

Calibration of Electronic Monitoring Devices

ENCLOSED ARENA RULES

Device Maintenance

Electronic monitoring devices need to be serviced periodically to ensure that they are accurately reading levels of carbon monoxide (CO) and nitrogen dioxide (NO₂). There are two ways devices are serviced: bump testing and calibration.

- **Bump testing** is exposing the device's sensor to a known concentration of gas to ensure that it is reading correctly.
- **Calibration** is an adjustment of the instrument to match a known gas concentration. The device sensor is exposed to the gas and then the device adjusts to the correct readout.

Bump Test Frequency

According to the International Safety Equipment Association (ISEA), the safest course of action is to bump test your device before each day's use in accordance with the manufacturer's instructions. Testing the sensor with a known concentration of gas is the only way to know if the monitor is working correctly.

Monitors with an integrated electronic sensor check may not require daily bump testing. Follow the manufacturer's requirements for maintenance.

All bump tests must be documented on the arena air quality testing log.

Calibration Frequency

Whenever a monitoring device fails a bump test, the user must calibrate the device before using the monitor in their arena. The device is not working properly and will not give correct readings without calibration. If the device cannot be adjusted by or pass calibration, it should be removed from service until repaired.

In addition, each manufacturer suggests or requires calibration frequency for their devices. A common frequency for many companies is every 180 days or 6 months. Even if the bump test readings are fine, you must complete a calibration of your device as often as the manufacturer requires. Many devices are programmed to remind users when calibrations are due.

Just like bump tests, all calibrations must be documented on the arena's air quality testing log.

Minnesota Department of Health
Indoor Air Unit
625 Robert St N
PO Box 64975
St. Paul, MN 55164-0975
health.indooair@state.mn.us
www.health.state.mn.us

05/09/2019

To obtain this information in a different format, call: 651-201-4601. Printed on recycled paper.