

OPERATION MANUAL

BX-302

Zero Filter
Calibration Kit

BX-302-9800 Rev G



POWERED BY ACOEM

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Met One Instruments has been designing and manufacturing class-leading meteorological, ambient air sensing, and air quality monitoring instrumentation since its inception in 1989. Its line of robust industrial-grade meteorological equipment, air particulate monitoring equipment, and indoor air quality monitoring systems have set the standard for the industry. Headquartered in Grants Pass, OR, Met One Instruments, Inc. is fueled by a dedicated expert team who is diligently working to advance the technology required to ensure continued improvements in human and environmental health now and for generations to come.

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Overview:

This document describes the procedure for using the BX-302 Zero Filter Calibration Kit to audit or adjust the background (BKGD) value on Beta Attenuation Monitors (BAM) particulate monitors. These instructions must be followed carefully to obtain the best accuracy from the unit.



BX-302 Zero Filter Variations



BX-302 with Cover (81418)

About the BAM Background:

The Background (BKGD) value is the zero correction (slope offset) used for all Met One Instruments BAM instruments (e.g. BAM 1020, BAM 1022, E-BAM Plus, and E-BAM).

The BKGD value is factory calibrated for each BAM instrument under laboratory conditions. Units should have this value verified and/or adjusted by the user during initial field deployment of the instrument, using the BX-302 zero filter kit. The BKGD value should also be audited either seasonally or at least annually afterward.

This field zero test corrects the BKGD value to compensate for minor variations caused by local conditions such as inlet heater operation, grounding, and RFI/EMI. It is not uncommon for the initial field zero test to result in a BKGD value that varies from the factory-set value by up to several micrograms.

If possible, the zero test should **NOT** be performed during a period of rapidly changing barometric pressure or ambient/shelter temperature, because rapid changes in air density can be measured as mass noise and may adversely affect the test results.

NOTE: The included BX-302 cover should always be installed during Background testing to protect against water ingestion and to prevent sunlight from creating false beta counts.

Reference the specific BAM instrument's operation manual for detailed Background test procedures.