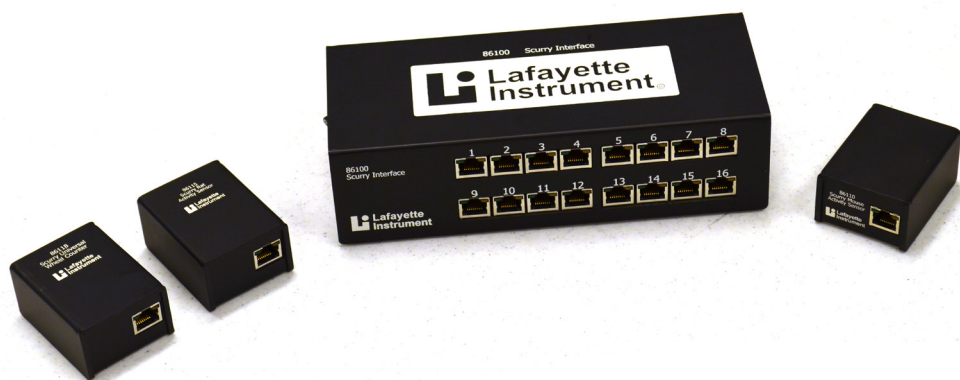


MAN8611x

**Models 86100, 86110,
86115, & 86118**

Scurry Activity System

User's Manual



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Lafayette, IN 47904
Tel: (765) 423-1505

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www.lafayetteinstrument.com

System Description

The Scurry Activity System is designed to provide precise schedule execution with accurate data monitoring and almost unlimited capacity. A variety of both rat and mouse wheels are available as well as special purpose wheels for large animals, wheel chambers with Lickometers, and custom designed products. Standard and custom components are sold separately.

Model 86100 Interface Description

The Scurry Interface provides sixteen inputs that are compatible with all Lafayette Instrument Scurry Activity System counter and brake modules. The interface includes a light sensor to automatically log the light dark cycle in the animal room. The interface is connected to the PC via USB to be setup and programmed for execution. In the event of a computer failure or communication failure during an experiment, the interface will automatically begin backing up all data until a connection is reestablished. This requires a suitable uninterruptible power supply (UPS) with battery backup for the interface (not included). Once a connection has been reestablished, backup data is automatically downloaded to the software. All counter and brake inputs are configured within the software. The Scurry Activity Software package must be ordered separately.

Features

- Designed for high accuracy data recording
- All data counting is handled by the Scurry hardware without encumbering computer resources
- Monitor 16 sensor or module inputs
- USB communication
- Backup storage during PC communication failure
- Automatic backup data download
- Execute time and/or event based schedules
- Ambient light sensor to indicate light/dark periods
- Rung pulse LED indicator on all sensor inputs and at the interface

Specifications

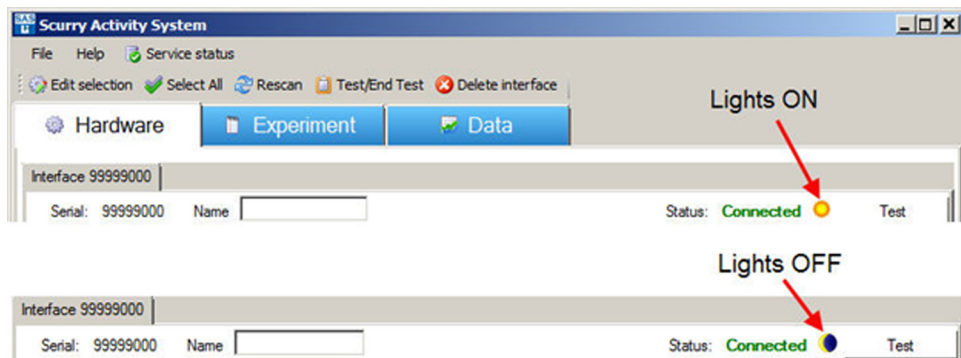
- Size:
 - 8.85 x 3.66 x 2.4 in
 - 225 x 93 x 61 mm
- Connections:
 - Power: 15V DC, 4.6A Switching AC Adapter
 - PC: USB-HID
 - Inputs: 16 RJ45
- Downloads: 3 Seconds
- Resolution:
 - Revolution Count: 3 Seconds
 - Lickometer Count: 0.25 Seconds
- Backup Data Storage Capacity: 4MB (Approximately one week)

Interface Panel Indicators

The following Panel Indicators indicate the status of the interface as shown below.



PHOTO: Photo sensor for the automatic monitoring of light/dark cycles in the lab. This does not time the light dark cycle but logs the times a change occurs and provides a graphic on all charts. The Scurry Software Icons representing the Light and Dark conditions in the lab may be found on the hardware tab and during the running of an experiment.



ADJ: Sensitivity adjustment for the automatic monitoring of light/dark cycles in the lab. Once the interface has been placed in the position it will be used during an experiment verify the sensitivity of the photo sensor. The Scurry Software Icons representing the Light and Dark conditions in the lab may be found on the hardware tab. Verify the proper icons are represented for light and dark conditions. Use a small flat head screw driver to adjust the sensitivity as needed.

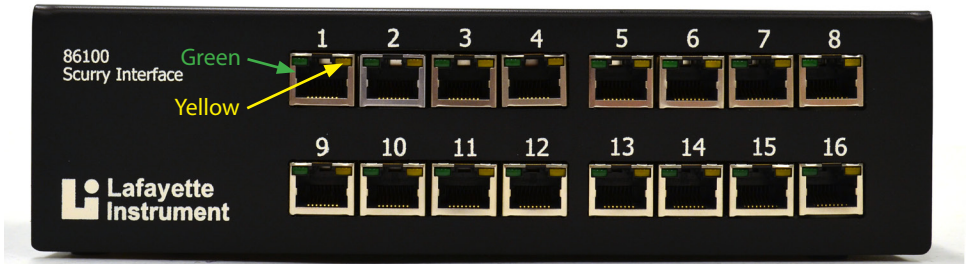
STATUS: Green indicates experiment session running. Red indicates data being stored into backup memory because of PC failure or loss of communication.

USB: Green indicates communication from PC to Interface while Red indicates communication from Interface to PC.

POWER: A green LED to indicate when power is ON. It is recommended that this unit be connected to a UPS Supply for long term studies to prevent data loss due to power outage.

Scurry Activity System

The following indicators indicate the status of individual ports on the interface.



Green: Turns ON with connection to any sensor connection. Pulses when communication is active.

Yellow: Turns ON with each rung or flag detected by the activity sensor. It pulses with a moving wheel and may be ON or OFF with a stopped wheel.

The following is provided on the side panel.



POWER: A power switch and jack may be found on the 86100 Interface. Power is provided from a Switching AC Adaptor with output rating of 15V DC, 4.6A.

USB: Connection is made between the 86100 Interface and the PC. A standard six foot A Male to B Male cable is provided.

Model 86110 Mouse Counter

The Mouse Activity Counter provides an output that is recognized by the Scurry Activity System Interface; it is designed to acquire the revolutions of a mouse activity wheel. The number of sensor pulses per revolution is configurable in the Scurry Software, so this may be used with standard and miss-step wheels. The sensor is setup as an all-in-one unit, with the optical sensor mounted within the enclosure to facilitate quick setup and easy removal for cleaning. Simply plug this unit into the top of any appropriate Mouse Activity Wheel Chamber.



Model 86115 Rat Counter

The Rat Activity Counter provides an output that is recognized by the Scurry Activity System Interface; it is designed to acquire the revolutions of a rat activity wheel. A number of wheel designs have been updated to accept this unit. The sensor is setup as an all-in-one unit, with the optical sensor mounted within the enclosure to facilitate quick setup and easy removal for cleaning. This unit hangs on two machined keys that are part of the Scurry Rat Wheels or may be added to older AWM Wheels.



Model 86118 Universal Counter

The Universal Counter is designed to be used with all old Lafayette Instrument Company, Inc. wheels, other manufactures wheels, and some new wheels that are not compatible with the new all-in-one sensor/counter modules described above. It can be hung on the same machined keys used for older counters. It is easily connected to the Scurry Activity System Interface to collect detailed running wheel activity. A replacement bracket may be needed for some wheels. Contact Lafayette Instrument Company, Inc. for details.



Counter Specifications

	86110	86115	86118
Dimensions (LxWxH)			
	inches	2.56 x 1.97 x 1.328	2.56 x 1.97 x 1.328
	mm	65 x 50 x 33.73	65 x 50 x 33.73
Connector	RJ45 (10' / 3m Cable Included)	RJ45 (10' / 3m Cable Included)	RJ45 (10' / 3m Cable Included)
Power	Provided by 86100	Provided by 86100	Provided by 86100
Configuration	Standard and Custom settings provided by the Scurry Software Model 86165	Standard and Custom settings provided by the Scurry Software Model 86165	Standard and Custom settings provided by the Scurry Software Model 86165

Interface (Model 86100) Setup and Operating Instructions

1. Connect at least one device (sensor, counter, brake, or lickometer) to any of inputs 1-16.
2. Connect the interface to a suitable PC using the USB cable provided.
3. Connect the supplied power supply to the jack provided.
4. Turn the interface power ON before opening the Scurry Software Application.
5. Refer to the Scurry Software manual for configuring and testing the device.
6. Verify Sensor function at the wheel or sip tube and at the interface, if needed, to test for function and cable integrity. The yellow LED will flash when the wheel is turned or when contact is made between the grounded floor and sipper tube. The green LED indicates a connection and will blink with communication.

Precautions

- Only connect authorized Lafayette Instrument sensors and modules into the Interface inputs
- Do not connect to any other RJ-45 based equipment
- Use appropriately rated Power Supply, supplied by Lafayette Instrument Company
- Always remove Scurry sensors and modules before washing or cleaning chambers
- Do not disconnect and reconnect RJ-45 cables to the interface or counters while the interface is powered On

Wheel Upgrades

Wheels originally running on AWM Counters may require a new Model 1-219-0084 Sensor Bracket or may be used as is with the Model 86118 Universal Scurry Counter. Older wheels may also be upgraded to the new Scurry Sensor/Counter using the following components. The Scurry Interface and software application must be purchased separately. Additional conversion instructions are available on the next page.

Model 80820 and 80821 Mouse Activity Wheels

Model 86110KIT is available for converting the 80820 and 80821 Mouse Activity Wheels; the kit contains:

Product	Qty
Scurry Mouse Sensor Bracket	1
Mouse Counter	1

Model 80820F and 80821F Mouse Activity Wheels

Model 86118KIT is available for converting the 80820F and 80821F Mouse Activity Wheels; the kit contains:

Product	Qty
Scurry Mouse Sensor Bracket	1
Replacement Scurry Sensor Block	1
Mouse Counter	1

All Model 80850 and 80859 Series Rat Activity Wheels

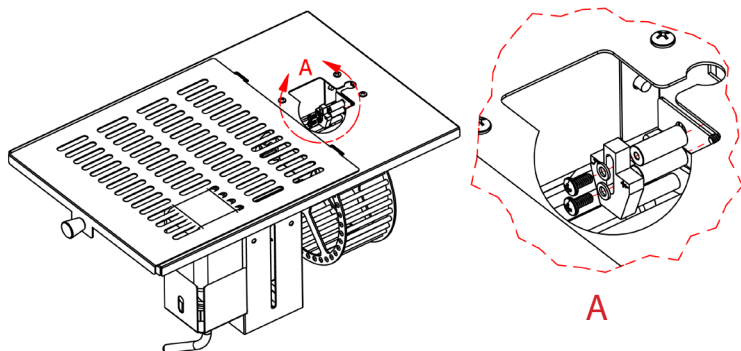
Model 86115KIT is available for converting the 80850 and 80859 Rat Activity Wheels; the kit contains:

Product	Qty
Scurry Rat Sensor Mount Plate	1
Threaded Mount Key, 6-32	2
Screw, 6-32x.375 FH SS	2
Screw, 6-32x.25 FHUC SS	2
Scurry Rat Sensor/Counter	1

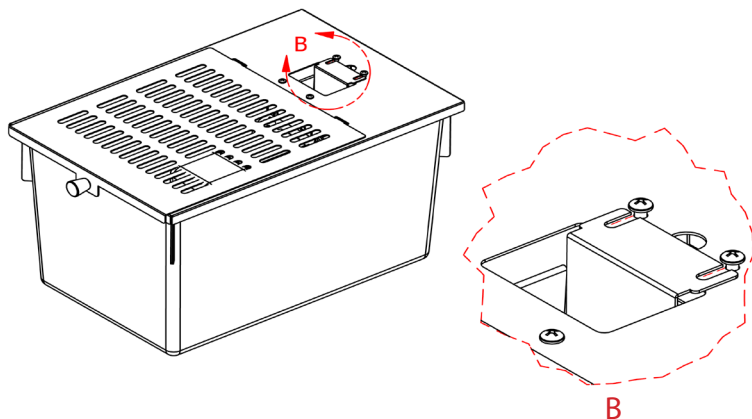
Conversion Instructions

Convert Model 80820 to 80820S

1. Remove the old sensor.

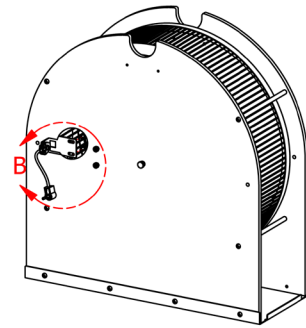
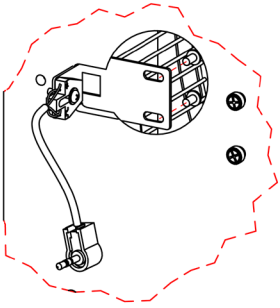
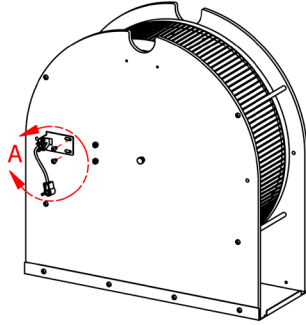
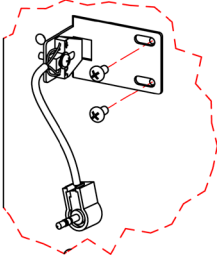


2. Loosen the screws, slide the new bracket into place, and tighten the screws back down.

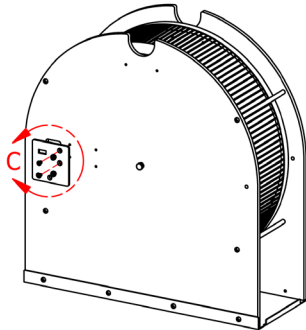
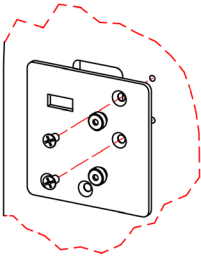


Updating Model 80850 Series Rat Activity wheels for Model 80115 Scurry Rat Counters

1. Depending on the model, remove the old sensor and bracket from either the outside of the wall or the inside of the wall.

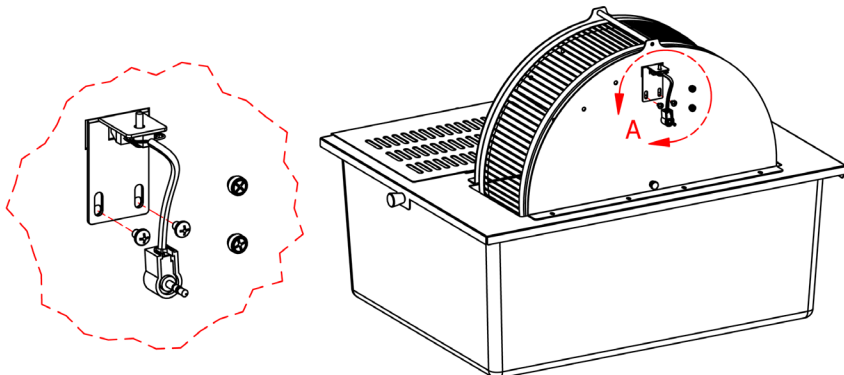


2. Add the new sensor bracket as shown. The 86115 sensor hangs on the available mounts.

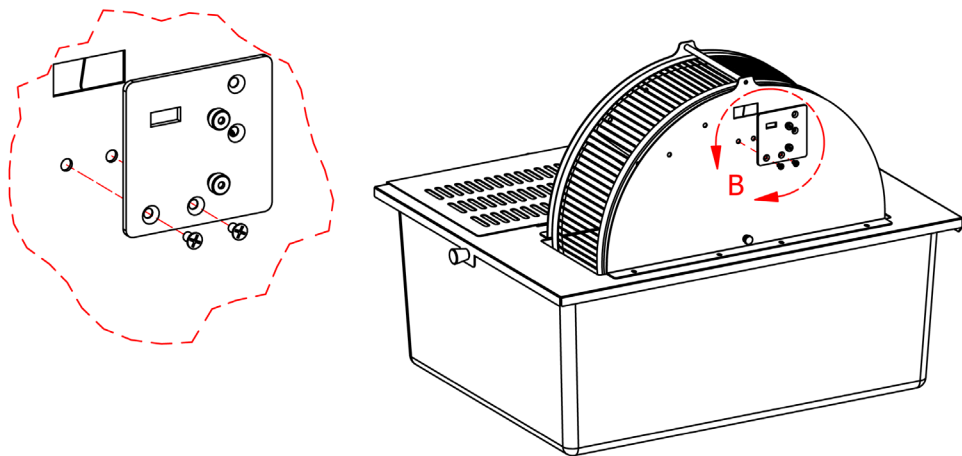


Updating Model 80859 Series Rat Activity wheels for Model 80115 Scurry Rat Counters

1. Remove the old sensor and bracket as shown.

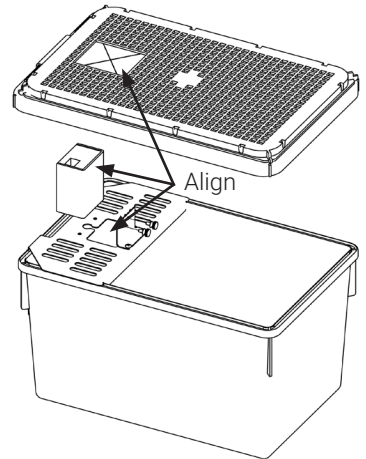
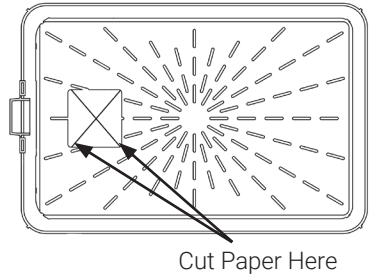
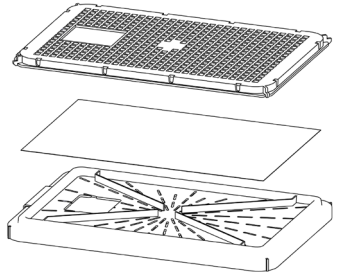
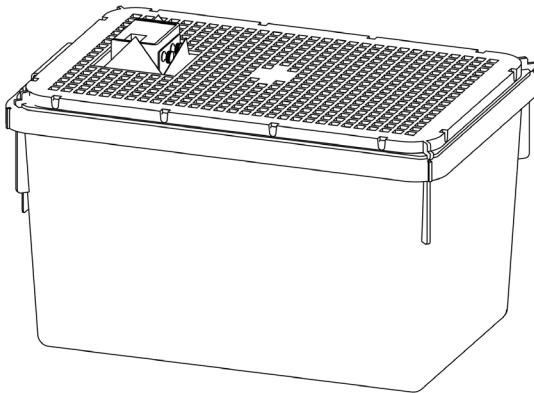


2. Add the new sensor bracket as shown. The 86115 sensor hangs on the available mounts.



Appendix A: Lid Assembly and Filter Paper Cutting

1. Remove lid assembly from the tub by lifting the blue lid handle to release the lid lock and lift the lid assembly up.
2. Separate Top Lid from Bottom Lid by lifting the flange of the Top lid where it rests on top of the bottom lid. Remove and discard old filter paper between Top and Bottom lids.
3. Place fresh sheet of filter paper centered on the Bottom Lid.
4. Align Top Lid with rectangular cutout over the cutout in the bottom Lid and press lids together. Top Lid snaps into place on the bottom Lid.
5. Turn the lid upside down and rest Top Lid on hard surface.
6. With a sharp Exacto knife cut an X pattern through the filter paper with cuts starting and ending at the 4 corners of the cutout in the Top Lid.
7. Return lid assembly right side up and align the cutout in the lid assembly with the 86110 counter extending from the stainless steel half lid on the tub. (Pictured is 86120 Brake/Counter)
8. Pull up on the blue lid handle and press the lid assembly onto the tub. Release the lid handle to lock the lid assembly on the tub.
9. The cut triangular sections of the filter paper bend up and rest against the four sides of the brake/counter extending past the lid.



CE - Declaration of Conformity

The following apparatus:

Product Name: Scurry Activity System

Model Designations:

86100	86100M	86110	86115	86118
86120	86125	86130	86131	86135
86150	80840B	80860B	80851B	

is hereby confirmed to comply with the essential requirements set out in the Electromagnetic Compatibility Directive 89/336/EEC and Low Voltage Directive 73/23/EEC. For the evaluation regarding the electromagnetic compatibility and low voltage directives, the following standards were applied:

IEC 61326:2012	CISPR11:2010	IEC 61000-4-2	IEC 61000-4-3
IEC 61000-4-4	IEC 61000-4-5	IEC 61000-4-6	IEC 61000-4-11

Effective Date: June 18, 2015

This declaration of conformity is issued under the sole responsibility of the manufacturer:

Company Name: Lafayette Instrument
Company Address: 3700 Sagamore Parkway North
Lafayette, Indiana 47904
U.S.A.

Authorized EU Representative:

Company Name: Lafayette Instrument Europe
Company Address: P.O Box 8148
Loughborough
Leicester
LE12 7XT
U.K.

Person responsible for making this declaration:

Name: Brent E. Smitley
Position/Title: Engineering Manager
Place: Lafayette, Indiana U.S.A.

Legal Signature:



Terms and Conditions

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PO Box 5729

Lafayette, IN 47903, USA

Lafayette Instrument Europe:

Phone: +44 1509 817700

Fax: +44 1509 817701

Email: emails@lafayetteinstrument.com

Phone, Fax, Email or Mail-in Orders

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

- Quantity
- Part Number
- Description
- Your purchase order number or method of pre-payment
- Your tax status (include tax-exempt numbers)
- Shipping address for this order
- Billing address for the invoice we'll mail when this order is shipped
- Signature and typed name of person authorized to order these products
- Your telephone number
- Your email address
- Your FAX number

Domestic Terms

There is a \$50 minimum order. Open accounts can be extended to most recognized businesses. Net amount due 30 days from the date of shipment unless otherwise specified by us. Enclose payment with the order, charge with VISA, MasterCard, American Express, or pay COD. We must have a hard copy of your purchase order by mail, E-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 transfers to our account; charge with VISA, MasterCard, American Express, or confirmed irrevocable letter of credit. Proforma invoices will be provided upon request.

Exports

If ordering instrumentation for use outside the USA, please specify the country of ultimate destination, as well as the power requirements (110V/60Hz or 220V/50Hz). Some model numbers for 220V/50Hz will have a "C" suffix.

Quotations

Quotations are supplied upon request. Written quotations will include the price of goods, cost of shipping and handling, if requested, and estimated delivery time frame. Quotations are good for 30 days, unless otherwise noted. Following that time, prices are subject to change and will be re-quoted at your request.

Cancellations

Orders for custom products, custom assemblies or instruments built to customer specifications will be subject to a cancellation penalty of 100%. Payment for up to 100% of the invoice value of custom products may be required in advance. Cancellation for a standard Lafayette Instrument manufactured product once the product has been shipped will normally be assessed a charge of 25% of the invoice value, plus shipping charges. Resell items, like custom products, will be subject to a cancellation penalty of 100%.

Exchanges and Refunds

Please see the cancellation penalty as described above. No item may be returned without prior authorization of Lafayette Instrument Company and a completed Return Form. A copy of the Return Form or your assigned Return # (you will receive this via email after submitting the form) must be included with the returned goods. The merchandise should be packed well and fully insured. Unopened merchandise may be returned prepaid within thirty (30) days after receipt of the item and in the original shipping carton. Collect shipments will not be accepted. Returned products must be in saleable condition, and credit is subject to inspection of the merchandise.

Refapses

Instrumentation may not be returned without prior authorization by Lafayette Instrument Company and a completed Return Form. When you complete the

Form, or call Lafayette Instrument, you will receive a Return #. Your Return # number will be good for 30 days. Address the shipment to:

Lafayette Instrument Company

3700 Sagamore Parkway North

Lafayette, IN 47904, USA.

Shipments cannot be received at the LIC PO Box. Items should be packed well, insured for full value, and returned along with a copy of the Return Form or the Return #. An estimate of repair will be given prior to completion ONLY if requested in an enclosed cover letter. We must have a completed purchase order by mail or fax, or repair work cannot commence for non-warranty repairs.

Damaged Goods

Damaged instrumentation should not be returned to Lafayette Instrument prior to a thorough inspection. If 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. If damage is not detected at the time of delivery, contact the carrier/shipper and request an inspection within 10 days of the original delivery. Please call the Lafayette Instrument Customer Service Department for repair or replacement of the damaged merchandise.

Limited Warranty

Lafayette Instrument Company warrants equipment manufactured by the company to be free of defects in material and workmanship for a period of one year from the date of shipment, except as provided hereinafter. The original manufacturer's warranty will be honored by Lafayette Instrument for items not manufactured by Lafayette Instrument Company, i.e. resell items. This assumes normal usage under commonly accepted operating parameters and excludes consumable products.

Warranty period for repairs or used instrumentation purchased from Lafayette Instrument is 90 days. Lafayette Instrument Company agrees either to repair or replace, at its sole option and free of part charges to the customer, instrumentation which, under proper and normal conditions of use, proves to be defective within the warranty period. Warranty for any parts of such repaired or replaced instrumentation shall be covered under the same limited warranty and shall have a warranty period of 90 days from the date of shipment or the remainder of the original warranty period whichever is greater. This warranty and remedy are given expressly and in lieu of all other warranties, expressed or implied, of merchantability or fitness for a particular purpose and constitutes the only warranty made by Lafayette Instrument Company.

Lafayette Instrument Company neither assumes nor authorizes any person to assume for it any other liability in connection with the sale, installation, service or use of its instrumentation. Lafayette Instrument Company shall have no liability whatsoever for special, consequential, or punitive damages of any kind from any cause arising out of the sale, installation, service or use of its instrumentation. All products manufactured by Lafayette Instrument Company are tested and inspected prior to shipment. Upon prompt notification by the Customer, Lafayette Instrument Company will correct any defect in warranted equipment of its manufacture either, at its option, by return of the item to the factory, or shipment of a repaired or replacement part. Lafayette Instrument Company will not be obliged, however, to replace or repair any piece of equipment, which has been abused, improperly installed, altered, damaged, or repaired by others. Defects in equipment do not include decomposition, wear, or damage by chemical action or corrosion, or damage incurred during shipment.

Limited Obligations Covered by this Warranty

1. In the case of instruments not of Lafayette Instrument Company manufacture, the original manufacturer's warranty applies.
2. Shipping charges under warranty are covered only in one direction. The customer is responsible for shipping charges to the factory if return of the part is required.
3. This warranty does not cover damage to components due to improper installation by the customer.
4. Consumable and/or expendable items, including but not limited to electrodes, lights, batteries, fuses, O-rings, gaskets, and tubing, are excluded from warranty.
5. Failure by the customer to perform normal and reasonable maintenance on instruments will void warranty claims.
6. If the original invoice for the instrument is issued to a company that is not the company of the end user, and not an authorized Lafayette Instrument Company distributor, then all requests for warranty must be processed through the company that sold the product to the end user, and not directly to Lafayette Instrument Company.

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