

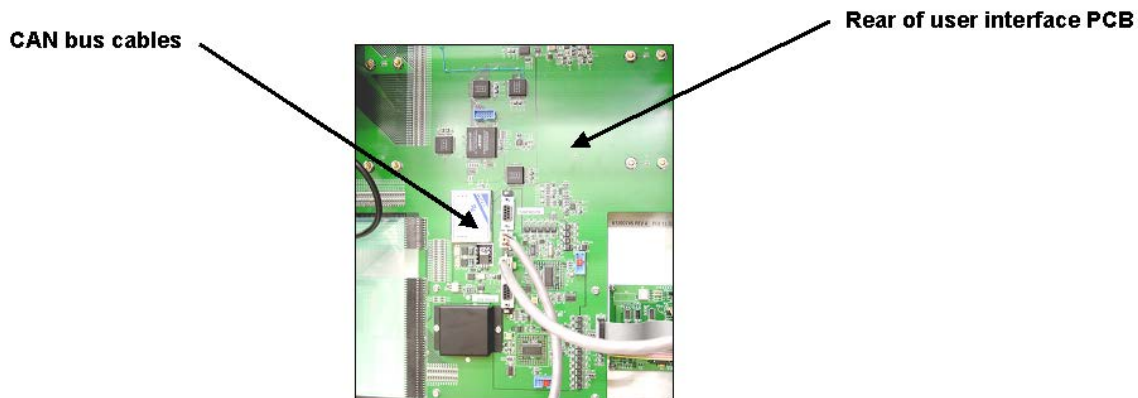
Technical Service Bulletin 031209

Calibration of HPA Meter Movements: DCX Paragon

For each metered operating parameter, the Paragon HPA control system maintains two different calibrations: the meter movement calibration and the sensor calibration. The *sensor calibration* sets the digital metering value used by the control system to monitor amplifier performance and trigger alarms. The *meter movement calibration* ensures that the value reported on the analog front panel meters matches the internal digital value registered by the control system. The meter movements must be calibrated before any sensor calibrations may take place. This procedure addresses meter movement calibration.

Procedure 031209: Calibrate HPA Meter Movements	
Applicability	DCX Paragon transmitters.
Prerequisites	None.
Equipment Required	None.
Comments	All meter movements must be calibrated before sensor calibration may be performed.

1. Remove CAN bus connections from rear of user interface control panel and support cable safely out of way.



2. Mechanically zero HPA control panel meters using small screw adjustment below each meter face.
3. Restore CAN bus connection to rear of user interface control panel.

4. Navigate to meter calibration menu by pressing buttons in following sequence on LCD control screen: **Information Access > System Operations > HPA Maintenance > Meter Calibration**. Default technician password is 4444.
5. The menu will list choices of **Top Set**, **Middle Set**, and **Bottom Set**. Under each of these choices are choices of **Right** or **Left**. These choices cover all six meters.
6. Select **Top Set > Right > Offset**. Upon selection of **Offset**, meter will move to a position near zero. Use **Up** and **Down** buttons to set corresponding meter exactly to zero and press **Ok**.

NOTE: Do not go "past" zero. Continuing to press the down button will not physically drive the meter movement below zero, but the zero calibration factor will continue to decrease, thereby creating the potential for metering inaccuracy.

7. After **Ok** is pressed, system will automatically go to **Scale** menu for same meter, and meter indicator needle will move to its highest reading. Use **Up** and **Down** buttons to set corresponding meter exactly to full scale and press **Ok**.
8. After **Ok** is pressed, system will revert to **Top Set** menu. Select **Left > Offset**, and set the left meter to (exactly) zero. Once meter is zeroed, press **Ok** to pass to **Scale** menu. Meter indicator needle will move to its highest reading. Use **Up** and **Down** buttons to set corresponding meter exactly to full scale and press **Ok**.
9. After **Ok** is pressed, system will revert to the top-level meter calibration menu. Select **Middle Set > Right > Offset** and set right, middle meter zero using procedures outlined above.
10. Set full-scale indication for right, middle meter using procedures outlined above.
11. Set zero and full scale reading for three remaining HPA front panel meters. (**Middle Left, Bottom Right, Bottom Left**).

NOTE: Pressing **OK** after setting the scale for the **Right** meter (in any set) returns the user back to choices for **Right / Left** meter under the current meter set being calibrated (**Top, Middle, or Bottom**), so that the user may choose **Left** and continue the meter calibration. However, pressing **OK** after setting the scale for the **Left** meter (in any set) returns the user to the top-level meter calibration menu where the next meter set (**Top, Middle, or Bottom**) may be chosen. This is graphically displayed in a menu tree on the last page of this service bulletin.

12. Once procedure outlined above has been performed for all six meters, meter movement calibration is complete and sensor calibrations may be started.

At Comark, we are constantly striving to improve the satisfaction of both our new and existing customers. Please do not hesitate to contact Comark Customer Service with any questions you may have concerning the contents of this service bulletin.

Paragon Meter Calibration Menu Tree

