



MP² ADVANTAGE SYSTEM DATALOGGER

FEATURES • INSTALLATION • CALIBRATION • TROUBLESHOOTING



INSTALLATION INSTRUCTIONS
AND OWNER'S MANUAL

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DATALOGGER FEATURES

Stores data directly to USB flash drive

- Simple means to transport data from the truck to the office
- A great compromise between the costliness of wireless downloading and the awkwardness of downloading via laptop connections
- Memory capacity of flash drive exceeds a decade of datalogging requirements

Can be added to the MP² Advantage System anytime

Outputs to AVL/GPS systems for real-time data transmission

Uses Muncie Chassis Network technology

- Data is captured from the MP² Advantage System directly through the connections to the vehicle electrical system.
- Very simple and fast installation
- Only power and ground connections required

Comes with complimentary datalogging reporting software

- Quick and easy way to track the amount of material discharged, distance traveled, pre-wetting usage, spreader performance in auto mode vs. manual mode, and more
- Data is easily compiled for either an individual truck or an entire fleet.
- Software runs in Microsoft Excel – this allows charts and graphs to easily be created with imported data.

DATALOGGER INSTALLATION

1. Mount the Datalogger in an accessible place in the cab – (Under or behind the seat, back wall of cab, etc.)
2. Locate the 10 ft. wire harness provided with the datalogger.
3. Connect the 3 leads of the wire harness to their designated locations (Shown Below). The Red lead should be fused at 5 Amps.
4. Plug the male 3 pin connector into the female 3 pin connector.

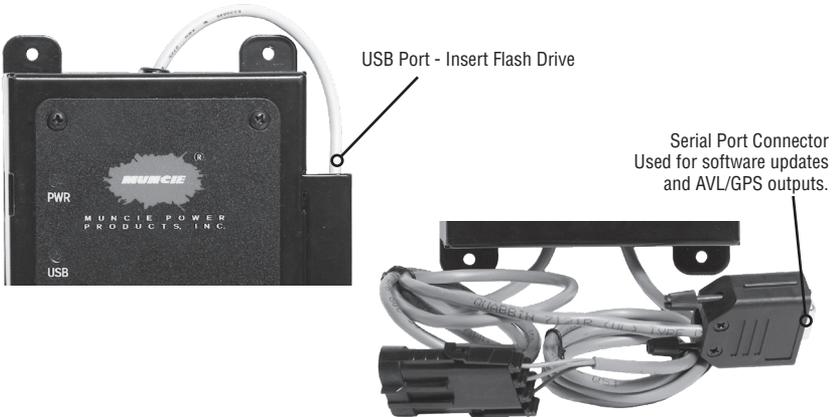
Black wire (Ground)
Connect where MP² Control
Panel is grounded.

Green wire (Ignition 12VDC)
Connect where MP² Control
Panel picks up power.



Red wire (Constant 12VDC)
Connect directly to positive
(+) terminal of battery.

5. Insert a flash drive into the USB port on the datalogger.
6. A speedometer input must be connected to the MP² Advantage System before the datalogger will work. Reference the MP² Advantage System manual on more information regarding the speedometer input wire.



ENTERING THE DATALOGGER CALIBRATION MENU

Before operating the MP² Advantage System with a datalogger, calibrations need to be made to accurately record data. There are two different calibration menus that can be accessed using the control panel.

Reference the MP² Advantage System manual for instructions on entering the main system calibration menu.

The following two items must be adjusted in the main system calibration menu. If these calibrations have been completed before installing a datalogger, they do not have to be repeated.

1. Speedometer matching – tells the datalogger the speed and the distance traveled.
2. Weight Dump Calibration – tells the datalogger how much material is being discharged.

Follow the steps below to access the datalogger's calibration menu.

1. Simultaneously press and hold the Auger and Spinner knobs for 2 seconds until CA appears in the display.

Remember that the Flash Drive must be inserted when making any changes to the datalogger's calibration settings.

2. Once the control panel powers up in the Calibration Adjustment mode (CA), enter the datalogging adjustment pass code using the Liquid and Spinner knobs. Press the Spinner knob to enter the pass code.

The datalogging adjustment pass code will be 5 + the system pass code.

If the wrong value is entered, the screen will go blank and the process will have to be repeated with the correct pass code. If the main system calibration pass code is **0001**, the datalogging pass code will be **0006**.

3. Rotate the Auger knob to scroll through the menu lines. Rotate the spinner knob and the liquid knob to change a setting. Once the desired setting has been established, press the spinner knob (a verification tone should be heard when the spinner knob is pressed). If a verification tone is not heard try recycling power to the MP² Advantage System and reinserting the flash drive.
4. To exit the calibration menu, find the line listed as E H I t, and press the spinner knob.

DATALOGGER CALIBRATION MENU



DISPLAY	DESCRIPTION
Yr	Year YY
t3	Time (Military) HH:MM
dt	Date MO:DY
t1	Truck ID-1 XXXXyyyy (First 4 Digits)
t2	Truck ID-2 xxxxYYYY (Last 4 Digits)
3H Sd	Max Spreading Speed (Future Dev.)
3Et	Metric Units (0=English, 1=Metric)
dU	Software Version (Non-adjustable)
EH It	Exit and Save Datalogger Config.

} Up to 8 total digits allocated for the truck ID.

MP² Advantage System Datalogging Rules

- A truck I.D. other than 0 must be entered before the datalogger will begin logging data.
- The datalogger only records data if the truck is moving – when the truck is stationary and off-loading material data will not be recorded.
- The MP² Advantage System must be connected to a vehicle speedometer signal and calibrated. This allows the datalogger to record the vehicle's speed and distance.
- A weight dump calibration must be performed so that the datalogger can accurately measure the quantity of material that is being discharged.
- Only use the provided flash drive with the datalogger. Only certain flash drives are compatible with the MP² Advantage System Datalogger.

DATALOGGER LIGHT DESIGNATIONS

PWR – This L.E.D. indicates the vehicle ignition is powered on.

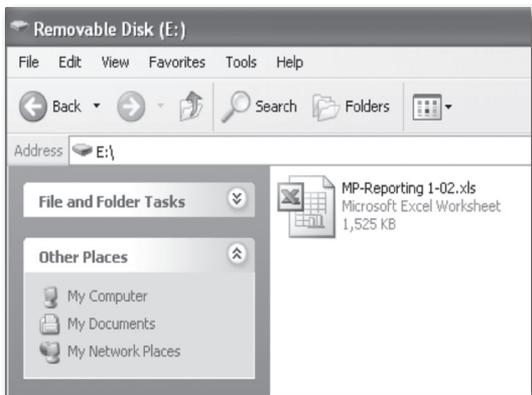
USB – This L.E.D. indicates a flash drive is currently inserted into the USB port of the MP² Advantage System Datalogger. When this L.E.D. is flashing, this indicates that the datalogger is writing to the flash drive.

CPU – This L.E.D. indicates the processor is functioning inside of the datalogger. The light will alternate between flashing and remaining constantly on.

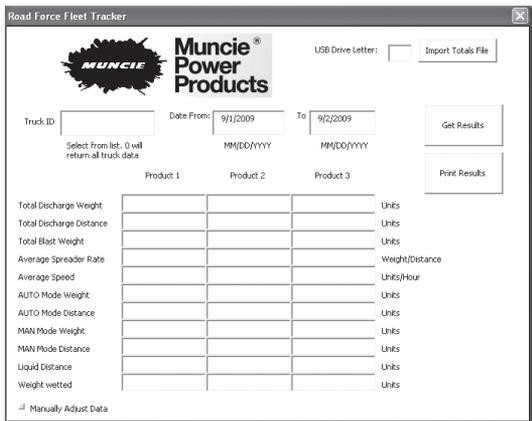


INSTALLING REPORTING SOFTWARE

1. Each flash drive supplied with the datalogger has a copy of the MP² Advantage System Datalogging Reporting Software on it. To install the software, insert the flash drive into a USB port in a computer.
2. Click on Start
3. Click My Computer
4. Double click or open the flash drive to view its content.
5. Drag the MP² Advantage System Datalogging Reporting software onto your desktop.
6. Double click on the program to open it.
7. After Double clicking on the program, the software should load and appear like the following:



If the software loads as a blank spreadsheet, try lowering the security settings. Instructions for lowering the security settings vary due to different versions of Microsoft Excel.



For Microsoft Office 2003 – Open Excel – click on Tools – Click on Options – Select the Security Tab – Click on Macro Security – Select Low

For Microsoft Office 2007 – Open the MP² Advantage System Reporting Software – Click on the Options button beside the security message at the top left corner of the page – Click Enable Content under the Macro Settings.

DOWNLOADING DATA

To download data from a flash drive:

1. Plug the flash drive into a USB port on your computer.
2. Take note of the USB drive letter.
 - To find the USB drive letter, click on “My Computer” and find the flash drive.
 - For example, the USB drive letter here is E. 
3. Next, open up the MP² Advantage System datalogging reporting software.
4. Insert the USB drive letter into the text box shown below and push the Import Totals File Button.

Road Force Fleet Tracker

 **Muncie[®] Power Products**

USB Drive Letter:

Truck ID: Date From: To:

Select from list. 0 will return all truck data. MM/DD/YYYY MM/DD/YYYY

	Product 1	Product 2	Product 3	
Total Discharge Weight	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units
Total Discharge Distance	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units
Total Blast Weight	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units
Average Spreader Rate	<input type="text"/>	<input type="text"/>	<input type="text"/>	Weight/Distance
Average Speed	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units/Hour
AUTO Mode Weight	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units
AUTO Mode Distance	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units
MAN Mode Weight	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units
MAN Mode Distance	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units
Liquid Distance	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units
Weight wetted	<input type="text"/>	<input type="text"/>	<input type="text"/>	Units

Manually Adjust Data

5. If the data has been loaded successfully, you should see the truck number appear in the Truck I.D. box.

COMPILING IMPORTED DATA

Data can be compiled either for an individual truck or for an entire fleet.

To compile data for the entire fleet:

1. Select 0 for the truck I.D.
2. Enter the desired date range
3. Click on the “Get Results” button

To compile data for an individual truck:

1. Select the desired truck number
2. Enter a desired date range
3. Click on the “Get Results” button

To Clear All Data Out of the Excel File:

1. Click on the Manually Adjust Data Box in the bottom left corner of the reporting software window.
2. Delete all of the data in all four of the attached spread sheets.
3. Click Save when you are finished deleting all of the data.

Road Force Fleet Tracker

Muncie[®] Power Products

USB Drive Letter:

Truck ID:

Select from list. 0 will return all truck data

Date From: To:
MM/DD/YYYY MM/DD/YYYY

	Product 1	Product 2	Product 3	
Total Discharge Weight	246	0	0	Units
Total Discharge Distance	3	0	0	Units
Total Blast Weight	0	0	0	Units
Average Spreader Rate	82.0	0.0	0.0	Weight/Distance
Average Speed	20.0	0.0	0.0	Units/Hour
AUTO Mode Weight	248	0	0	Units
AUTO Mode Distance	1	0	0	Units
MAN Mode Weight	0	0	0	Units
MAN Mode Distance	2	0	0	Units
Liquid Distance	0	0	0	Units
Weight wetted	0	0	0	Units

Manually Adjust Data

EXPLANATION OF DATA

Auto Mode Distance

The distance traveled while spreading in auto mode.

Auto Mode Weight

The weight of material discharged in auto mode.

Average Speed

The average speed of the vehicle while the spreader was active.

Average Spreader Rate

Average pounds discharged per mile while spreading.

Liquid Distance

The distance traveled while the pre-wetting system was active.

Man Mode Distance

The distance traveled while spreading in manual mode.

Man Mode Weight

The weight of material discharged in manual mode.

Total Blast Weight

The weight of material that was discharged in blast mode.

Total Discharge Distance

The total distance that was traveled while the spreader system was on.

Total Discharge Weight

The total weight discharged in auto mode, manual mode, and blast mode.

Weight Wetted

The weight of material the pre-wetting liquid was applied to.

TROUBLESHOOTING

SYMPTOMS	SOLUTION
Datalogger not powering on with the rest of system. (The lights on the datalogger will not turn on)	Check Electrical Connections.

TROUBLESHOOTING CONT.

SYMPTOMS	SOLUTION
<p>Datalogger isn't recording data</p>	<p>The green wire must be connected to an ignition hot, the red wire must be connected to a constant 12VDC power source (Directly to battery), and the black wire must be connected to a ground.</p> <p>Check the truck number in the datalogger calibration mode: the truck number must be something other than 000000 to record data.</p> <p>Check to see if the MP² Advantage System is receiving a speedometer signal. The datalogger will not record the spreader discharge if the vehicle is not moving. If the spreader system operates in Auto Mode correctly, this is not an issue.</p> <p>Make sure datalogger is using the provided flash drive from MPP.</p>
<p>Data is not accurate (distance traveled, Auto mode weight discharged)</p> <p>Data is not accurate (manual mode weight discharged)</p>	<p>In the main system calibration mode, make sure that the speedometer is properly calibrated to the controller.</p> <p>In the main system calibration mode, make sure that a weight dump calibration has been performed. Recording data will not be accurate in manual mode without performing a weight dump calibration.</p>
<p>Datalogging settings are not being saved</p>	<p>Try reinserting flash drive into USB port on datalogger. Try to recycle power to the MP² Advantage System.</p>



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