MODEL 9099

FIELD TEMPERATURE CALIBRATION PROCEDURE MANUAL

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9099-9800 Rev B

Met One Instruments, Inc.

Title: **Field Temperature Calibration Procedure**
Product(s): SASS™ Speciation Sampler
SuperSASS™ Speciation Sampler

Purpose:

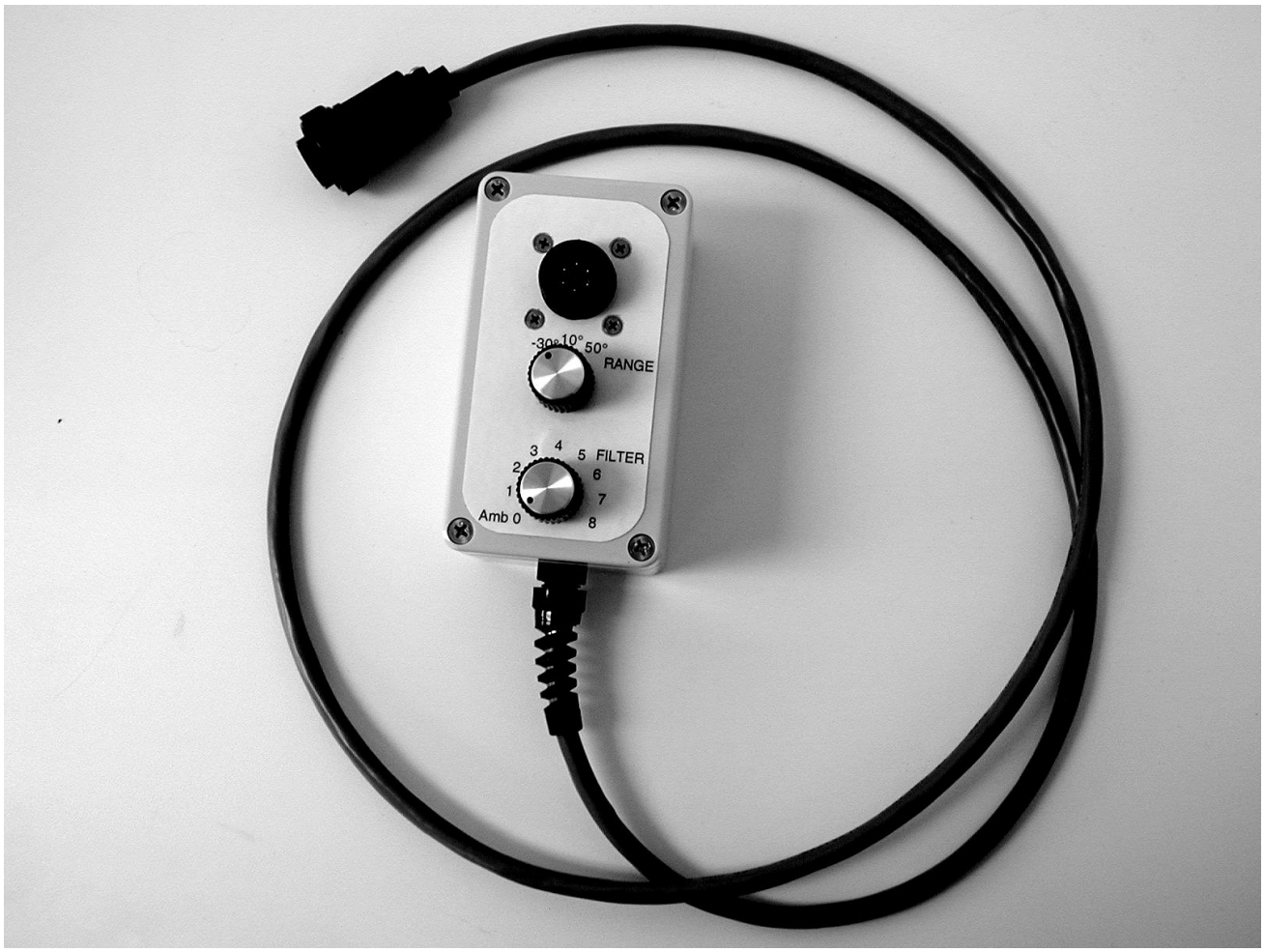
To provide a convenient means for field calibration of the SASS™/SuperSASS™ electronics associated with temperature measurement, removing the requirement for an ice bath or other laboratory equipment.

Approach:

A multi-point temperature calibration can be performed on the SASS™ and SuperSASS™ using a precision resistor box to simulate the output of a thermister-type (resistance) temperature sensor. The resistance used in this unit holds a 0.01% tolerance to insure accuracy, and represents known temperature standard values. A precision resistor box is available from Met One, which comes configured to directly plug into the cables in place of the temperature sensor and Head Assembly. This kit may be ordered as part number 9099, and contains a switched resistance box representing –30 degrees Celsius, +10 degrees Celsius, and +50 degrees Celsius.

Procedure:

Referring to the photo below, 5 steps are given to perform this procedure.



Step 1:
From the MAIN MENU of the SASS™ or SuperSASS™ Control Box, press the **CALIBRATE** button.
On the next screen, press **F3** for **TEMPERATURE CALIBRATION**.

Step 2:
With the Ambient Temp Sensor removed from the cable, connect the Ambient Temp Cable to the Top connector on the switched resistance box. Disconnect the Sampling Head Cable from the Pump Box and connect the switched resistance box cable in its place. Choose the appropriate channel. Channel 0 = Ambient Temp, Channel 1 = Filter 1 Temp, Channel2 = Filter 2 Temp, etc. Select **–30 deg C** with the Temp Selector Knob. Wait a few seconds for the measurement to stabilize, then press **F1** to save this value.

Step 3:
Move the Temp Selection Knob to **50 deg C**. Again, wait a few seconds for the measurement to stabilize. Once the number is stable, press **F4** to save the **50 deg C** value.

Step 4:
Press the **CALIBRATE** button to store the calibration/resistance-equivalent data.

Step 5:
Finally, perform one last check to insure the calibration curve has accurately been generated. Move Temp Selector Knob to **10 deg C**. Your screen should display **10 deg C**, with a tolerance of **+/- 1 deg C**. If your readings do not agree to within +/-1 degree C, repeat steps 1-5. If the readings continue to be erroneous, contact the Met One Instruments Service Department.

Repeat Steps 1 through 5 for each channel used. For example, Channels 0 and 1 are used on SASS™ and Channels 0 through 8 are used on SuperSASS™

At this point, your procedure is finished. **EXIT** out of this screen to go back to the MAIN MENU.

END OF PROCEDURE