# Gilian 5000 Basic Manual

This manual covers specifications, warnings and basic operation. For compete information, including detailed operation, options, and other details see the Operation Manual (PN 360-0103-01). The warnings, safe operation, installation and maintenance instructions in that manual should be adhered to at all times.

**Cautions:**

Pump is intrinsically safe for use in areas designated in the attached specifications listed on page 4. Do not replace or charge batteries in hazardous area. Charge batteries completely before each use. No special discharge or battery conditioning required. Use only specified charger, and charge only within specified temperature range.

## Operation Guide




### Keypad Operation

**Power/Enter:** Press momentarily to turn on. While on, press for five seconds to turn off. Also used to confirm entries and adjustments.

**Set/Cal:** Used to select flow rate set (FLO) or Calibration (CAL)

**▲/Clear:** Used in set modes to adjust displayed value upward. Also used to reset accumulated run data before initiating new sample when held down for 15 seconds.

**▼/Run/Stop:** Used in set modes to adjust displayed value downward. Also used to start and stop sampling when held down for five seconds.

### Turning Pump power ON and OFF

**On:** Press Power/Enter key momentarily to turn power on. Display turns on all segments and indicators briefly, shows the software revision, shows the number of hours since last calibration, then enters the Ready mode.

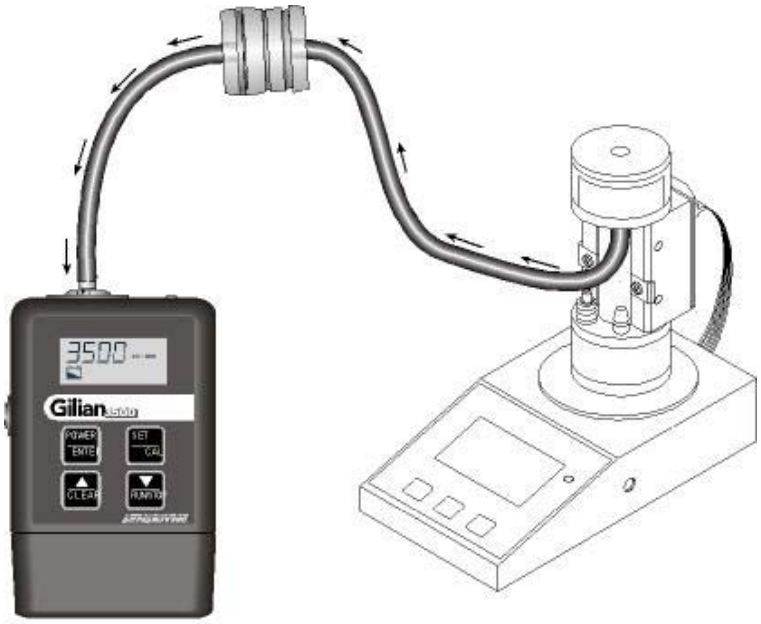
**Off:** While the pump is in Ready mode (not running), press and hold the Power/Enter key for several seconds, until the display shows “OFF”. After a few seconds, the pump will turn power off.

### Setting the Flow Rate:

1 While the pump is in Ready mode, press SET button once. “FLO” is displayed.
2 Press ENTER button to begin setting the flow rate.
3 Press and hold ▲ button to increase flow rate set point or ▼ button to decrease flow rate set point.
4 When desired flow rate set point is reached press ENTER button. Elapsed Time and Total Volume will be cleared by this operation.

### Flow Calibration

Connect the pump to a calibration device such as a Gilibrator as shown in figure below.



Gilibrator 2
(Primary)

1 While the pump is in Ready mode, press SET/CAL KEY twice. Display will show “CAL”
2 Press ENTER button to enter Calibration Mode. “SCAL” is displayed for 10 seconds, then, pump motor starts running. The set flow rate is displayed.
3 Measure flow rate using reference meter.
4 Adjust pump display to match actual flow rate. Press and hold ▲ button to increase. Press and hold ▼ button to decrease.
5 When pump display matches actual flow rate press SET button. Pump motor continues running and adjusts speed to deliver adjusted flow rate. Pump display changes to show the original flow rate.
6 Continue to measure flow rate. If pump display does not match measured flow rate within a few cc’s, you may repeat Steps 4 and 5 until display shows the actual flow rate. When the display matches the actual flow, go to Step 7.
7 Press ENTER button again to complete calibration. The pump stops before returning to idle

### Note on Field Calibration

The above display calibration procedure serves to make internal pump adjustments and improve the accuracy of the flow display. It does not replace field calibration as described by OSHA and NIOSH. A flow verification using the Gilibrator and the exact field sampling train should be conducted before and after each field sample. Procedures for field calibration may be referenced in the *NIOSH Manual of Analytical Methods* at www.cdc.gov/niosh or in the *OSHA Technical Manual* at www.osha.gov.

## Starting the Sample Run

**NOTE: Total Run Time and Total Volume Sampled are cumulative from one sample run to the next unless you reset the flow rate, clear the display, or calibrate the display. If you want to clear the values before starting a sample run, see the section on clearing sample results.**

Make sure pump is fully charged, that flow rate has been properly set, and that the pump has been field calibrated using actual sampling set-up. Make certain all sample tubing and any sample media have been properly installed.

- Press and **hold** the "▼/Run/Stop" button until "SCAL" is displayed, then release button. Pump motor will start 10 seconds later. **Note**: "SCAL" indicates pump is doing an internal Self Adjustment. This self adjustment will occur during the course of a sample once per hour or if the temperature changes by more than 3ºC. The pump is not operating and the clock does not count the time while the pump is in the SCAL mode.

## Stopping the Sample Run

- Press and **hold** the "▼/Run/Stop" button until pump motor stops.

## Clearing Sample Run Data

Press and hold CLEAR button for 8 seconds. The pump will display "CLr", and the "CLr" display will flash for a total of 8 seconds.

## Maintenance

Battery

The Gilian 5000 pump uses rechargeable Nickel-Metal-Hydride batteries that must be fully charged and properly maintained for maximum run time. The battery pack has a charge time under 4 hours. Make certain charger plug is fully inserted into jack on battery pack. After charging is complete, make certain the rubber jack cover is plugged back into the charging jack to protect the jack during operation.

Pump Filter

Change internal pump filter when it is dirty or damaged. To access filter, remove two non-recessed (front and back) panhead screws on filter holder assembly, then lift filter cover. Inspect o-ring and replace or reuse; ensure it is properly seated when reinstalling.

## Specifications:

| | |
|---|---|
| Operating High Flow Range | 1000–5000 cc/min |
| Constant Flow control | < ± 5% of set flow (after calibration);1-5 LPM; |
| Constant Flow Compensation | 5000cc up to 20” water back pressure *(8 hours)* |
| | 4000cc up to 30” water back pressure *(8 hours)* |
| | 3000cc up to 50” water back pressure *(8 hours)* |
| | 2000cc up to 60” water back pressure *(8 hours)* |
| | 1000cc up to 70” water back pressure *(8 hours)* |
| Dimensions | 3.2” (W) x 5.4” (H) x 2.3” (D) |
| Weight | 19.5 oz. |
| Battery Pack | Removable, Sealed, NiMH |
| Run Time | 8 hours at maximum load (4000cc/min @ 30”) |
| Charge Time | < 4 hours **(Use only Sensidyne PN 298-0013-01)** |
| Intrinsic Safety | |
| US/Canada (Hazardous | Class I, Div 1, Groups A, B, C, D |
| Area Certification) | Class II, Groups E, F, G |
| | Class III, T4 |
| | Ta= -20°C to 45°C |
| | FM17US0133 |
| | FM17CA0073 |
| Europe | ATEX II 1 G, Ex ia IIC T4 |
| | Ta= -20°C to 45°C |
| | FM 07ATEX0018 |
| | IECEx FMG17.0013 |
| EMC EMI/RFI | EN61326-1:2013 |
| | FCC Part B, Class A |
| | IECS-003 Class A |
| ISO13137:2013 Compliance | Type P |
| Operating Temperature | 0°C to 45°C (32°F to 113°F) |
| Storage Temperature | -20°C to 45°C (-4°F to 113°F) |
| Charging Temperature | 5°C to 40°C (41°F to 104°F) |
| Operating Humidity | 0–85 %RH, non-condensing |
| Storage Humidity | 0–98 %RH, non-condensing |

## Service:

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