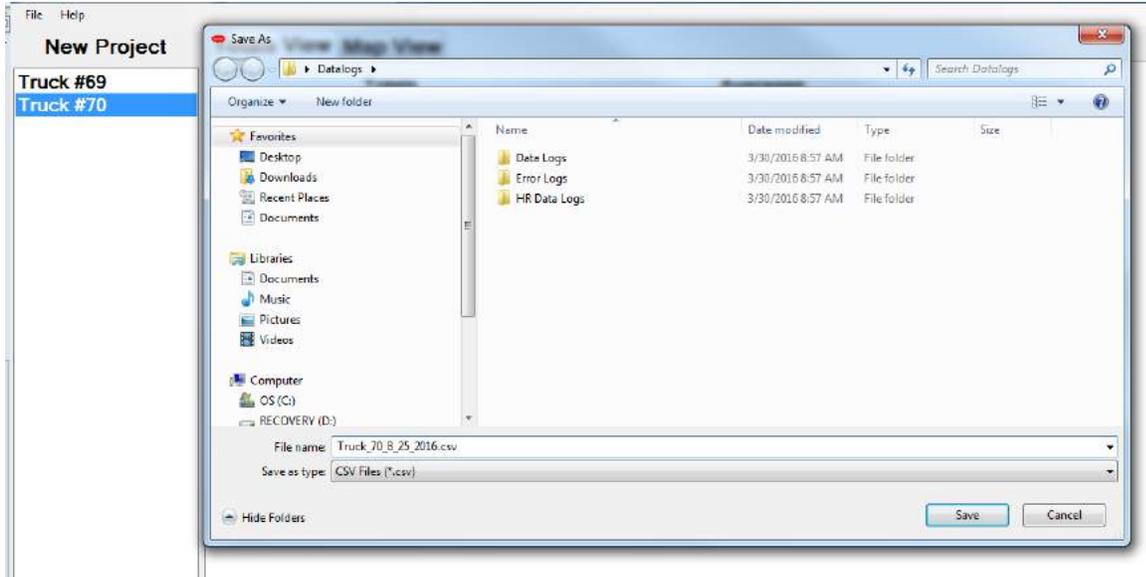


Export Truck Data

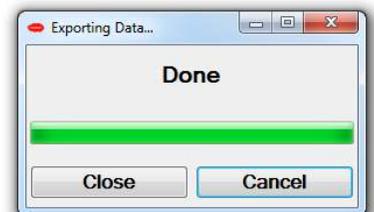
.U



1. Current projects can be exported to a file. This will export the current project to a .csv file type that can be used on Excel or similar programs.



2. To export a file, click the “Export Truck Data” button at the bottom of the screen.
3. This will bring up a dialog box to save the file.
4. Select the folder where you want to save the file and put in a descriptive name for the file. It is recommended to integrate the truck number and current date into the designated file name. An example of a good name would be: (Truck_70_8_25_2016).
5. After entering the file name press the “Save” button to save the file.
6. After pressing the “Save” button a pop-up window will show up displaying the progress of exporting the file. When this is complete, press the “Close” button.



DATA ANALYSIS TOOLS - BASIC OPERATION

Totals View

The totals view shows the totals information for the truck selected. Only one truck can be viewed at a time. To change between trucks, select the truck number you wish to view from the panel on the left. The time range can be filtered to view specific time ranges. See the **Filter Options** section on using the filter for more details on the filtering process.

The screenshot displays the 'Totals View' for 'Truck #70'. The interface includes a truck selection list on the left, a main data table, and a filter bar at the bottom.

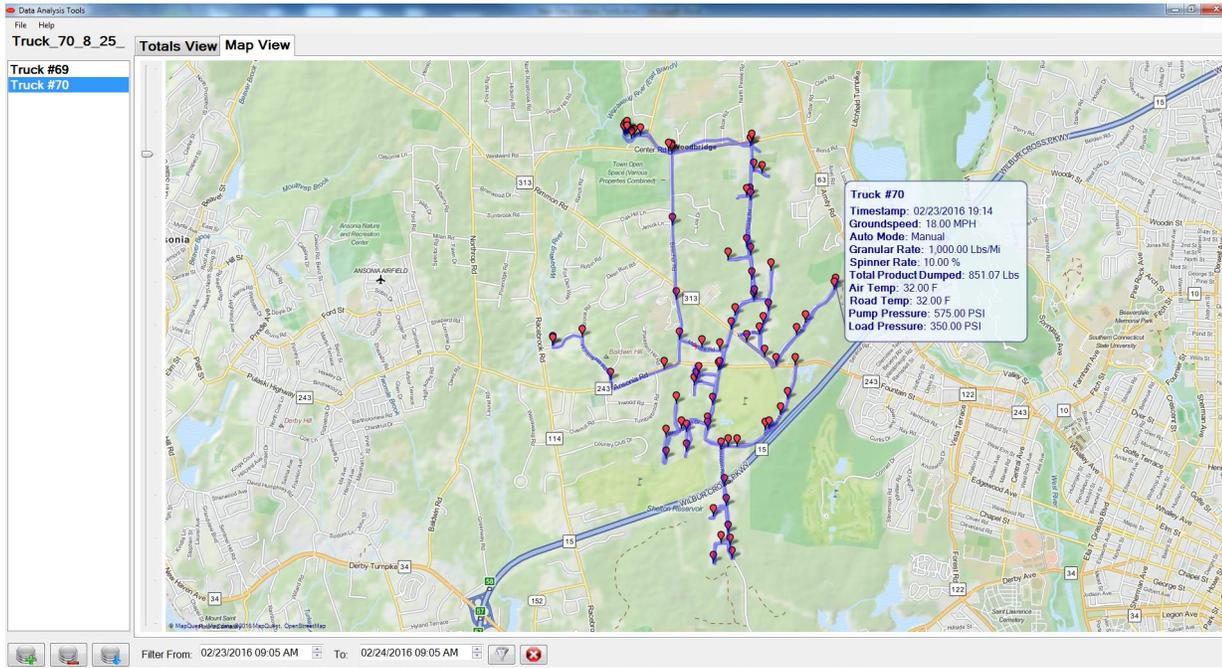
Totals		Averages		
Granular	99,526.82 Lbs	Granular Rate	52.43 Lbs/Mi	
Pre-Wet	0.00 Gals	Pre-Wet Rate	0.00 Gal/Ton	
Anti-Ice	0.00 Gals	Anti-Ice Rate	0.00 Gal/Mi	
Distance	1,878.16 Mi	Groundspeed	4.72 MPH	
Auto Distance	0.00 Mi			
Manual Distance	1,878.16 Mi			
Pre-Wet Distance	0.00 Mi			
Anti-Ice Distance	0.00 Mi			

Filter From: 11/17/2015 01:51 PM To: 02/24/2016 09:05 AM



Map View

The map view is used in conjunction with the GPS antenna supplied with the system to plot the trucks' route. Once a log file has been added into the program, clicking on the map view tab will display this information on the map. To use the map view, the computer being used must be connected to the internet. When in the map view, clicking a data point will bring up the information specified in the setting menu for that point.



Filter Options

1. The filter allows you to narrow the data to a specific time range. The filter option affects both the total view and map view.
2. By default the filter is set to the minimum and maximum limits of the file.



3. To change the minimum point adjust the time and date on the "From" selection.
4. To change the maximum set point adjust the time and date of the "To" selection.
5. After the desired changes have been made, press the "Apply Current Filter" button.
6. To remove the filter to see all available date in the file, press the "Clear Filter" button.



DATALOGGING E-MAIL

The E-mail datalogging feature allows the Advantage+ controller to automatically transmit datalogging files through a Wi-Fi connection. The files are sent to a designated e-mail address. This process is triggered anytime the controller connects to a wireless network.

Setting up E-mail Address

1. Turn the controller on and enter the configuration menu.
2. Navigate to Datalogging Pg. 4.
3. Press the white box next to Log E-Mail and enter the E-mail address the datalogging files need to be sent to.

*Note: The system needs to connect to a wireless network with internet access to send the log files. See the section on **Connecting to a Wireless Network** to learn how to go through the set up procedure.*

Datalogging Pg. 4	
Time Interval	120 SEC
Log Clear	AUTO
Log E-Mail	insert_name@email.gov

4. The datalog files are sent out 10 times a day in two hour intervals. Any log files with the same E-mail address will be sent at the same time. Files will come from noreply@munciepower.com. This is an unmonitored address so do not send E-mail replies to it.
5. To download the files from the E-mail with Outlook, right click on the attachment and select the "Save As" option and save the file to the desired location.



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