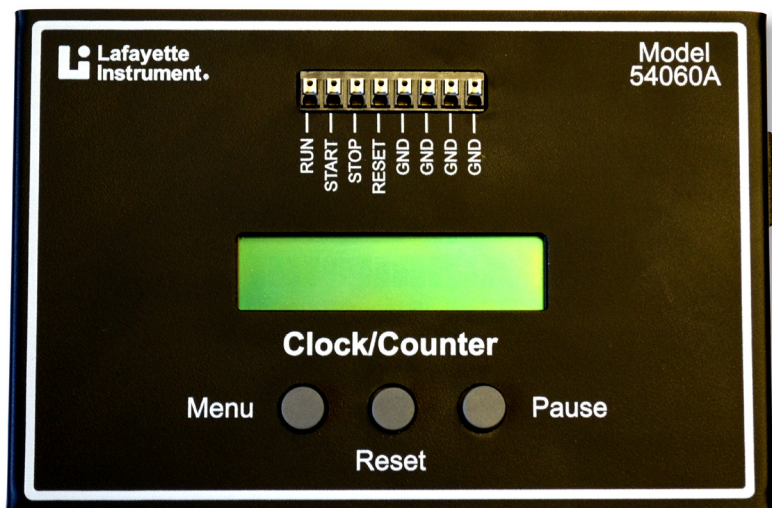


MAN54060A

Model 54060A

Economy Clock/Counter

Instruction Manual



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Description

The Economy Clock/Counter is a timing device that is capable of accurately recording times down to the millisecond. This device is powered by a single AA battery, and supporting circuitry is engaged to provide all the operational needs of this device. All of the switch contacts can be configured for Normally Open or Normally Closed contacts, adding versatility to the device. This unit can display times up to 999.999 seconds before roll-over of the display occurs, and it can display up to 9,999 count inputs before roll-over occurs.

Specifications

- Voltage: AA Battery (1.5V Alkaline AA Included)
- Power: 12mW (no tone); 1/5 W (tone on)
- Weight: .7 lbs.
- Size: 6 3/8" wide x 4 1/4" long x 1 5/8" tall

Operation

Turn the Economy Clock/Counter on by toggling the power button on the side so that the line symbol is pressed down.



If the battery is below a certain threshold, the Low Battery Screen will appear indicating only a couple hours of life remain. Press the button corresponding with Continue to proceed to the test screen.



Wiring Instructions

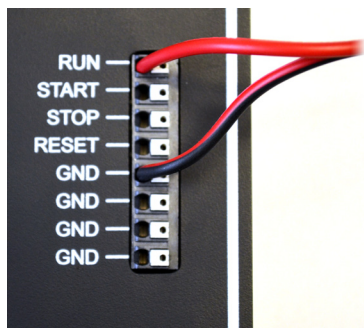
24 AWG min

16 AWG max

Stripped portion length of wire should be a minimum of 8mm and a maximum of 12mm

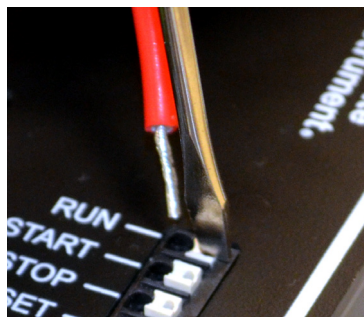
Insertion: Depress the white push button with screwdriver (shown at right), and place stripped wire end into corresponding terminal block hole

Removal: Depress the white push button; pull wire out of hole



Buttons

Menu Button: Pressing the Menu button while no test is running will cycle through the following options. Press either the Reset button or Pause button to select the first or second option respectively. Each time the device is powered on, the bolded option is set by default.



- RUN: **NO** NC
- START: **NO** NC
- STOP: **NO** NC
- RESET: **NO** NC
- TONE: **OFF** ON
- START: **SNGL** REP

Reset Button: Pressing the Reset button is identical to activating the Reset input. The Reset input is invalid if the timer is running or if the device is paused.

Pause Button: Pressing the Pause button toggles the Pause state. During the Pause state, no inputs can be activated and the only button that works is the Pause button to toggle out of the Pause state.



Inputs

Run: If the Run input is the initial input received, the unit will start timing for the duration of the input. Each activation of the input will add to the count and continue the clock. The Start and Stop inputs will be ignored until a Reset command is received.

Start: If a Start input is the initial input received, the unit will start timing until a Stop input is received. During the timing or after it has stopped, the Run input will add an additional count.

Stop: The Stop input is used to stop the timer if Start was used as the initial input.

NO (Normally Open): The input is activated when it is connected to ground.

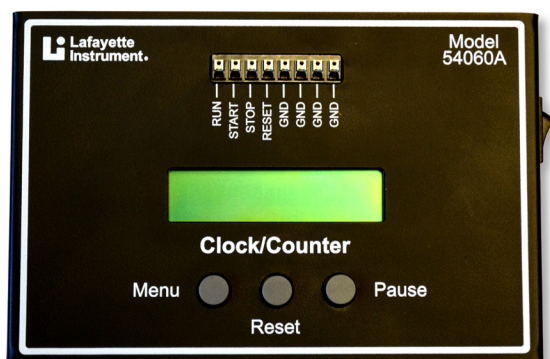
NC (Normally Closed): The input is activated when it is disconnected from ground.

TONE: If ON, whenever the Run input is activated, a tone will sound for the duration of the activation.

Start Options

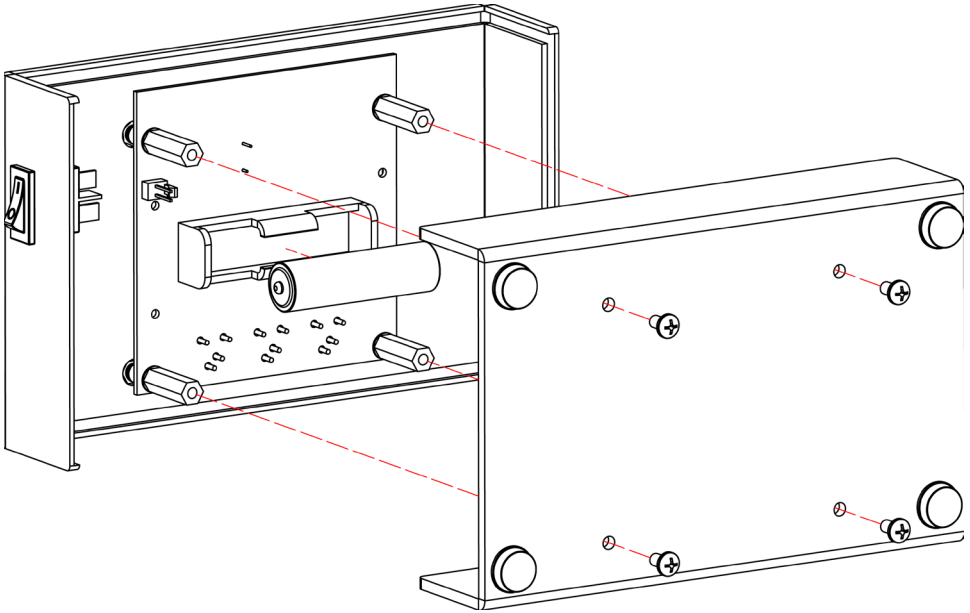
SNGL: If Start is set to Single Mode (SNGL), then the Start and Stop inputs may only be used once before the Reset command is received.

REP: If Start is set to Repeat Mode (REP), then the Start and Stop inputs may be used multiple times before the Reset command is received. Each subsequent Start will continue the timer where it left off.



Battery Exchange Instructions

1. Loosen/remove four (4) screws on underside of enclosure.
2. Gently separate top and bottom of enclosure.
3. Remove discharged battery; replace with new battery
4. Gently slide top and bottom of enclosure back together.
5. Insert/tighten four (4) screws on underside of enclosure.



Examples

Hole Type Steadiness Tester Settings

- RUN: **NO** NC
- START: **NO** NC
- STOP: **NO** NC
- RESET: **NO** NC
- TONE: **OFF** **ON** (either is acceptable)
- START: **SNGL** REP

Connect a Lafayette Instrument Model 32011 binding post to any ground port of the 54060A. Connect the stylus to the run input port of the 54060A. Keep the default settings as all contacts Normally Open. The data recorded will show the number of times the subject touches the side of the hole and the total amount of time the subject is in contact with the side of the hole.

Switchmat Settings

- RUN: **NO** NC
- START: NO **NC**
- STOP: **NO** NC
- RESET: **NO** NC
- TONE: **OFF** ON
- START: **SNGL** REP

For a 40 yard dash, connect the Lafayette Instrument Model 63516 black wire to any ground port of the 54060A. Connect the red wire to the Start input of the 54060A. The Stop input on the 54060A should be wired to the red binding post of the 63502IR, while the black binding post of the 63502IR should be wired to any other ground port of the 54060A. When the runner steps off of the switch mat, the clock begins to run until the runner initiates the Stop input by crossing the designated line.

Notes

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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:

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- 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.
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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