

MAN500

**Models 80116T,
80116TM, 80116TR,
80116TRM, 80117RM**

Lafayette Nosepoke User's Manual



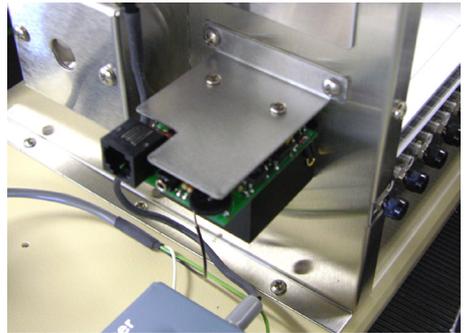
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Description

The Lafayette Instrument Company Nosepokes described in this manual are used for the conditioning of animals with computer controlled operant systems using ABET, ABET II or other computer interface and software. They are designed for reliable photocell detection when a subject blocks the infrared beam in the Nosepoke environment. All are equipped with a tricolor light for presenting different light based stimuli. In addition, the 80117RM has an oversized plastic surround and specially designed conical hole for animals with head stages as well as provisions for liquid delivery.



Note: These nose pokes could also be used with the Behavioral Conditioning Console (Model 81335C) in the Lafayette Learning Systems with some limited features. The Model 80116O and Model 80116OR nose pokes, not covered by this manual, are through-hole designs that can be used with either the stand alone control console or computerized systems. The open hole design is also suitable for air puff stimuli, drug delivery or the delivery of olfactory stimuli.

Model 80116T	Nosepoke with Tri-Color Light (mouse)
Model 80116TM	Nosepoke with Tri-Color Light on standard modular panel (mouse)
Model 80116TR	Nosepoke with Tri-Color Light (rat)
Model 80116TRM	Nosepoke with Tri-Color Light on standard modular panel (rat)
Model 80117RM	Nosepoke with Tri-Color Light, Conical Entry, Liquid Delivery, and extra relief on a standard modular panel (rat)

Specifications

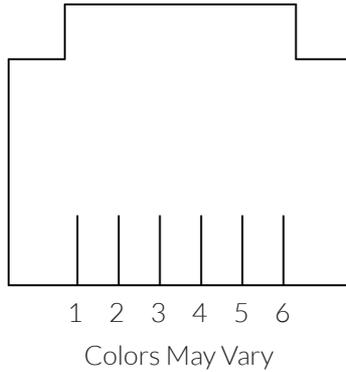
Power:	+28VDC input
Photocell Output:	Active low
Computer Control:	3 bit word (active low (Logic 0) turns each control line ON)

Wiring Instructions to ABET Model 81408/9 I/O Block

Use the supplied 6 pin modular cable to connect to three consecutive outputs for stimulus control.

Connector End View

- 1 = Output 3
- 2 = Ground 0V
- 3 = Output 2
- 4 = Ground 0V
- 5 = Output 1
- 6 = +28vdc



Note: Control Outputs need to be open collector or TTL -5 VDC

Use the 2.5mm cable with stripped and tinned wires for response input:

Black/Bare:	Gnd
Red:	Nosepoke Response (NO) Active Low when beam is broken
White:	Nosepoke Response (NC) Active Low when beam is released

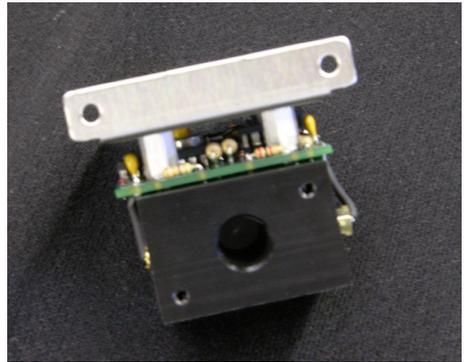
Note: + 28 V DC for both the stimulus light and the I/R Photobeam circuit is obtained through the modular cable. Therefore, this cable must be connected even if the cue lights are not being used.

Operating Instructions

Mount Model 80116T or Model 80116TR to the Lafayette Animal Learning Standard Test. Model 80116TM, 80116TRM, or Model 80117RM Modular Nose Pokes may be used with the 80004 Modular test chamber as well as modular test chambers provided by other manufacturers.

The 6 pin modular connector establishes contact with three sequential outputs in either 81408 or 81409 I/O Connection Block. This connection is in parallel with the individual terminal screws so make sure the group selected is not being used to control other devices. Contact Lafayette Instrument Co. if using this product with other control systems.

1. Connect the cable with a 2.5mm plug on one end as indicated above.
 - a) The black/bare wire may be connected to any terminal screw on the “TALL” row labeled Inputs 1 - 8. This row provides a GND connection for all inputs.
 - b) Connect the Red wire to an available input line on the “SHORT” row labeled Inputs 1 - 8. For the 81335C Control, follow the instructions for connecting any press bar (FL, FR, BL, or BR). The nose poke will simply replace the press bar function in your schedule selections
 - c) Optional. Connect the Whitewire to a second input line on the “SHORT” row labeled Inputs 1 - 8. This input may be used to determined when a nose poke is terminated, i.e. the beam is released in ABET and other suitable programming systems. The 81335C Control does not have provisions for the NC response.
2. The thumb wheel potentiometer on the PCB is an overall light intensity control. Rotate to the left for full intensity and rotate to the right for low intensity.
3. The tables on the next page indicate the outputs to use for each stimulus function available from these units. This includes a high and low intensity of each of the three colored stimuli, and multiple ramp or flash rates for the yellow stimulus only.



Function Table for Nose Poke Cue Control (Mode OFF)

Function	ABET Intensity	Generic Output Sequence			Binary Logic Notation (0 = ON, 1 = OFF)		
		Out 1	Out 2	Out 3	Bit 3	Bit 2	Bit 1
Cue Off	OFF	OFF	OFF	OFF	1	1	1
Mode Select On	1	ON	OFF	OFF	1	1	0
High Intensity Yellow	2	OFF	ON	OFF	1	0	1
Low Intensity Yellow	3	ON	ON	OFF	1	0	0
High Intensity Green	4	OFF	OFF	ON	0	1	1
Low Intensity Green	5	ON	OFF	ON	0	1	0
High Intensity Red	6	OFF	ON	ON	0	0	1
Low Intensity Red	7	ON	ON	ON	0	0	0

When using Output 1 (Bit 1) with other outputs it must be turned ON at the same time or immediately after the other output or you will turn the Mode Select ON and the table that follows will determine the state of the output.

Function Table for Nose Poke Cue Control (Mode ON)

Function	ABET Intensity	Generic Output Sequence			Binary Logic Notation (0 = ON, 1 = OFF)		
		Out 1	Out 2	Out 3	Bit 3	Bit 2	Bit 1
Cue Off	OFF	OFF	OFF	OFF	1	1	1
Mode On	1	ON	OFF	OFF	1	1	0
Ramp Fast @ 10 Hz	2	OFF	ON	OFF	1	0	1
Ramp Medium @ 10 Hz	3	ON	ON	OFF	1	0	0
Ramp Slow @ 1 Hz	4	OFF	OFF	ON	0	1	1
Flicker Fast @ 10 Hz	5	ON	OFF	ON	0	1	0
Flicker Medium @ 5 Hz	6	OFF	ON	ON	0	0	1
Flicker Slow @ 1 Hz	7	ON	ON	ON	0	0	0

All Mode ON functions use the Yellow cue light. For the Mode ON function to take effect, the second output command must occur between 10-50ms following the Mode ON command or the unit may revert back to Mode OFF functions.

Mode Function Application

Use the following sequence when using the mode function on the nosepoke modules.

1. Turn the first output in the three output sequence associated with the nose poke cue ON or use ON with Intensity 1 in the ABET or ABET II software.
2. Insert a delay of 10-50 ms
3. Use the above table to turn on the outputs associated with the desired function or use ON with Intensity 2 – 7 as indicated.
4. The function will turn on immediately
5. Turn all the outputs OFF to turn the cue light off.

Repeat the same sequence as needed to repeat the same function or to activate a different function.

Notes

Enter user Notes here for your convenience.

Terms and Conditions

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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.

Repairs

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.
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.

Export License

The U.S. Department of Commerce requires an export license for any polygraph system shipment with an ULTIMATE destination other than: Australia, Japan, New Zealand or any NATO Member Countries. It is against U.S. law to ship a Polygraph system to any other country without an export license. If the ultimate destination is not one of the above-listed countries, contact us for the required license application forms.