

Pathfinder Mouse Motorized Maze System Assembly Instructions



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Description

The Pathfinder Maze System provides an amazing advancement in controlled spatial learning and memory devices. This maze system allows for the same control of visual and auditory cues as the Rat Pathfinder Mazes and a unique fixed goal box design to eliminate olfactory cues when the maze is rotated between trials. The Pathfinder controls these variables through standard features, such as:

- Control bridges or doors (optional) with 20 feet of separation between the operator and the maze
- Washable scent/stain-resistant finishes eliminate unwanted stimuli
- Aluminum arena, runways and goal boxes provide a sturdy durable platform that will not absorb odors
- EZ-Turn design lets you rotate the arena and runways 359 degrees to control spatial cues without disconnecting the control cables or wires, and without moving the goal boxes.
- An optional arena kit and optional side walls are available in clear polycarbonate, as well as red tinted or smoked acrylic.

The small electric servo motor used in this system may be connected to the bridges for a completely open maze or to the doors of the optional arena. The arena can be used with open runways and goal boxes or the runways and goal boxes can be enclosed with clear, red tinted or smoked wall kits. The electrical switch box used to control the bridges or doors features individual switches for each runway plus a master switch that lets you pre-load the door/bridge positions and then activate all motors simultaneously. Connections are also provided for optional interface control.

Specifications

Manufactured Materials

Polycarbonate Walls (Clear Only)
Polycarbonate Guillotine Doors (Clear Only)
High-Strength Lightweight Aluminum

Dimensions

Overall Weight: 65lbs
Overall Diameter: 39.0"
Overall Height (to maze floor): 35.0"
Min/Max Diameter of the Arena: 8"/9"
Remote Control Unit:
Length: 8.5"
Width: 3.5"
Height: 1.75"
Can be Operated up to 20'

Arms

Length of an Arm: 12"
Outer Width of an Arm: 2.25"
Inner Width of an Arm: 2.125"
Height of an Arm Side Channel: 0.5"
Height of the Standard Arm Walls: 6"

Doors

Height of the Arena Guillotine Doors and Columns: 6"
Clearance Width Through a Guillotine Door: 2.25"
Clearance Height Through a Guillotine Door: 2.5"

Goal Boxes

Length: 3"
Width: 3"
Food Cup: 1.25" dia x 0.6875" deep

Optional Accessories

Wall, arena, and inset kits provide the exact configuration and level of animal containment required for your research. Each is available in clear polycarbonate, or smoked or red tinted acrylic. When using the Arena Kit, the guillotine doors are connected to the same linkage used to operate the bridges while the bridges are locked in the up position. The insert kits are provided to better define standard T, Y and Plus maze configurations as well as a straight 35" long runway. The following are all ordered separately:

89217 Mouse Maze Arena – Clear
89217R Mouse Maze Arena – Red
89217S Mouse Maze Arena – Smoked

89216 Mouse Maze Wall Kit – Clear
89216R Mouse Maze Wall Kit – Red
89216S Mouse Maze Wall Kit – Smoked

89215 Mouse Maze Insert Kit – Clear
89215R Mouse Maze Insert Kit – Red
89215S Mouse Maze Insert Kit – Smoked

See page 7 for a diagram details

Assembly

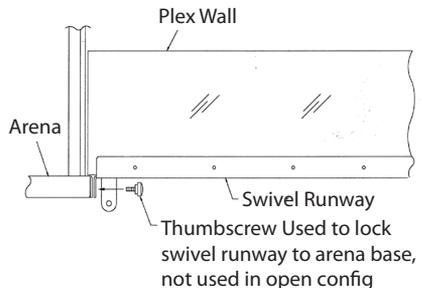
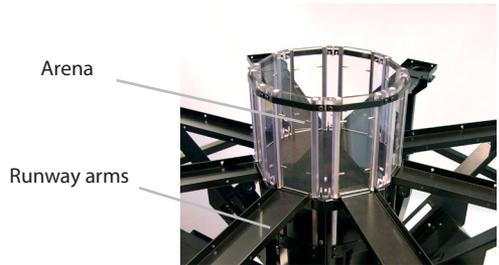
The unit will come fully assembled except for walls and inserts. It may be necessary to remove one or more goal boxes and supports if the unit will not pass through the doorway. The only tools required are a Phillips head screwdriver, 5/32" Allen wrench, and perhaps a pliers or some small wrenches. A 5/16" socket wrench or nut driver is also very useful.

Arenas, Doors, and Bridges

(See the drawing on page 6 to assist you with steps 1- 5)

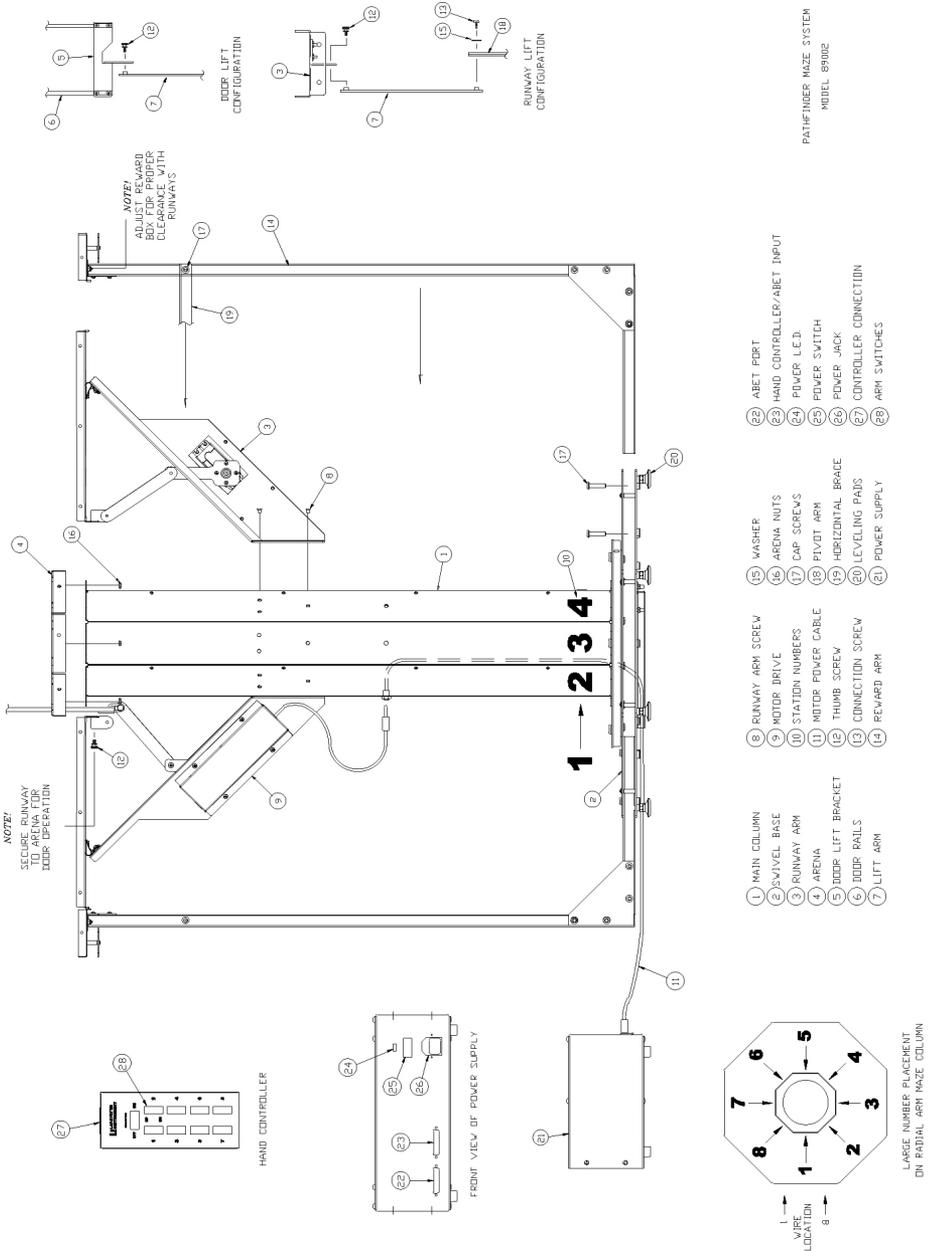
Installation of a Central Arena

1. Locate and remove the (4) kep nuts holding the central platform to the maze hub. Remove the platform.
2. Place the arena on top of the column assuring that all (4) threaded studs are seated into the mating holes on the hub. Install the (4) kep nuts provided and tighten securely with a 5/16" socket wrench or suitable alternative. Tighten these as evenly as possible and make sure that all doors slide freely in their guides.
3. Remove the 8/32" thumbscrew securing the door/bridge control arm to the bridge.
4. Lift up slightly on the door and secure the control arm to the door under carriage.
5. Use additional 8/32" thumbscrews to secure the runway/bridge to the hub lip in front of the door. (See diagram at right for details)



Electronic PathFinder Maze System

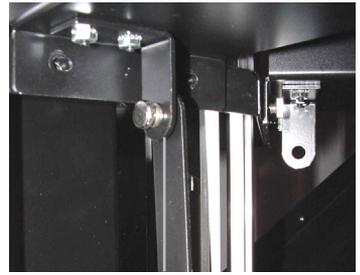
Main Assembly Diagram



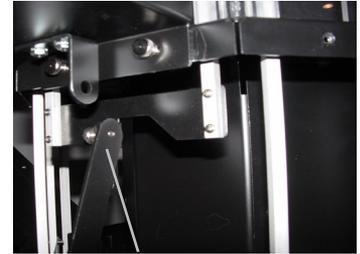
PATHFINDER MAZE SYSTEM
MODEL 89002

Removal of the Central Arena

1. Remove the 8/32" thumbscrews securing each bridge to the hub lip in front of each door and allow the bridges to drop out of the way.
2. Lift up slightly on the door and remove the 8/32" thumbscrews holding the control arm to the door under carriage.
3. Remove the (4) kep nuts holding the central arena and lift the arena from the hub.
4. Place the central platform over the maze hub and tighten the (4) kep nuts securely with a 5/16" socket wrench or suitable alternative.
5. Connect each control arm to the runway/bridge with an 8/32" thumbscrew.



Runway connection



Door connection

Connecting the Power Supply and Control Box

1. Place the power supply in close proximity to the maze and connect the numbered cables to the numbered sockets on the front of the unit.
2. Connect the 25' DB-25 Cable between the hand held switch box and the back of the power supply. The female end of the cable goes to the switch box and the male end goes to the power supply. Connect the hand held box first to make sure that the proper connection is made at the power supply.
3. The hand held switch box may be connected to a tripod for convenience.
4. Connect the IEC cable to the back of the power supply and a suitable 115 V AC 60 Hz Line Voltage (only model 89002*C is suitable for 230V AC 50 Hz).
5. Make sure the master switch on the hand held switch box is OFF and turn the power switch located on the back of the power supply and control box ON.
6. Make sure everyone and everything is clear of the door/bridge linkage.
7. Use any combination of switches and the master switch to control the doors and/or bridges as needed.



back of power control box



Front of power control box



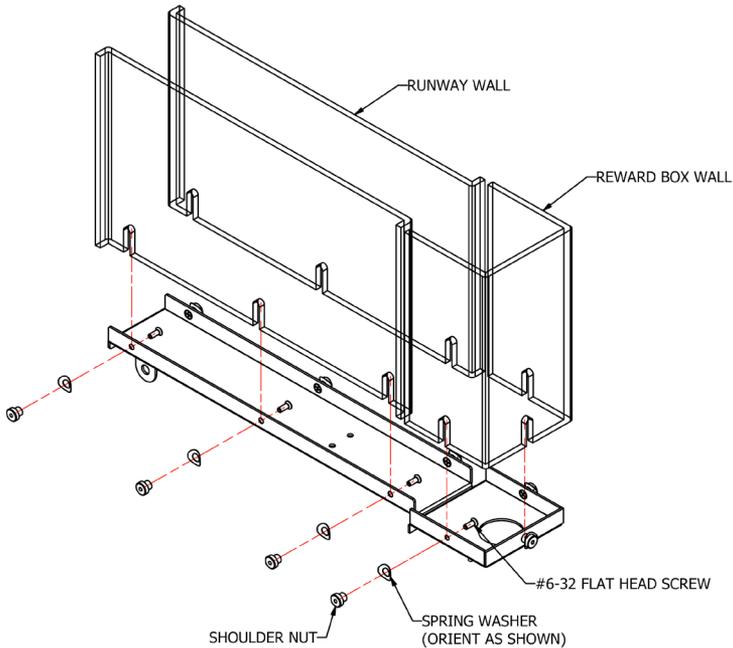
switch box

Electronic PathFinder Maze System

Installation of Optional Wall Kits

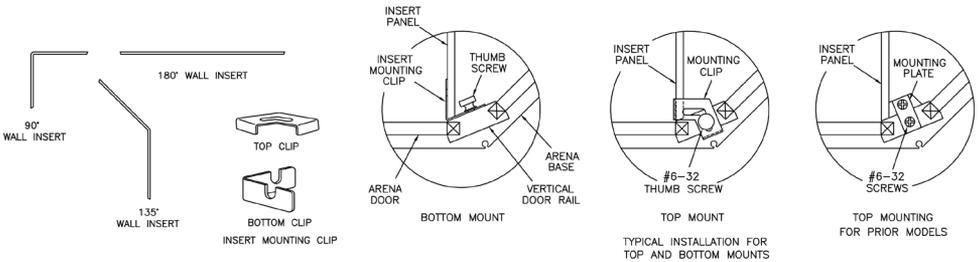
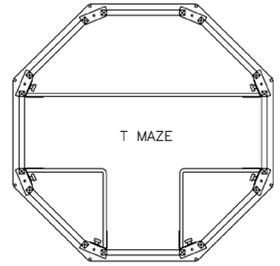
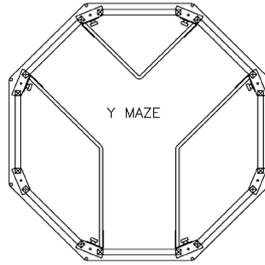
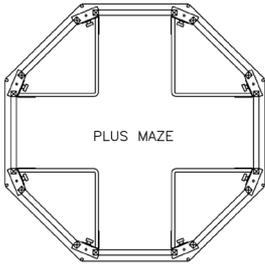
(See the illustration below for details)

1. Begin by placing the spring washer over the shoulder nut, orienting the washer as shown below.
2. Insert the flat head screw through the mounting holes in the runway and secure with a shoulder nut on the opposite side. A Phillips head screw driver may be required.
3. Align the slots in the walls with the shoulder screws so the wall is between the runway and the spring washer. Then, press down firmly to lock the wall in position. The walls will fit very tightly.
4. Repeat this process for the remaining walls.



Installation of Optional Insert Kit Walls

MAZE INSERT KIT CONFIGURATION



Using the ABET Computer Interface System:

Connect the ABET Starter Interface (Model 81401) or Expander Interface (Model 81402) to Model 89002 Motorized Maze using the following guidelines.

1. Disconnect the cable from the Switch Box and connect the female DB-25 plug to the male socket on the ABET Interface Module. The following connections include a full ABET I/O Block so that inputs may be used with photo beam sensors and additional outputs used to control other accessories.
2. Connect the small 6' DB-25 Jumper Cable from the female socket on the radial arm maze power supply to the male socket on the 81408 Full I/O Block.
3. Connect a 25' DB-25 Cable from the remaining socket on the I/O Block to the remaining socket on the interface module.
4. Instructions for connecting photo beam sensors or other accessories to the ABET interface should be supplied with those products. The ABET software package should include a sample schedule for running the Radial Arm Maze.

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 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 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 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.

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.