

## Model 3671 Operating Instructions

Hook-up your controller as per the hook-up diagrams for your particular application.

### 1. pH Standardization:

Immerse the pH electrode and the ATC probe, (Automatic Temperature Compensation), in the buffer pH 7.00 solution.

Press the **Temp** switch on the front panel. The meter will indicate the temperature of the buffer 7.00. Allow time for the temperature probe to reach the buffer temperature. If you are using a fixed value resistor to simulate temperature you can press the **Temp** switch to check the value that the resistor is indicating. **See Pt-100 Temperature vs. Resistance Compensation Chart.**

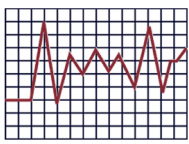
Turn the **Calib Screw, (Calibration)**, control on the front panel of the meter to read the pH buffer value corresponding to the temperature value of the buffer 7.00 solution you just measured. **Refer to Table 1.**

Immerse the pH electrode and the ATC probe, (if used), in buffer 4.01 or buffer 10.01.

Press the **Temp** switch on the front panel. The meter indicates the temperature of the buffer 4.01 or 10.01. Allow sufficient time for the pH electrode and temperature probe to reach the temperature of the buffer.

Set the **Slope** control on the front panel of the meter to read the buffer values corresponding to the temperature value you just took.

The Jenco 3671 Controller is now standardized and ready to take measurements.



## 2. ORP Mode

In the ORP mode, (Oxidation Reduction Potential), the meter indicates the absolute value of the measured solution in mV, (milli-volts).

ORP readings are not temperature compensated and there is no calibration/standardization procedure. You can however check the accuracy of the ORP electrode against a known Standard such as Quinhydrone mixed with buffer 7.00. The reading should be  $+86\text{mV} \pm 15\text{mV}$ . Use Jenco Quinhydrone checking kit SD-4001-04.

## 3. Controller Set Points. Setting the Hi & Low relays.

The Jenco 3671 has two **Unenergized** relays. You must run power through the relay to your pump or alarm to turn the pump or alarm on and off.

Press and hold the **Hi Set** point switch on the front panel. The meter indicates the value of the Hi set point.

Adjust the **Hi Set** control on the front panel for the desired pH or mV value for the Hi Set point.

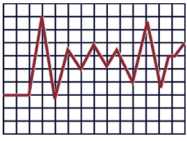
Release the **HI Set** switch. The meter again indicates the process pH or mV value of your solution.

Press and hold the **Low Set** point switch. The meter indicates the value of the low set point.

Adjust the **Low Set** control on the front panel of the meter for the desired pH or ORP values for the Low Set point.

Release the **Low Set** switch. The meter again indicates the value of your pH or mV process.

## 4. Relay and Front Panel LED Format.



The internal **Hi Set** relay and the **Hi Set LED** indicator on the front panel are energized when the process value is greater than the set value.

The internal **Low Set** relay and the **Low Set LED** indicator on the front panel are energized when the process value is less than the set value.

It is recommended that you use the NO, (Normally Open), and COM, (Common) terminals of the relay for the control operations since most system failures would **De-Energize** the relays thus disrupting power to the external control devices.

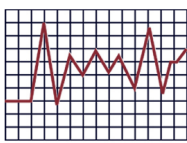
## 5. Temperature Measurement.

When measuring temperature the process will lose control.

Press the **Temp** switch on the front panel of the meter and the meter will display the temperature. The process value will again be indicated when you release the **Temp** switch.

Temperature measurement is recommended when calibrating/standardizing the Jenco Model 3671.

## Pt-100 Temperature vs. Resistance Compensation Chart



This chart shows the temperature versus resistance value for the Pt-100 RTD, ATC probe. A precision 0.1% resistor can be connected across the ATC input terminals to simulate a fixed process temperature for your chemical solution if your chemical solution always remains about the same temperature. **This is located inside the Phono Jack Plug on the 3671.**

Temperature ° C	Resistor Value in $\Omega$	Temperature ° F
0	100.00	32
10	103.90	50
20	107.79	68
25	109.73	77
30	111.67	86
40	115.54	104
50	119.40	122
60	123.24	140
70	127.07	158
80	130.89	176
90	134.50	194
100	138.50	212

**Table 1**

Temperature °C / °F	Buffer 7.00	Buffer 4.01
5 (41°F)	7.08	4.01
10 (50°F)	7.06	3.99
15 (59°F)	7.06	3.99
20 (68°F)	7.01	3.99
25 (77°F)	7.00	4.00
30 (86°F)	6.98	4.02
35 (95°F)	6.98	4.02
40 (104°F)	6.98	4.03
50 (122°F)	6.97	4.05
60 (140°F)	6.98	4.08