AWM STARTER INTERFACE & SOFTWARE USER INSTRUCTIONS





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Description:

The 86056 Starter Interface provides a computer connection for up to 15 80830, 86060 or 86061 activity wheel counters. The 86056 connects to the counters through 6 pin modular cables and to the computer through a serial communications port. The 86056 has the ability to connect with 86057 Expander Interfaces to handle an additional 15 counters per expander interface. Up to 7 86057 Expander Interfaces can be connected to the 86056 to handle a maximum of 120 counters. The 86056 includes a software program to download the information from the counters. **Warning!** Do not connect two 86056 starter interfaces together.

Specifications:

Power: 12 VDC Supply

Number of counters: 15

External Interface: RS-232C interface to computer

19200 baud, no parity, 8 data bits, 1 stop bit



Operating Instructions:

- 1. Connect the 80830, 86060 or 86061 counters to the 86056 modular jacks using the 6 pin modular cables. It is recommended to connect the counters in sequential jacks beginning with one. This will allow the software to avoid delays in reading the counter information.
- 2. The jack that the counters are connected to defines the address for the counter in the software.
- 3. Connect the 9 pin serial cable to comm port 1 or comm port 2.
- 4. Connect the plug from the power supply to the 86056 power jack and plug the supply into the wall.
- 5. After all of the physical connections are made, turn on the 86056 power.
- 6. When powered on, the 86056 provides power to all of the counters. Therefore, the 86056 should be left on even if the counters are battery powered.

Warning: The 86056 must remain powered on by the external power supply while any counter is connected. The 86056 will steal power from the counter batteries if the 86056 is not being powered by the external power supply.

AWM Software Instructions:

Communication Setup:

The AWM Software will automatically detect what Comm port the interface is connected to. If this feature fails, follow the on-screen instructions.

Automatic Download:

Automatic Download allows the user to automatically download information from either all of the counters present or selected counters. The information is collected at defined intervals for a defined length of time. Download intervals are accurate up to one-eighteenth of a second for every download. Typically this means the system accumulate a late download time of 1 second about every 20-60 downloads.

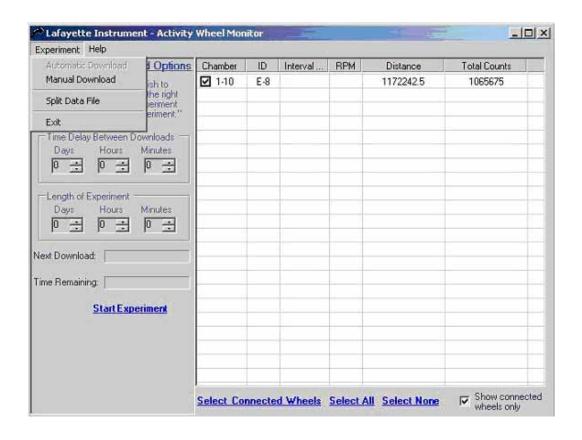
The results of the experiment will be logged in a .csv file, which can be directly viewed using Microsoft Excel. If the program should fail the data is backed up as "tempDump.txt" file located in the program directory. The default program directory is: "C:\Program Files\Lafayette Instrument\Activity Wheel Software"

When an automatic download is in progress, you may not do the following things:

- Power off or disconnect a wheel that is connected to an interface communicating with the AWM software
- Connect additional counters to a interface communicating with the AWM software

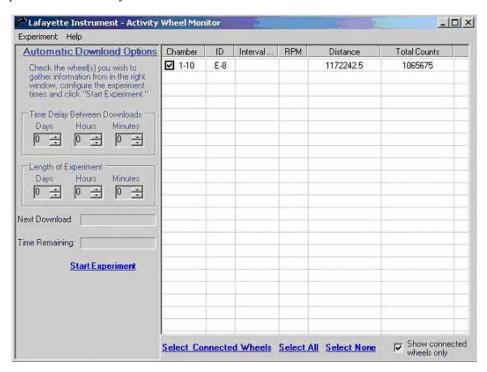
How to use Automatic Download:

The program will automatically start in Automatic Download Mode, however, if you are somewhere else, click on the Download Menu and select 'Automatic Mode.'

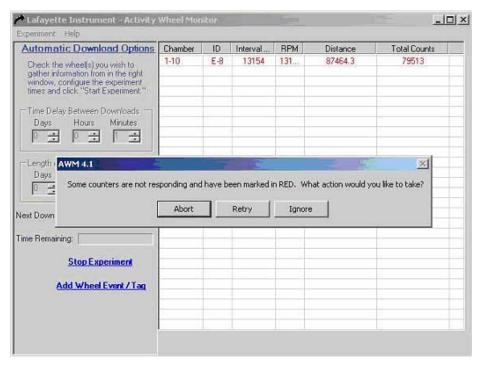


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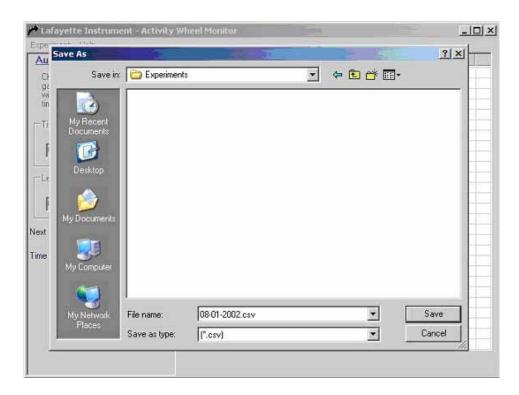
To begin an experiment you must choose the length of the experiment and the time delay between downloads. To do this, use the mouse to click the up and down buttons next to the time boxes. You can run experiments from 60 days to 1 minute in length and you can download from 1 minute to 23 days. You can also choose the wheels you wish to monitor. Check the checkbox next to the Chamber. You can also use the links on the bottom to select the connected wheels, select all the counters or select none of the counters. 'Start Experiment' when ready.



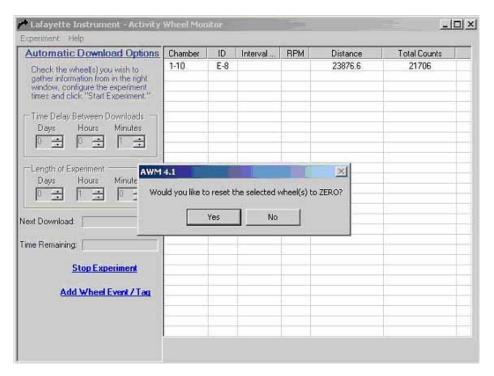
The AWM system will verify the connected wheels are working properly. If a error occurs you will get the following message. Check the connections of the wheels that failed and try again. If you can not figure out a reason for the error, please call Lafayette Instrument Company.



The 'Save As' dialog will appear. Choose a file name and location and click the 'Save' Button.

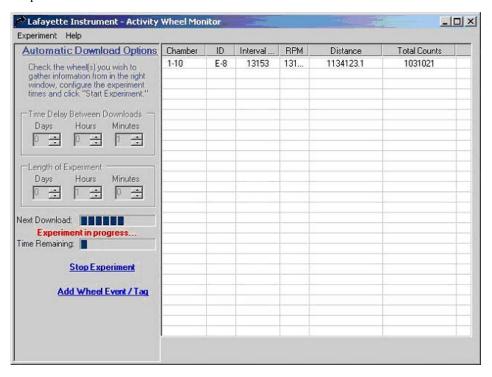


Next, you will have the option to reset the wheel counts to ZERO before the beginning of the experiment. To reset the counts, click 'Yes.'



Lafayette Instrument AWM Starter Interface & Software

The AWM system begins the experiment. You will see the data file generated in the destination folder. You may open this file at any time during the experiment.

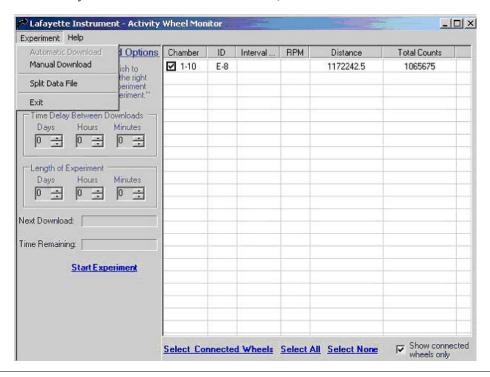


Manual Download:

Manual Download allows the user to retrieve information, test and reset an individual activity wheel counter.

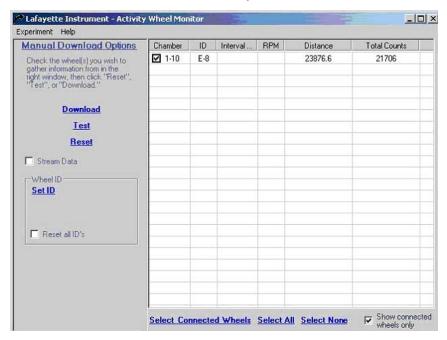
How to use Manual Download:

The program will automatically start in Automatic Download Mode, click on the Download Menu and select 'Manual Mode.'



Model 86056 User Instructions

Check the checkbox for the chamber you wish to gather data, then click a command. You can Download, Test or Reset all check wheels with on click. Click the 'Stream Data' link to continuously download data.



Assigning a Counter an ID:

In Manual mode, compatible counters can be assigned an ID. To assign an ID, click on the "Set ID" button. Choose and ID, and click "Save ID." The ID you choose will be saved on the counter and will remain until you reset the ID. Data files generated by automatic mode will also use the ID to identify the counters, if none is present, it will use the interface and wheel number.

To clear and ID, click on "Set ID", then "Clear ID".

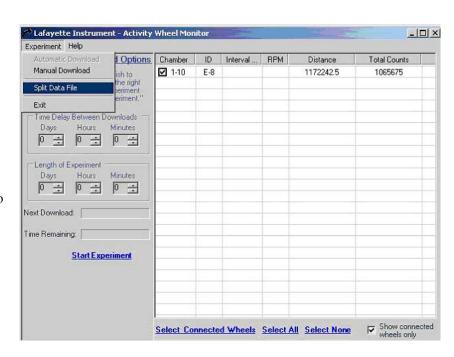
Splitting Data Files:

After an experiment has finished, select "Split Data" from the experiment menu. You will be able to split the data either by Interface, first ID value or customized.

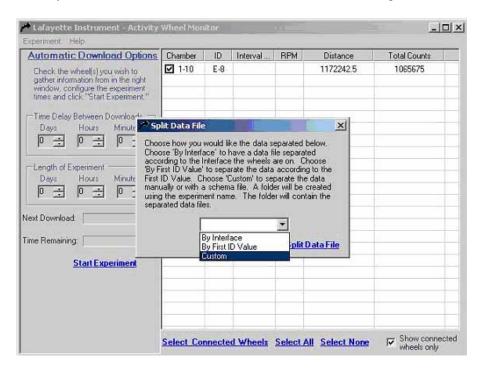
Choose how you would like the data separated below. Choose 'By Interface' to have a data file separated according to the Interface the wheels are on. Choose 'By First ID Value' to separate the data according to the First ID Value. Choose 'Custom' to separate the data manually or with a schema file. A folder will be created using the experiment name. The folder will contain the separated data files.

How to Split Data Files:

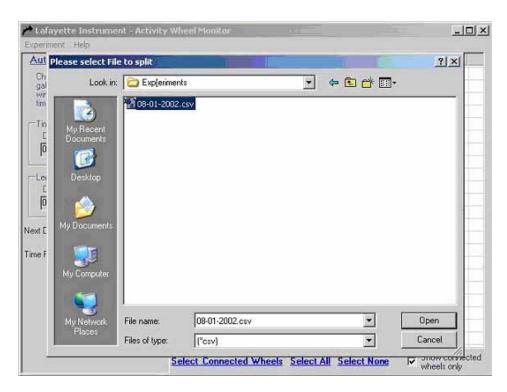
Choose 'Split Data File' from the Experiment Menu.



Choose 'By Interface', 'By First ID Value', or 'Custom.' From the liskbox, then click 'Split Data File.'

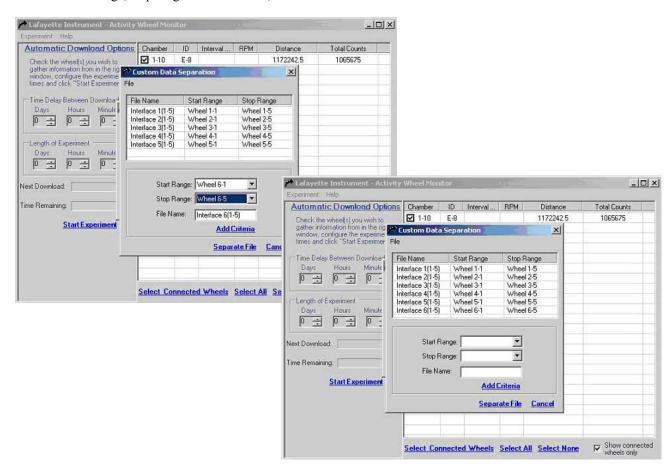


A open dialog box will open, choose the file you wish to split.

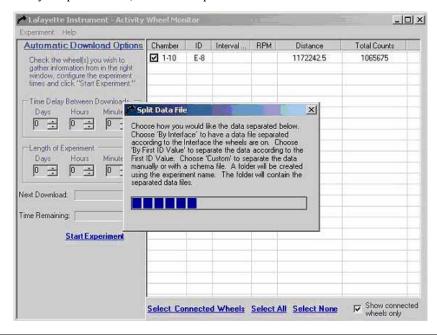


Model 86056 User Instructions

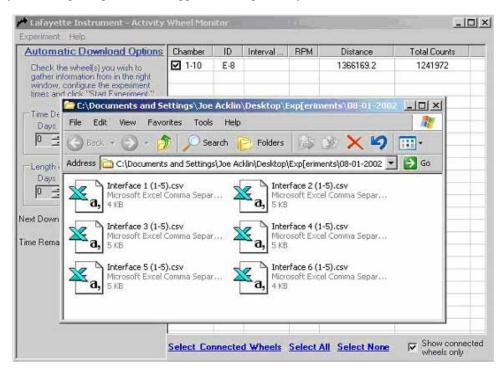
If you chose custom, the following window will be displayed. In this window you can define how the data is separated and where the data is saved. Choose a start range, stop range and a filename, and click 'Add Criteria.'



You can add as many criteria as you wish. When you have defined the separation schema, you can save the schema for later use by selecting 'Save Custom Separation Schema.' You can load these schemas at a later time by choosing 'Load Custom Separation Schema.' When you are ready to split the data, click the 'Separate File' link.



The directory containing the split files will appear on compatible systems.



Troubleshooting Guide:

Errors during Manual Download:

- ERROR:
- ✓ Problem: The error box indicated that the AWM software could not make a connection to the specified counter.
- ✓ Solution: Verify the connection between the Interface and counter you have selected. If the problems continue, go to the communication troubleshooting page of this manual.

Errors during Automatic Download:

- Errors reported with the following connections:
- ✓ Problem: The AWM software could not make a connection to the specified counter(s).
- ✓ Solution: Verify the connection(s) between the Interface and counter you have selected. If the problems continue, go to the communication troubleshooting page of this manual.

Troubleshooting Communication:

Below are solutions to common communication problems. The solutions are in order from simple to advanced. Try the simplest solution first, if problems continue, move to the next.

- Verify the power is on for all interfaces.
- Turn the power to the off position for all interfaces. Starting with Interface 1, turn the power switches to the on position.
- Verify the serial cable is connected from Interface 1 to Comm Port 1 or 2.
- Verify the modular cable is connected from the interface to the counter.
- Unplug the modular cable from the interface and plug it back in. This will reset and address the counter.
- Notify Lafayette Instrument Company if problems continue

DRA 8/21/01 JTA 3/5/03 Notes:

Lafayette Instrument AWM Expander Interface Model 86057 User Instructions

Ordering Information:

All phone orders must be accompanied by a hard copy of your order. All must include the following information:

- 1) Complete billing and shipping addresses
- 2) Name and department of end user
- 3) Model number and description of desired item(s)
- 4) Quantity of each item desired
- 5) Purchase order number or method of payment
- 6) Telephone number

DOMESTIC TERMS

There is a \$50 minimum order. Open accounts can be extended to most recognized educational institutions, hospitals and government agencies. Net amount due 30 days from the date of shipment. Enclose payment with the order; charge with VISA, MasterCard, American Express; or pay COD. We must have a hard copy of your order by mail or fax. Students, individuals and private companies may call for a credit application.

INTERNATIONAL PAYMENT INFORMATION

There is a \$50 minimum order. Payment must be made in advance by: draft drawn on a major US bank; wire transfer to our account; charge with VISA, MasterCard, American Express; or confirmed irrevocable letter of credit. Proforma invoices will be provided upon request.

RETURNS

<u>Equipment may not be returned without first receiving a Return</u> Goods Authorization Number (RGA).

When returning equipment for service, please call Lafayette Instrument to receive a RGA number. Your RGA number will be good for 30 days. Address the shipment to: Lafayette Instrument Company, 3700 Sagamore Parkway North, Lafayette, IN 47904, U.S.A. Shipments cannot be received at the PO Box. The items should be packed well, insured for full

value, and returned along with a cover letter explaining the malfunction. Please also state the name of the Lafayette Instrument representative authorizing the return. An estimate of repair will be given prior to completion ONLY if requested in your enclosed cover letter. We must have a hard copy of your purchase order by mail or fax, or repair work cannot commence.

WARRANTY

Lafayette Instrument guarantees its equipment against all defects in materials and workmanship to the ORIGINAL PURCHASER for a period of one (1) year from the date of shipment, unless otherwise stated. During this period, Lafayette Instrument will repair or replace, at its option, any equipment found to be defective in materials or workmanship. If a problem arises, please contact our office for prior authorization before returning the item. This warranty does not extend to damaged equipment resulting from alteration, misuse, negligence or abuse, normal wear or accident. In no event shall Lafayette Instrument be liable for incidental or consequential damages. There are no implied warranties or merchantability of fitness for a particular use, or of any other nature. Warranty period for repairs or used equipment purchased from Lafayette Instrument is 90 days.

DAMAGED GOODS

Damaged equipment should not be returned to Lafayette Instrument prior to thorough inspection.

When a shipment arrives damaged, note damage on delivery bill and have the driver sign it to acknowledge the damage. Contact the delivery service, and they will file an insurance claim. When damage is not detected at the time of delivery, contact the carrier and request an inspection within 10 days of the original delivery. Please call the Lafayette Instrument Customer Service Department for a return authorization for repair or replacement of the damaged merchandise.



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