

# **DL - 3000 SpO<sub>2</sub> Simulator.**

## **Calibration Procedure.**



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Quality Standards Accreditations : BS EN ISO 9001 / BS EN 46001.

**Distributed by :**

Calibration instructions contained within are for use with DL-3000 SpO<sub>2</sub> simulators and in conjunction with the DL-3000 SpO<sub>2</sub> simulator : Operating Instructions.

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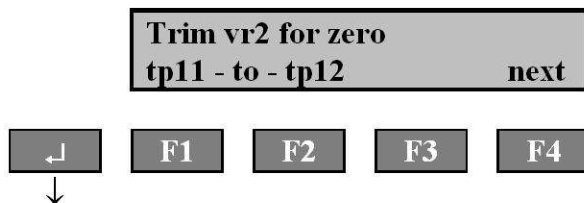
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### **Calibration of the DL-3000 SpO<sub>2</sub> Simulator.**

The DL-3000 only requires a simple calibration procedure which should be carried out annually, to guarantee the accuracy of the unit.

The DL-3000 calibration procedure involves circuitry adjustments as detailed below. Test equipment used (DVM) should be calibrated and traceable to National Standards. Viamed Ltd. cannot be liable for the accuracy of the unit once the original calibration seal is broken.

1. Remove the rear panel retaining bolts (4) and separate the rear panel from the remainder of the casing. Slide out the upper casing cover.
2. Remove the shorting link at 'Lk2' from the RUN position and refit in the CAL position.
3. Identify the Issue No. printed on the motherboard under the test finger connector.  
**"Iss.A" : Carry out steps (1 - 10). "Iss.B", "Iss.C" : Carry out steps (1 - 7) and (10).**
4. Switch on the DL-3000 whilst F4 is depressed. The unit enters its calibration routine. Whilst F4 is depressed the unit displays it's software version.



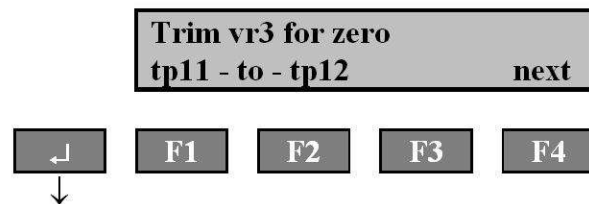
Enter : No function.

5. Connect a calibrated DVM between Tp11 & Enter : No function.

Tp12. Trim Vr2 until the voltage between Tp11 and Tp12 equals 0.00V. Press F4.

#### Selections.

F1, F2 & F3 : No function.  
F4 : Select next measurement.

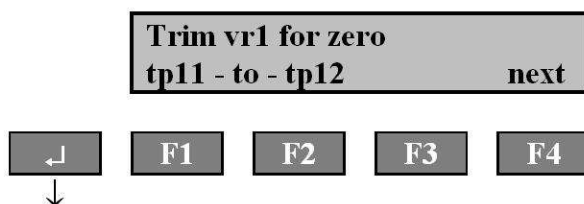


Enter : No function.

6. Trim Vr3 until the voltage between Tp11 & Tp12 equals 0.00V. Press F4.

#### Selections.

F1, F2 & F3 : No function.  
F4 : Select next measurement.



Enter : No function.

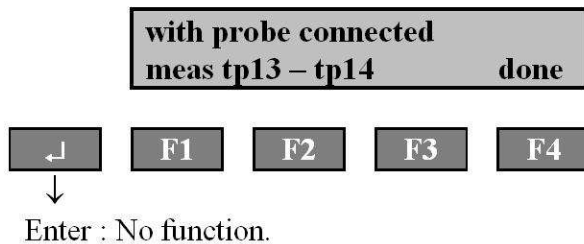
7. Trim Vr1 until the voltage between Tp11 & Tp12 equals 0.00V.

#### Selections.

F1, F2 & F3 : No function.  
F4 : Select next measurement.

**This completes the necessary adjustments for Iss.B and Iss.C motherboards. Go to (10).**

**Steps (8) & (9) for “Iss.A” motherboards only.**

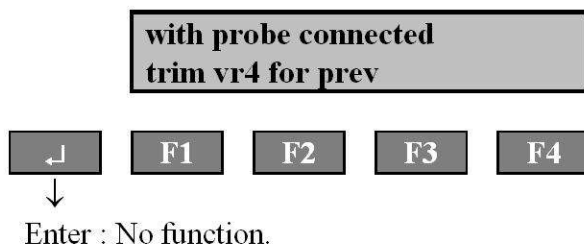


8. Connect the DVM between Tp13 and Tp14.  
Measure and record the voltage difference.

Selections.

F1, F2 & F3 : No function.

F4 : Select next measurement.



9. Trim Vr4 until the voltage between Tp13 and Tp14 equals the recorded value at (8).

Selections.

F1, F2 & F3 : No function.

F4 : Return to (5).

10. Switch off the unit, refit ‘Lk2’ in the RUN position and reassemble the unit.

**The unit must be switched off to exit the calibration routine.**

**DL-30 & DL-300 : Calibrated Light Source & Test Finger Calibrator.**

The DL-30 is a calibrated light source used to verify the DL-300 test finger calibrator. The instrument produces a precise infrared light output of 45μW. The DL-300 is a calibrated test unit which connects to the test finger and verifies the correct output of light using an independent photodetector. The calibration is traceable to National Standards.

