The MiniRAE 2000 Portable VOC Monitor (Model PGM 7600) is a compact monitor designed as a broadband VOC gas monitor and datalogger for work in hazardous environments. It monitors Volatile Organic Compounds (VOC) using a Photo-Ionization Detector (PID) with a 10.6 eV gas discharge lamp.

**Pre-Operation Checks:**

1. Inspect for physical damage. Do not use if damaged
2. Check for last calibration date and last deep discharge of battery. (Recommend each once/month)
3. Ensure that the water and particulate filter is attached to the sampling tube of the MiniRAE.
4. Determine the gas of interest and the correction factor prior to beginning work.
5. Perform a daily QC (≤ 24 hrs.) as below.

**QC Check:**

1. Press the Mode button once to turn the MiniRAE on.
2. Ensure that the MiniRAE goes through a 60 second self test. During this time the alarm and back light will be tested as well.
3. Allow the MiniRAE to warm up for 3 minutes before performing the daily check.
4. Press and hold the Mode and N/- buttons together to enter Programming Menu
5. Select the calibration memory you wish to use for your environment by pressing the Y/+ button on Calibrate/Select Gas, then N/+ for Fresh Air Calibration, N/+ for Span Cal, then Y/+ for Select Cal Memory. Isobutylene is Mem # 0, Hexane Mem # 1, Xylene Mem #2, please consult owners manual for additional gases.
6. Go into Survey mode by pressing the Mode button until you are at the Ready prompt. Press and hold the Mode and N/- buttons together to enter Programming Menu, press N/- for Calibrate/Select gas, then N/- for Change alarm, N/- for Change Datalogger, then Y/+ for Change Monitor, Y/+ again for Change Op Mode, then Y/+ for Survey Mode. Press the Mode button to exit from the Programming Menu until you are back at the Ready prompt.
7. At the ready prompt, attach the span gas to the sampling tube of the MiniRAE and press Y/+ to begin sampling. The MiniRAE should read +/- 5% of 100ppm. Therefore a functional check of the instrument should show readings from 95ppm to 105ppm.

**Calibration Instructions:**

1. Press the Mode button once to turn the MiniRAE on.
2. Ensure that the MiniRAE goes through a 60 second self test. During this time the alarm and back light will be tested as well.
3. Allow the MiniRAE to warm up for 3 minutes before performing the calibration.
4. Press and hold the Mode and N/- buttons together to enter Programming Menu
5. Confirm that you have selected calibration memory # 0 for isobutylene calibration. (See Step 5 above)
6. Press Y/+ at Calibrate/ Select Gas, Press Y/+ for Fresh Air cal. Follow the instructions until the instrument asks if you want to do a Span Cal.
7. Press Y/+ for Span Cal. Press Y/+ through the prompts until the monitor displays “Apply Gas Now”. Attach the monitor to the tubing adapters and then to the regulator of the calibration gas. Turn the gas on and wait for the instrument to calibrate.
8. After the MiniRAE is calibrated it will display “Update Data” on the screen as it internally applies the new calibration. “Span Cal Done” and then “Turn off Gas” will prompt you and let you know calibration is complete. Press “Mode” to return to Ready mode.

Rev. 0