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JP Tech, Inc. • PO Box 863 • 2286 Church Street • East Troy • WI • 53120
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REVISED 6/30/16
1. Read Manual to familiarize yourself with the operation of the meter.

2. Mount Unit. **FOR PUMP (P) MODELS:** Attach feed tubes to the Squeeze tubes using wire ties or stainless hose clamps. **NOTE:** Pick up tube may float so you might need to weigh it down.

3. Connect the 15’ of 2 wire twisted pair signal wire to the dry contact switch (red to the more positive side). **IMPORTANT:** If you shorten this wire, remove all shielding from the ends of the twisted pair and put tape around the ends. At no time should the shielding be grounded.

4. Connect the 120VAC power source plug into the 120VAC receptacle.

5. Apply power to the unit.

6. Set your Presets (how often to feed chemicals) and Timers (how much chemical to feed). Use the Worksheet at the end of the manual to figure these values. These values can be changed any time to get the correct balance.

7. You can use the “Prime Pump” function to prime these pumps if need be.

**NOTE FOR PUMP (P) MODELS:** CHECK PUMP SQUEEZE TUBE REGULARLY FOR INTEGRITY
**INSTALLATION**

**TIME-P1 Model**

**PUMP OUTPUT**
(Only in Pump Control Versions)

The TIME-P1 models come with two 120 VAC pigtails with female receptacles. Any 120 VAC pump which draws no more than five amps can be plugged into these receptacles. When the preset number of seconds is attained, the pump will be energized for the length of time that the operator has designated in TIMER1 and TIMER2.

**TWISTED PAIR**

All models of the meter come with 15 feet of twisted pair wire to be connected to a switchable device. The “OFF” position is the normal, open state. When contact is made (“ON”), the meter begins to accumulate seconds. The red wire must be connected to the positive terminal and the black wire to the negative terminal.

**USE WITH A DRY CONTACT ONLY**

**WARNING:**

All board components and circuitry use a “floating ground” and must remain isolated from all other circuits and grounds. This is only an issue if the board is removed outside its protective casing.

**TIME-P3 Model**

**PUMP OUTPUT**
(Only in Pump Control Versions)

The TIME-P3 models come with either one or two peristaltic pumps. When the preset number of seconds is attained, the pump(s) will be energized for the length of time that the operator has designated in TIMER1 or TIMER2. Facing the controller, Pump 1 is to the left and Pump 2 is to the right.

**120 VAC POWER**

The meter operates off 120 VAC. Pump models of the time meters use a three wire grounded plug.

**230 VAC POWER users should connect directly to the terminal strip inside the meter.**

**TWISTED PAIR**

All models of the meter come with 15 feet of twisted pair wire to be connected to a switchable device. The “OFF” position is the normal, open state. When contact is made (“ON”), the meter begins to accumulate seconds. The red wire must be connected to the positive terminal and the black wire to the negative terminal.

**USE WITH A DRY CONTACT ONLY**

**WARNING:**

All board components and circuitry use a “floating ground” and must remain isolated from all other circuits and grounds. This is only an issue if the board is removed outside its protective casing.

**PUMP PARAMETERS (TIME-P3 ONLY)**

10’ HEAD MAX

75’ LATERAL RUN MAX
QUICK START

USING THE METER

JP Tech’s Time Based meters are designed for measuring accumulated seconds. TIME-P1 and TIME-P3 models of the Time Based meters can also control two (2) pumps.

JP Tech’s Time Based meters incorporate a simple menu design featuring a two (2) button keypad. Pressing the SELECT key once cycles through different menu screens. Holding the SELECT key for about three (3) seconds will enable changes to be made on the menu screen chosen (not applicable on all screens; see the Menu Operation section for information on which values are editable).

After holding the SELECT key for three (3) seconds, a flashing cursor will appear, allowing for changes to be made. In this mode, the SELECT key moves your cursor right, and the CHANGE key advances the selected value by one. Once you have set the values you want, hold the SELECT key to return to the menu.

NOTE: The SELECT key will not change any values by itself! It only provides a way to move through menu screens or move the flashing cursor.

When the cursor is not flashing, pressing both the SELECT and CHANGE keys together will take you back to the default ‘SECONDS’ screen (as shown above). However, while editing values (cursor is flashing), pressing both the SELECT and CHANGE keys together will reset the value to zero.
MENU OPERATION

Menu Hierarchy

1. One Shot Count (Default Screen if One Shot Mode is enabled)
2. Cumulative Second Total (Default Screen)
3. Resettable Second Total
4. Prime Pump (if either pump is enabled)
   IF PUMP 1 IS ENABLED
5. Preset 1
6. Preset 1 Count Left
7. Timer 1
8. Timer 1 Count Left
9. Cycle Count 1
   IF PUMP 2 IS ENABLED
10. Preset 2
11. Preset 2 Count Left
12. Timer 2
13. Timer 2 Count Left
14. Cycle Count 2
14. Setup
   14.1. Relay 1
   14.2. Relay 2
   14.3. Display Mode
   14.4. One Shot Mode
   14.5. Keyed On/Off
   14.6 SW Debounce
MENU OPERATION

Main Menu Screens

NOTE: The status of the meter is indicated in the lower right hand corner. OFF indicates that the counters are off, and ON that the counters are on. (P Models Only): If pumps are enabled, P1 (pump 1), P2 (pump 2), or P12 (pumps 1 and 2) will appear.

1. CUMULATIVE SECOND TOTAL

This menu screen shows the accumulated second total over the life of the meter. This is the default menu screen and will appear when both the SELECT and CHANGE keys are pressed at the same time.

NOTE: This value cannot be reset and is good to 1 trillion seconds. This is for EPA compliance and lifetime tracking standards.

2. RESETTABLE SECOND TOTAL

This menu screen totals accumulated seconds similar to CUMULATIVE SECOND TOTAL, but can be reset to zero at any time.

NOTE: Remember that while editing values, pressing both the SELECT and CHANGE keys together will reset the value to zero. Outside of editing values, this will navigate back to the CUMULATIVE SECOND TOTAL menu screen.

3. PRIME PUMP (if either pump is enabled)

Holding SELECT on this screen will allow you to enable/disable both pumps separately. Press SELECT to switch between PUMP 1 and PUMP 2. When a pump is enabled, the “OFF” symbol will disappear, replaced by either a P1 (pump 1), P2 (pump 2), or P12 (pumps 1 and 2) to indicate which pump(s) is on.

NOTE: There is no automatic shutoff once pumps are enabled!

14. SETUP

Holding SELECT on this screen will allow you to enter Setup (see page 9; Setup Options for more information).
MENU OPERATION

Pump Controls (P models only)

4. PRESET 1 / 9. PRESET 2
This screen is used to set the interval of seconds before
the pump is turned on. The pump will activate for the
length of time (in seconds) specified in the corresponding
TIMER.

5. PRESET 1 COUNT LEFT / 10. PRESET 2 COUNT LEFT
This screen shows the number of seconds remaining
before the meter activates the corresponding TIMER.
NOTE: This screen is for information purposes only and
does not need to be edited.

6. TIMER 1 / 11. TIMER 2
This screen is used to set the amount of time (in seconds)
the corresponding pump should run. The number of
seconds in PRESET COUNT LEFT will count to zero (0),
activating the corresponding pump for the amount of
time (in seconds) set here.

7. TIMER 1 COUNT LEFT / 12. TIMER 2 COUNT LEFT
This screen shows the amount of seconds remaining
while the corresponding pump is currently “on”. This
screen can also be used to add time to the current pump
cycle without affecting the TIMER setting.

8. CYCLE COUNT 1 / 13. CYCLE COUNT 2
This screen shows the number of times the
corresponding PRESET and TIMER have completed their
cycles.
14.1 RELAY 1 / 14.2 RELAY 2
This screen is used to select what kind of device you are controlling. You can choose between a PUMP or to DISABLE one or both of the relays. Enabling either of the relays will allow access to the corresponding PUMP and TIMER menus.

14.3 DISPLAY MODE
Holding SELECT will allow you to toggle between seconds, minutes, or hours as the default unit of time on the meter.

14.4 ONE SHOT MODE
One Shot Mode allows you to close the dry contact for a burst, rather than closing for the period of time set in TIMER.

14.5 KEYED ON/OFF
This screen allows you to enable or disable the keyed on/off function. If ENABLED, holding the CHANGE key for three (3) seconds enables the timer. For most users, this should remain DISABLED.

14.6 SW DEBOUNCE
When the contacts of a switch close, sometimes they can bounce, so that a single press can appear like multiple presses. If this is happening, enabling Switch Debounce will ignore quick subsequent presses of the switch detected within the second range input here. Switch debounce is preset at the factory, and usually does not need to be changed.
MAINTENANCE

The PERISTALTIC Series of metering pumps require a minimal amount of maintenance to achieve optimal performance. Periodically check the squeeze tube for cracks, deterioration, or swelling. The squeeze tube will typically need to be replaced about every 6 months (chemical compatibility and duty cycle can cause this interval to vary). NOTE: squeeze tubes are NOT a warranty item.

VERY IMPORTANT: When replacing squeeze tubes, DO NOT TWIST THE TUBES WHEN FITTING THEM AROUND THE ROLERS. Insert them so they remain flat in the same plane. (The writing on the tubes should be inline on both sides of the rollers.)

Applying lube to the squeeze tube once a month can extend the life of the tube, minimize wear on other contacting parts, and promote smoother pump operation. Use Knight Tube Lube (P/N 245-4-SQZLUBE) or an equivalent silicone-based lubricant.

1. Remove the faceplate of the pump.
2. Apply a thin bead of Tube Lube to the inner surface (the side that the rollers contact) of the squeeze tube between the 9 o’clock and 3 o’clock positions. Avoid getting the lube near the pinch points where the bottom of the faceplate grips the tube.
3. Put the faceplate back on the pump

Activate the pump under normal conditions—the lubricant will be evenly distributed as the pump rotates.

CAUTION: To avoid severe or fatal shock, always disconnect main power when servicing the unit.
### PARTS LIST

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PART NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELASTIC SQUEEZE TUBE</td>
<td>245-4-ELSQZTUB</td>
</tr>
<tr>
<td>(Standard with unit. Good for weak to strong alkanis, weak to medium acids.)</td>
<td></td>
</tr>
<tr>
<td>THERMISTANT SQUEEZE TUBE</td>
<td>245-4-TMSQZTUB</td>
</tr>
<tr>
<td>(Has superior acid-resistant and alkali-resistant qualities.)</td>
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</tr>
<tr>
<td>FLUORO-VITON SQUEEZE TUBE</td>
<td>245-4-FVSQZTUB</td>
</tr>
<tr>
<td>(Good for strong solvents and acids.)</td>
<td></td>
</tr>
<tr>
<td>SQUEEZE TUBE LUBRICANT</td>
<td>245-4-SQZLUBE</td>
</tr>
<tr>
<td>100 RPM/24 VDC PERISTALTIC GEAR MOTOR</td>
<td>245-4-GEARMOTOR-FV</td>
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<tr>
<td>ROLLER FOR PERISTALTIC UNITS</td>
<td>245-4-ROLLER</td>
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<tr>
<td>FACEPLATE FOR PERISTALTIC UNITS</td>
<td>245-4-FACEPLATE</td>
</tr>
<tr>
<td>ROLLER / TUBE PUMP HOUSING</td>
<td>245-4-PMPBODY</td>
</tr>
<tr>
<td>DELIVERY TUBING—20’ ROLL</td>
<td>245-4-PLYTB20</td>
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<tr>
<td>(Polyethylene 1/4’ OD, rigid wall tubing)</td>
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<tr>
<td>DELIVERY TUBING—50’ ROLL</td>
<td>245-4-PLYTB50</td>
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<tr>
<td>DELIVERY TUBING—100’ ROLL</td>
<td>245-4-PLYTB100</td>
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<tr>
<td>PERISTALTIC HINGE</td>
<td>245-4-HINGE</td>
</tr>
<tr>
<td>PICK UP TUBE</td>
<td>245-4-PICKUP</td>
</tr>
</tbody>
</table>

**NOTE:** CHECK YOUR SQUEEZE TUBES PERIODICALLY FOR INTEGRITY (ABLE TO EXPAND AFTER BEING SQUEEZED BY THE ROLLERS).

### ORDER PARTS

- **PHONE:** 262-642-7671
- **FAX:** 262-642-7681
- **E-MAIL:** sales@jptech.com
- **MAIL:** JP TECH, INC.
  P.O. Box 863
  East Troy, WI 53120
  USA
- **WEB:** JPTech.com
JP TECH, INC.

LIMITED PRODUCT WARRANTY

JP Tech warrants to first user of each new JP Tech product or component that it is free from defect in material and workmanship. The obligations of JP Tech under this warranty are expressly limited to the following:

☐ JP Tech will repair or replace, at its option, any defective components for a period of twelve (12) months from date of shipment. No charges are covered for the removal or replacement of defective components.

☐ This warranty applies only if the product is defective under normal use. It does not apply to breakage or defect from accident, alteration, misuse, or abuse of the product or component. In addition, this warranty is effective only if the product or component is installed in a location and manner prescribed by JP Tech’s instructions and only if it is so maintained. This warranty becomes null and void if the product or component is altered by anyone other than JP Tech, its authorized representatives, or by expressed written authorization for a specific situation.

☐ If JP Tech elects to send a service technician to a customer site to repair a defect, the cost of transportation and/or living expenses will be paid for by the customer. Should the defect turn out to be the result of the customer’s misuse, improper installation, or maintenance of the product or component, the customer will be responsible for the full cost of the service call including labor charges plus the aforementioned travel and living expenses.

☐ JP Tech will repair or replace any defective part within a product at the sole discretion of JP Tech. If JP Tech should choose to supply a part to the customer as a no-charge warranty replacement, the customer assumes all cost of installation associated with the replacement part. If the product needs to be returned for warranty service, a Returned Material Authorization (RMA) must be issued by JP Tech prior to such return. All returned material must be sent freight prepaid or it will not be accepted by JP Tech irrespective of warranty issues.

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This warranty may be modified, wholly or in part, at any time by JP Tech without notice to past or future customers. The warranty revision in effect at the time of shipment shall prevail in any claims rendered.

JP TECH, INC.

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The purchase of any products or services supplied by JP Tech shall be governed by the terms of this agreement. Purchaser of these products and services acknowledges and agrees to these terms without modification by any competing document or any agreement not reduced to writing and authorized by an officer of JP Tech, Inc.

☐ Pricing is the effective price at the time of the order. If the shipment of product is postponed by buyer, the price may be changed to reflect any price changes enacted by JP Tech. Prices may be changed by JP Tech at any time for any reason without notice to purchaser except for accepted orders not affected by a purchaser initiated delay. Prices, unless otherwise stipulated, do not include shipping and handling charges.

☐ Certain products may require initial and progress payments before the commencement and continuation of design, engineering, component procurement, and manufacture. These products will not be shipped until all progress payments have been made. Cancellation of any orders in progress will necessitate the forfeitures of any payments received to date as well as payment of any costs accrued in excess of paid amounts.

☐ Orders must be accepted by JP Tech at their home office. Acceptance of any purchase order, regardless of the method, is conditioned on assent of buyer to the terms and conditions contained herein.

☐ Sales are FOB point of shipment. Sales terms are net 30 days from date of shipment. Present or future sales, use, or other taxes on sales, installation or use shall be paid buy purchaser. Purchaser shall pay 1% interest per month on all outstanding amounts due to JP Tech. Interest accrual shall begin on the 31st day after shipment for all outstanding amounts.

☐ All sales are final. Any decisions to accept return of product after shipment and receipt by purchaser shall be at the sole discretion of JP Tech and not until payment has been made and agreement by purchaser to pay all shipping, cancellation, and restocking charges that may accrue.

☐ Shipping dates given prior to shipment are estimated, actual delivery will be based on factory and engineering loading at the time of manufacture as well as the availability of parts required for manufacture. JP Tech shall not be liable for any costs or damages arising out of or related to any delays in shipment or delivery, including but not limited to liquidated damages, unless otherwise agreed in writing.

☐ JP Tech may change design or construction of any product or component in any way they see fit. Upgrades for previously purchased products may be available for certain products for a price that will be determined when appropriate.

☐ Except as provided herein, any controversy, claim or dispute arising out of or related to any order or sale or breach there of, including but not limited to any breach of warranty claims, shall be litigated in state court, Walworth or Waukesha Counties, Wisconsin, and shall be governed by the laws of Wisconsin. If JP Tech is the prevailing party, JP Tech shall be entitled to collect all reasonable fees and costs, including court costs and attorney fees.