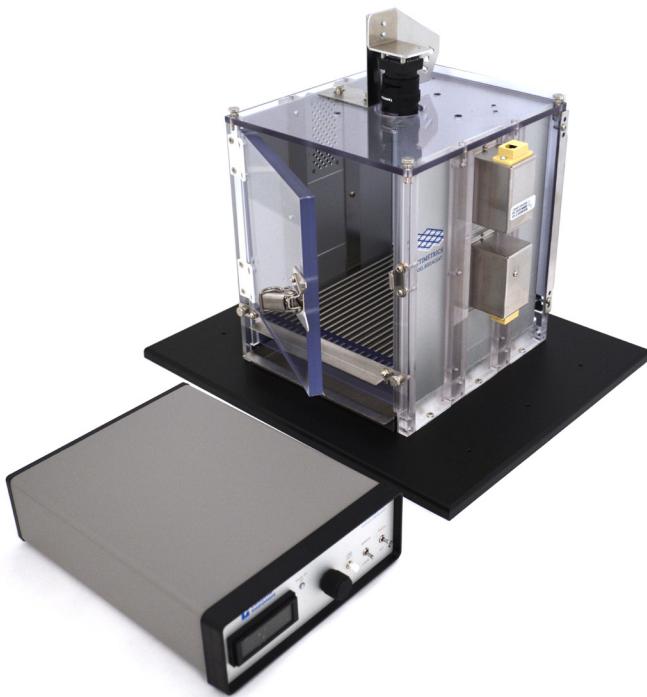


# Fear Conditioning Chamber Packages for Rodents

## *Operating Manual*



3700 Sagamore Parkway North  
Lafayette, IN 47904  
Tel: (765) 423-1505

[sales@lafayetteinstrument.com](mailto:sales@lafayetteinstrument.com)  
[www.lafayetteinstrument.com](http://www.lafayetteinstrument.com)

## Table of Contents

Product Descriptions	2
Mounting the Camera	6
Wiring Instructions	7

## Product Descriptions

### **Fear Conditioning Chamber**

#### **Model 80004AT (Rats)**

#### **Model 80014AT (Mice)**

This Fear Conditioning Chamber Package was designed from the ground up to be easy to order, easy to set up, easy to run and easy to maintain. Up to four test stations may be run on a single computer. The unique camera mount may be top or rear panel mounted making this chamber suitable for all fear conditioning protocols including testing animals with optical fiber for optogenetics. A chamber speaker is included for presenting computer generated audio cues.



Model 80004AT

### **Cue Light Module**

#### **Model 80221AMAT (Rats)**

#### **Model 80221AMAT-M (Mice)**

This optional stimulus light features multiple white PCB mounted LED's behind a flat milk white lens. The lens is recessed behind a modular panel and is perfectly flat to minimize damage from chewing



Model 80221AMAT

### **House Light Module**

#### **Model 80224AMAT (Rats)**

#### **Model 80224AMAT-M (Mice)**

This house light features three pure white light (5500K – 6500K) LED's with 120 degree beam angle. The light is angled 45 degrees down into the chamber and uses an opal matte diffuser lens to provide evenly distributed illumination of the entire chamber.



Model 80224AMAT

## Infrared House Light

### Model 80227MAT (Rats)

### Model 80227MAT-M (Mice)

An optional infrared light module that permits video recording in the dark. It consists of three bright 850 nm/940 nm wavelength LED's with a 120 degree beam angle. The light is angled 45 degrees down into the chamber and uses an opal matte diffuser lens to provide evenly distributed illumination of the entire chamber.



Model 80227MAT

## Speaker Module

### Model 80135MAT (Rats)

### Model 80135MAT-M (Mice)

One Speaker Module is included with each Actimetrics Fear Conditioning Chamber Package. Order this module to replace a defective component or to add a second auditory stimulus to the standard test chamber.



Model 80135MAT

## Isolation Cubicle

### Model 83020AT

This Isolation Chamber is constructed of moderately expanded PVC foam panels that resist moisture and many chemicals. All outside walls are 0.75" (19 mm) thick. This unit features easy access to either the rat or mouse fear conditioning test chambers. The European style hinges and rubber seal provide maximal light and sound incursion reduction. The door hinges also allow for 180° of movement (twice that of other units) and can be quickly released without tools to remove the doors when necessary. Metal offset baffles are mounted inside to reduce the overall dimensions and minimize wasted space.



- Outside Dimensions: 19.56" L x 19.56" D x 23.59" H  
49.7 x 49.7 x 60.0 cm
- Inside Dimensions: 18.06" L x 18.06" D x 21.69" H  
45.75 x 45.75 x 55.1 cm

## Splitter and Cable

### Model 83625AT

Each Model 83625AT Splitter includes a 25" RJ12 Modular Cable to connect the splitter to the interface. Four modular jacks on the splitter allow connection of up to four test chambers.



### Four Channel Audio Amplifier

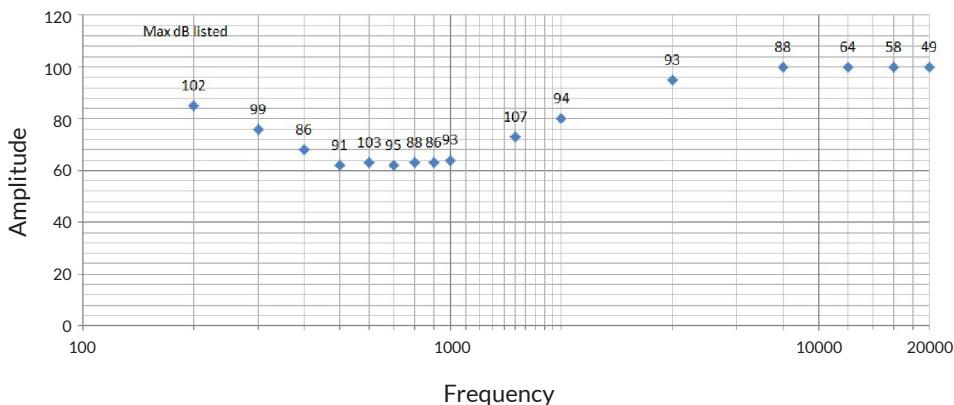
#### Model 83630AT

The input is compatible with the stereo output of the control computer. The left/right computer outputs are split to form four balanced amplifier outputs for each of four Fear Conditioning Test Chambers. In other audio stimulus applications, one could also support two independent speakers in two test chambers with this device.



- Power output: 1.25 W per channel
- Total Harmonic Distortion (THD): <0.2% @ 125 mW, <1% at 400 mW
- Frequency Response: 40 Hz - 20 kHz
- Input: 3.5 mm or 1/8" stereo
- Outputs (selectable): 3.5 mm or 1/8"; 4 channel mono outputs @ 8 ohm, internal stereo

The following Actimetrics Amplitude vs. Frequency chart shows the maximum dB possible inside an Actimetrics Chamber; the data was generated at a set computer volume of 55%. At each frequency, a pure sinewave was generated, and the sound level was measured with a calibrated sound level meter. We recommend that each system be tested as changes in PC volume, environment, and test equipment may yield different results as those presented.



## USB Interface for Stimulus Control

### Model ACT-714

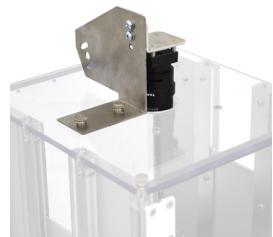
This multi-purpose Interface allows the FreezeFrame Fear Conditioning Software to simultaneously test one to four subject animals. The Interface features 8 Input lines and 8 outputs. This Interface may be used with a variety of Actimetrics® animal behavioral testing products. It is used in the Fear Conditioning Package to provide computer control and/or power as needed for the shock initiate, chamber house light, sound cubicle fan, optional cue light, and optional infrared house light.



## Camera and Lens

### Model AM2-CAM2

This 60 fps USB VGA camera can be mounted facing the top or the rear of the chamber; allowing multiple viewing angles of the subject. The infrared lens is designed for use in day/night environments while eliminating focus shift.



## Shocker Package

### Model HSCK100ATP

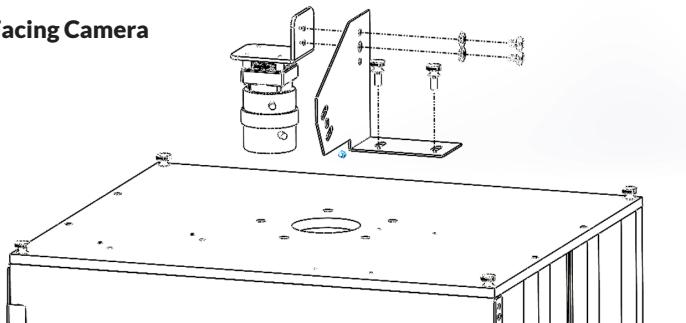
This programmable shocker may be used to electrify the grid floor of the operant chamber. Specialized connections allow use with the Fear Conditioning Chamber.



### Mounting the Camera

The camera can be mounted in the default top-down facing location or moved to the rear of the chamber mounted at an angle to allow for tether or swivel lines through the center hole in the ceiling panel. Instructions for each are below.

#### Chamber-Top Facing Camera

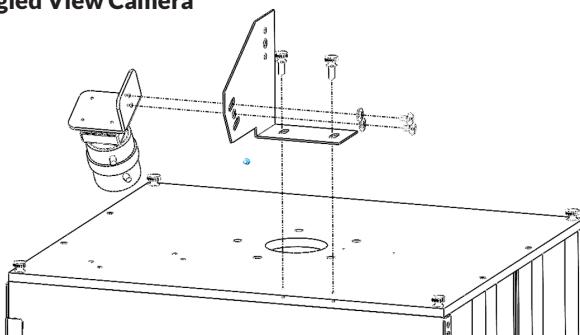


**Step 1:** Using the provided two (2) 8-32 x 0.25" screws, screw the metal brace to the camera using the upper holes as shown. Alternatively, a single (1) 8-32 x 0.25" screw is available for use with the center hole in instances when the required camera angle exceeds the allowable play.

**Step 2:** Remove lens cap

**Step 3:** Secure the metal brace to the center of the top panel of the chamber via the provided thumbscrews.

#### Chamber-Top Angled View Camera

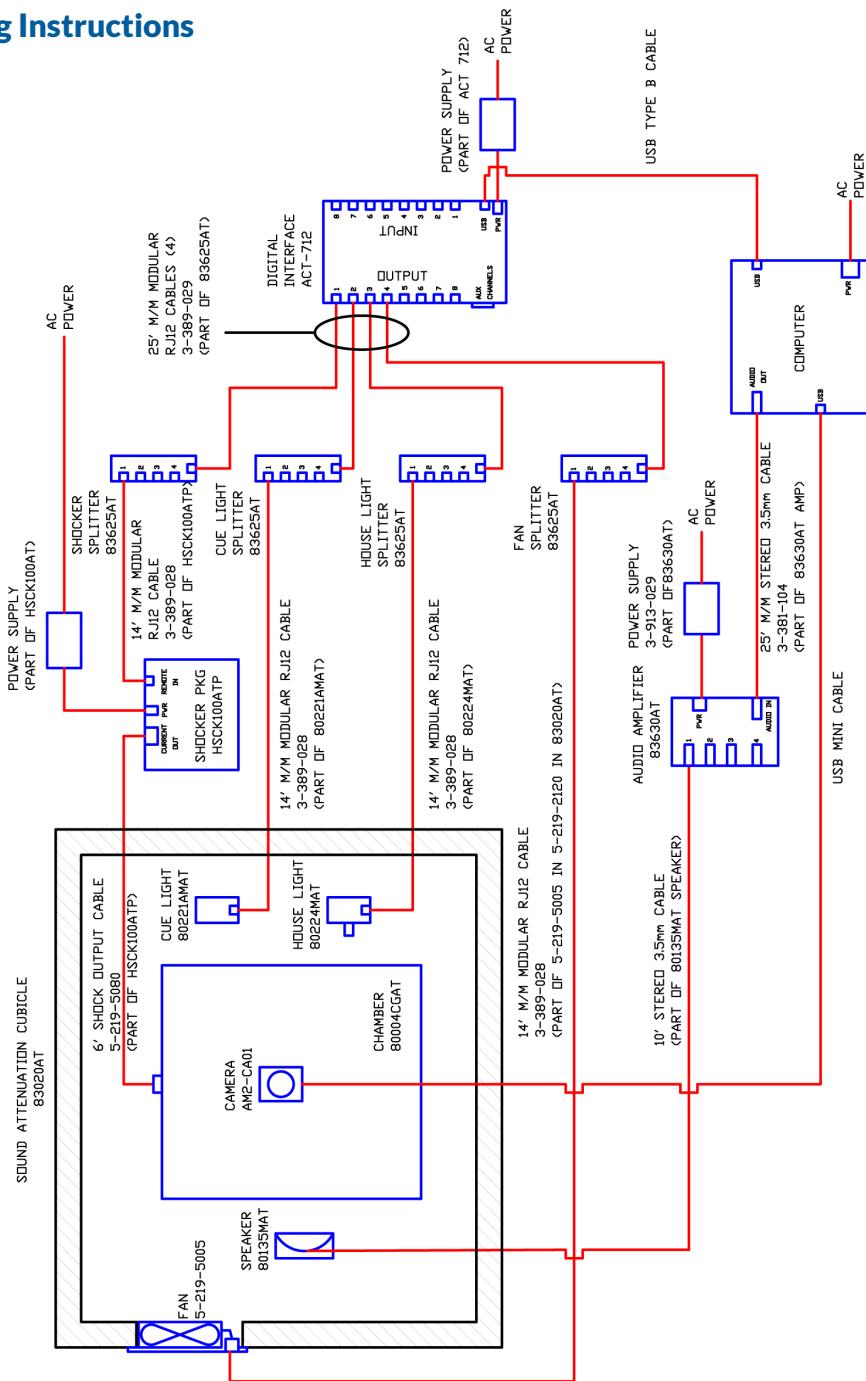


**Step 1:** Using the provided two (2) 8-32 x 0.25" screws, screw the metal brace to the camera using the angled holes as shown. Alternatively, a single (1) 8-32 x 0.25" screw is available for use with the center hole in instances when the required camera angle exceeds the allowable play.

**Step 2:** Remove lens cap

**Step 3:** Secure the metal brace to the rear facing side of the top of the chamber via the provided thumbscrews.

## Wiring Instructions



# Terms and Conditions

## Worldwide Headquarters

Lafayette Instrument Company  
3700 Sagamore Parkway North  
Lafayette, IN 47904, USA

Tel: (765) 423-1505

Fax: (765) 423-4111

[sales@lafayetteinstrument.com](mailto:sales@lafayetteinstrument.com)

## European Office

Tel: +44 1509 817700

Fax: +44 1509 817701

[sales@campdeninstruments.com](mailto:sales@campdeninstruments.com)

## Placing an Order

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

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

## Exchanges and Refunds

No item may be returned without prior authorization from Lafayette Instrument Company and a Return Materials Authorization (RMA#) number which must be affixed to the shipping label of the returned goods. The merchandise should be packed well and insured for the full value. 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. 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 Materials Authorization Number (RMA). When returning instrumentation for service, please contact Lafayette Instrument to receive an RMA number. Your RMA number will be good for 30 days. Address the shipment to:

Lafayette Instrument Company  
RMA# XXXX  
3700 Sagamore Parkway North  
Lafayette, IN 47904, USA.

Shipments cannot be received at the PO Box. All items should be packed well and insured for full value. An estimate of repair will be given prior to completion. We must receive a copy of your purchase order via email before non-warranty repair work can commence.

## 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 contact the Lafayette Instrument Customer Service Department for repair or replacement of the damaged merchandise.

## Limited Warranty

Lafayette Instrument Company warrants equipment to be free of defects in material and workmanship for a period of one year from the date of shipment, except as provided hereinafter. 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. 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.
2. This warranty does not cover damage to components due to improper installation by the customer.
3. Consumable and/or expendable items, including but not limited to electrodes, lights, batteries, fuses, O-rings, gaskets, and tubing, are excluded from warranty.
4. Failure by the customer to perform normal and reasonable maintenance on instruments will void warranty claims.
5. 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.

