

MAN634

**Models 80850,
80851A, & 80852**

Rat Activity Wheel with Optional Motor Drive User's Manual



shown with optional living chamber Model 80852



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Rat Activity Wheel Model 80850

Description

This Rat Activity Wheel System was designed for long-term circadian rhythm and general activity studies. The system incorporates many features to allow for animal well-being and easy maintenance of system components. The Optional Living Chamber Model 80852 includes support for food and water and includes guillotine style doors to restrict access to the activity wheel. The rat activity wheel can be monitored with either the Computerized Activity Wheel Counter (read only) Model 86061 or the Activity Wheel Counter Model 86060. These counters can also report activity data to a computer using our Activity Wheel Monitor Interface Model 86056A.

Features

- Removable lightweight 14" diameter anodized aluminum wheel is easy to clean and maintain and is run on two Rulon bearings
- Optional loading/transport cage
- Optional polycarbonate living chamber with food and water support
- Equipped with external mounting bracket for mounting of an optional electronic counter
- Wheel can be easily disassembled for cleaning



Specifications

- Dimensions: 15.6" x 14.2" x 5.3"
- Weight: 6.0lbs.
- Wheel Diameter: 14.0" ID
- Wheel Width: 4.3" (internal)
- Run Distance: 1.10 meters/revolution

Servo Brake for 80850 Rat Activity Wheel Model 80850-BK

This optional accessory is designed specifically for the 80850 Rat Activity Wheel and is secured with four small screws. It must be used with the 86070A Control/Counter, 86056A Interface and 86065 AWM Software. It may be programmed to lock the wheel or increase the wheel resistance based on the following schedule conditions:

- | | | |
|---------------------|---------------------------|------------------------|
| • Without condition | • until time | • at count |
| • after duration | • at distance | • at count or duration |
| • for duration | • at distance or duration | • at count or time |
| • at time | • at distance or time | |

An inexpensive manual lock is also available for control animals or those applications where a programmable feature is not needed.

Motor Drive Option for Rat Wheel Model 80851A

Description

The Activity Wheel Motor Drive Model 80851A is designed to offer forced motor activity to a standard Rat Activity Wheel Model 80850. The flexibility and ease of use of this design will allow for simple transition between a forced and free running system. The 80851A motor drive can be controlled when used with the 86070A Counter and Controller, and 86056A USB Computer Interface for Activity Wheel Counters, with the Activity Wheel Monitor Software Model 86065.

Features

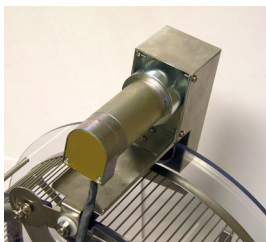
- Easy changeover between forced and free running
- Low friction Rulon bearings
- Easily removed from the 80850 wheel for cleaning
- Uses a non-slip drive belt for forced activity
- Motor speed control with feedback for reliable and consistent speeds
- 1 - 25 m/min speed range @ 0.5m/min increments

Setup Instructions for Forced & Free Running

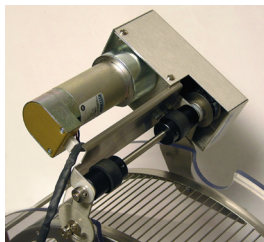
1. Place the 80851A on the top of the 80850 activity wheel and use four screws to secure the motor to the plexiglass. Make sure the motor rollers square up with the wheel and rim.
2. Connect the motor cable to the 86070A Counter Control.

Note: Additional information on controlling the motor may be found in the 86070A Control manual and the 86065 AWM software Manual.

3. To Engage the motor for forced running, simply place the motor down on the activity wheel.
4. To Disengage the motor for free running, move the motor off of the activity wheel.



Motor Engaged



Motor Disengaged

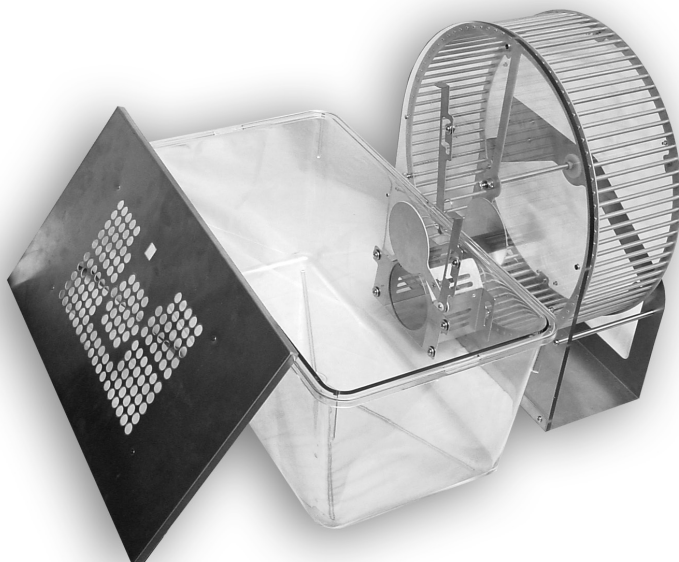
Living Chamber for Rat Wheel Model 80852

Description

This clear polycarbonate living chamber attaches to the activity wheel with convenient thumb screws to provide easy movement between the home environment and the running wheel. The chamber includes a food hopper, water bottle holder, bottle, and stainless steel sipper tube. A manual guillotine door at the tub side of the stainless steel tunnel may be used to restrict animal movement when needed. The size of this chamber allows it to be home for the animal.

Features

- Cage Size: 19" x 10.5" x 8" (48.3 x 26.7 x 20.3 cm)
- Floor Area: 143 sq. in. (922.3 cm sq.)
- Tunnel Access Diameter: 3.0" (7.62 cm)
- Tunnel Floor: 2.25"L x 3.375"W (5.72 x 8.5725 cm)



Cleaning Instructions

1. Unplug the sensor and remove the counter. Remove optional motor or brake if present.
2. Remove one spacer (#5 – Figure 4). Remove the wheel after loosening the two thumbscrews (#7). Remove one locking collar (#5 – Figure 1) and slide the axle out. Remove the rulon bearings (#4) and set them aside.

Warning: The optical sensor (#3 – Figure 3) must be removed before running the frame assembly through a cage washer or soaking in water.

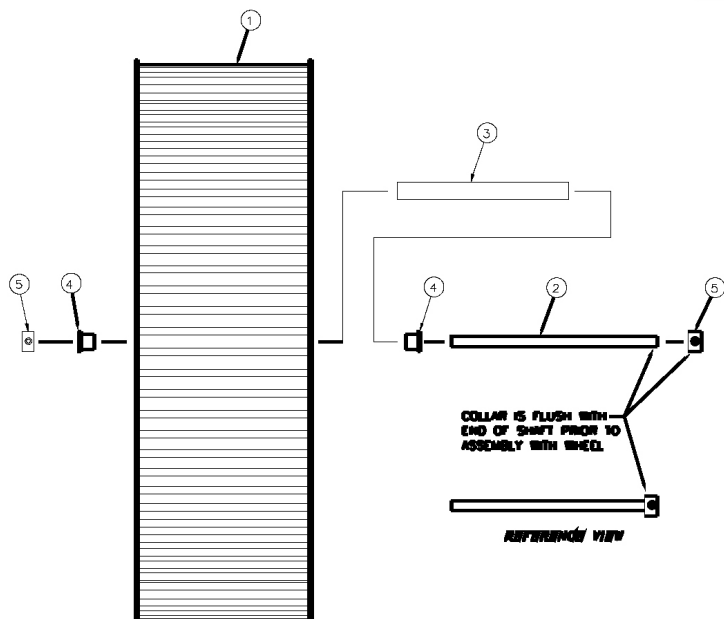
3. The home cage, home cage components and wheel may be washed in an automatic cage washer or hand washed with soap and water. These parts as well as the frame assembly may be wiped down with a 70% ETOH solution.

Warning: Do not run the rulon bearings through the cage washer or soak in water or other solvents. Doing so will eventually dry out the natural lubrication. **Do not add any lubricant.** A quick wipe is recommended.



Assembly Instructions

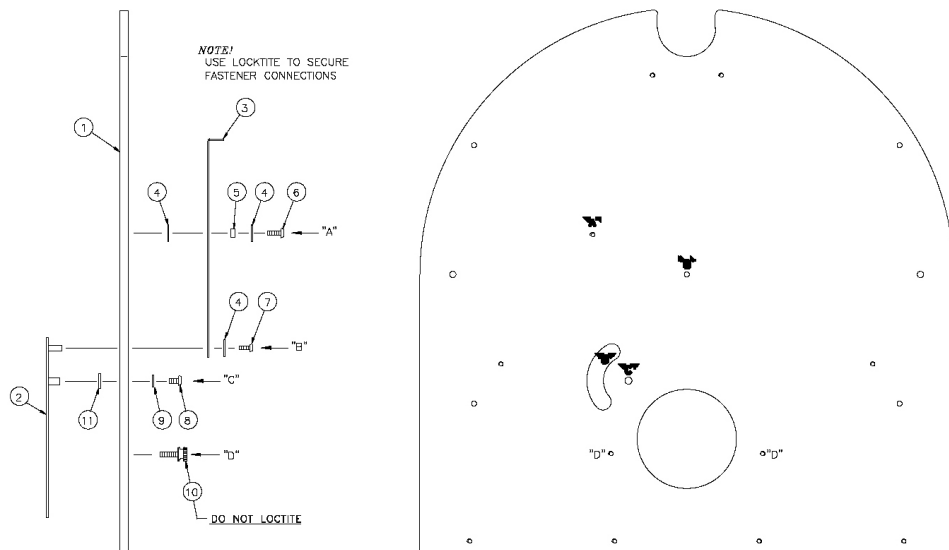
Figure 1: Wheel Assembly for Model 80850



NO.	P/N	QTY.	DESCRIPTION
1	5-219-0081	1	WHEEL ASSEMBLY
2	1-219-0075	1	SHAFT
3	1-219-0087	1	SHAFT COVER
4	4-221-300	2	RULON BEARING
5	4-333-003	2	LOCKING COLLAR

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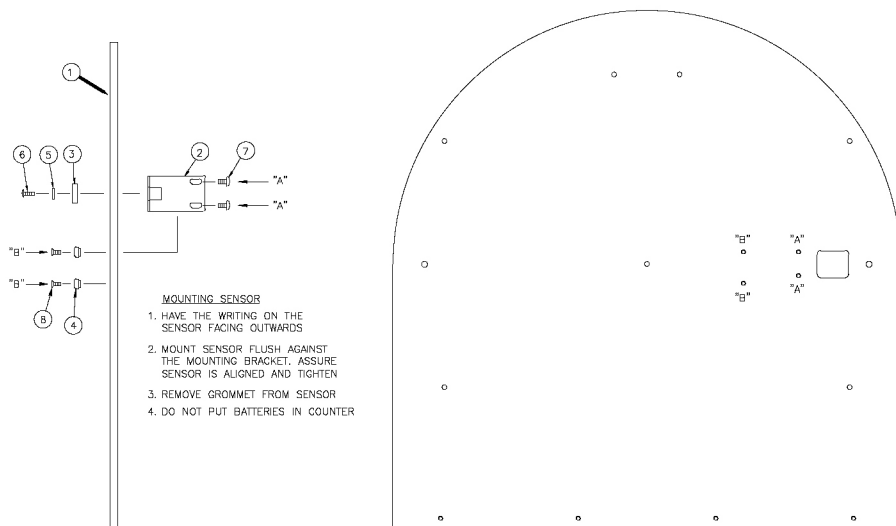
Figure 2: Wheel Frame Assembly 1 for Model 80850



NO.	P/N	QTY.	DESCRIPTION
1	1-219-0083	1	WHEEL BACK MOUNTING PANEL
2	1-219-0078	1	SWING HATCH
3	1-219-0073	1	HATCH LEVER
4	4-221-160	3	#6 STEEL FLAT WASHER
5	4-221-009	1	ALUMINUM SPACER
6	4-212-090	1	#6-32 x 7/16" PAN HD. SCREW
7	4-212-113	1	#4-40 x 5/16" PAN HD. SCREW
8	4-212-096	1	#4-40 x 1/4" PAN HD. SCREW
9	4-221-074	1	#8 STEEL FLAT WASHER
10	4-212-054	2	KNURLED THUMB SCREW
11	4-222-027	2	1/4" NYLON FLAT WASHER

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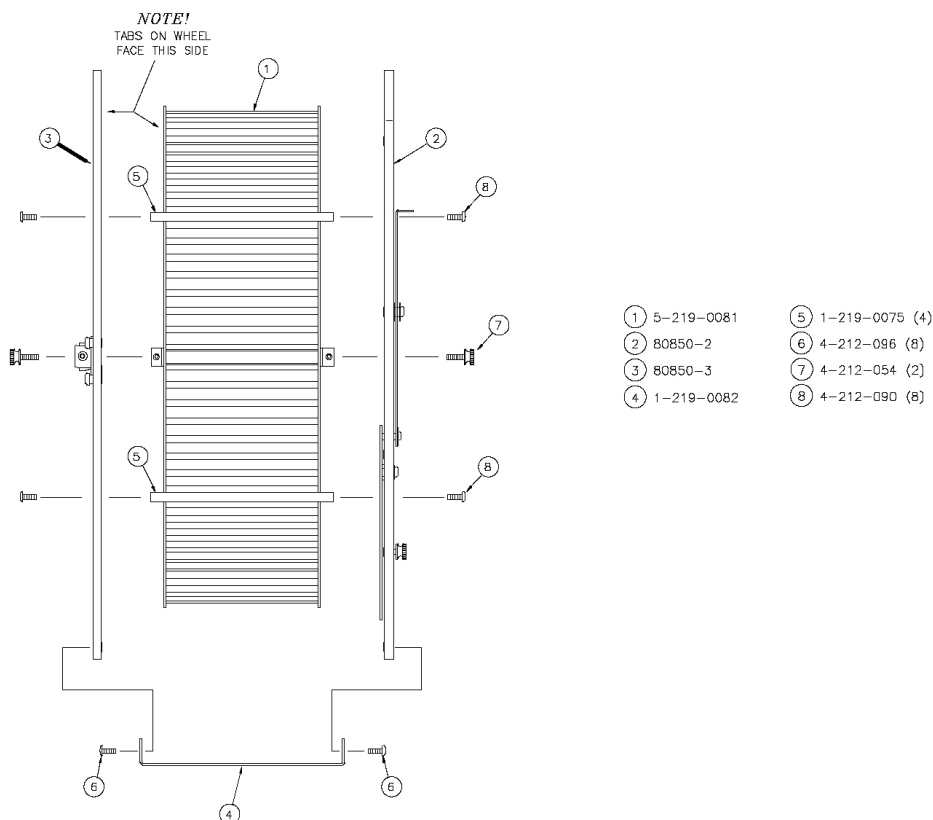
Figure 3: Wheel Frame Assembly 2 for Model 80850



NO.	P/N	QTY.	DESCRIPTION
1	1-219-0056	1	WHEEL MOUNTING PANEL-SENSOR
2	1-219-0084	1	SENSOR MOUNTING BRACKET
3	8606S	1	SENSOR
4	1-204-0329	2	KEY
5	4-221-059	1	#4 INTERNAL LOCK WASHER
6	4-212-110	1	#4-40 x 1/2" PAN HD. SCREW
7	4-212-096	2	#6-32 x 1/4" PAN HD. SCREW
8	4-212-087	2	#6-32 x 1/2" FLAT HD. SCREW

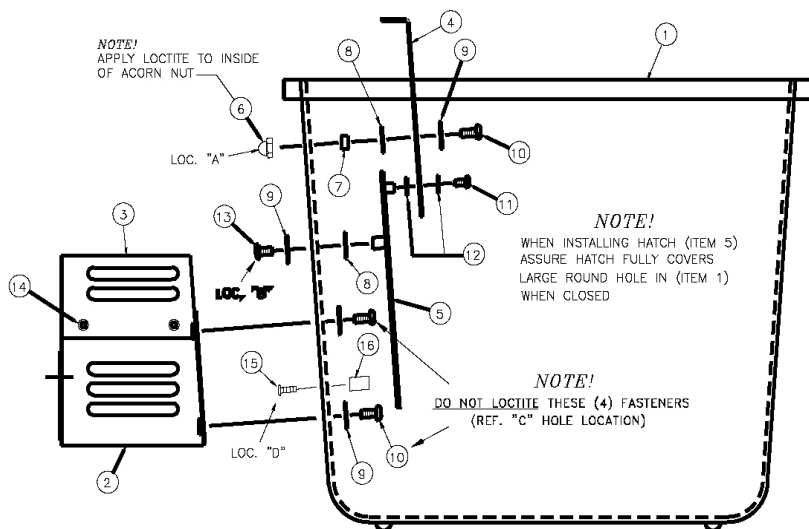
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Figure 4: Wheel Frame Assembly 3 for Model 80850

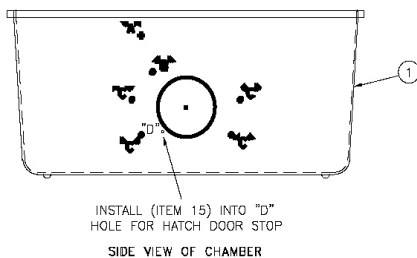


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Figure 5: Chamber Tunnel & Hatch Assembly For Model 80852



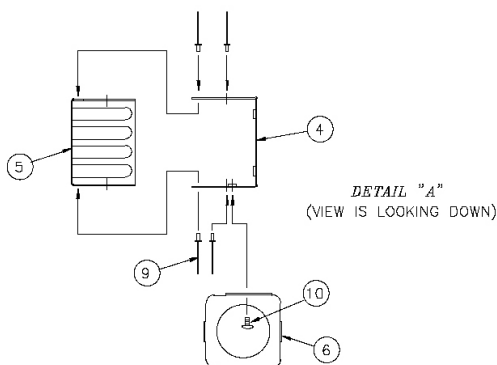
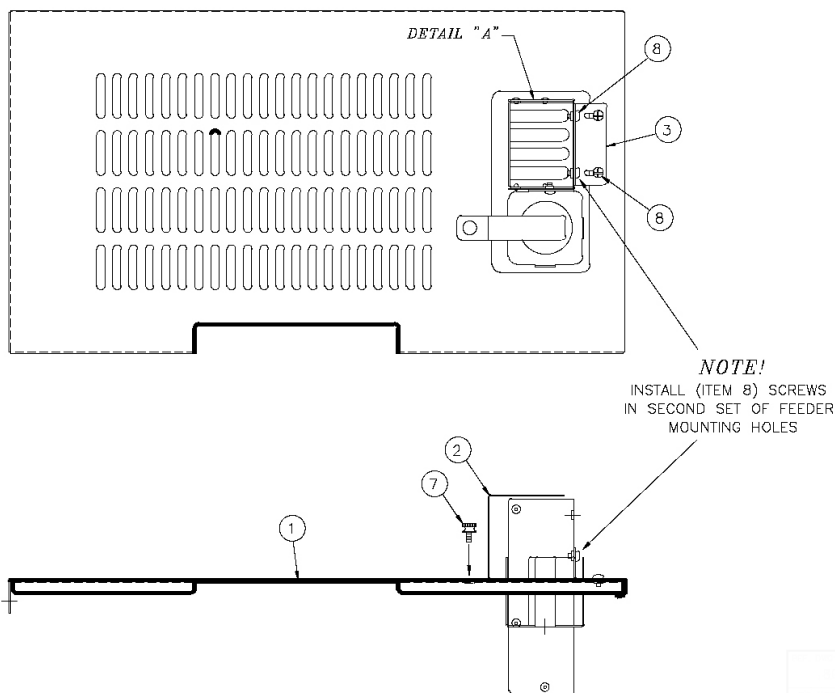
NO.	P/N	QTY.	DESCRIPTION
1	1-219-0079	1	RAT LIVING CHAMBER
2	1-219-0071	1	TUNNEL BASE
3	1-219-0072	1	TUNNEL COVER
4	1-219-0070	1	HATCH LEVER
5	1-219-0077	1	SWING HATCH
6	4-211-013	1	#6-32 ACORN NUT
7	4-221-009	1	1/8" LONG ALUMINUM SPACER
8	4-222-027	2	1/4" NYLON SPACER
9	4-221-160	6	#6 STEEL FLAT WASHER
10	4-212-090	5	#6-32 x 7/16" PAN HD. SCREW
11	4-212-117	1	#4-40 x 3/16" PAN HD. SCREW
12	4-222-023	2	#8 NYLON FLAT WASHER
13	4-212-096	1	#6-32 x 1/4" PAN HD. SCREW
14	4-221-245	4	RIVET
15	4-212-110	1	#4-40 x 1/2" PAN HD. SCREW
16	4-214-003	1	#6-32 x 3/8" ALUM. STANDOFF



NOTE!
USE LOCTITE TO SECURE
FASTENER CONNECTIONS
EXCEPT WHERE NOTED
USE 290 LOCTITE

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Figure 6: Chamber Cover Assembly For Model 80852



- | | |
|----------------|--------------------|
| (1) 1-219-0080 | (7) 4-212-055 |
| (2) 1-219-0069 | (8) 4-212-098 (4) |
| (3) 1-204-0346 | (9) 4-221-245 (6) |
| (4) 1-204-0308 | (10) 4-212-117 (2) |
| (5) 1-204-0309 | |
| (6) 1-204-0307 | |

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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 "CC" 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 Return Goods Authorization (RGA#) number which must be affixed to the shipping label of the returned goods. The merchandise should be packed well, insured for the full value and returned along with a cover letter explaining the reason for return. Unopened merchandise may be returned prepaid within thirty (30) days after receipt of the item and in the original shipping carton. Collect shipments must not be accepted. Product must be returned in saleable condition, and credit is subject to inspection of the merchandise.

Repairs

Instrumentation may not be returned without first receiving a Return Goods Authorization Number (RGA). When returning instrumentation 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, USA.

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. 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 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.
7. Failure by the customer to perform normal and reasonable maintenance on instruments will void warranty claims.
8. 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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