CALIBRATION UNIT FOR PERSONNEL TESTERS
Installation, Operation and Maintenance

Made in Britain

Figure 1. 223002 calibration unit.

Description

The Vermason calibration unit is essentially a resistance box to be used for calibrating either a wrist strap tester or a footwear tester. The calibration unit is set to cover limits as specified in EN61340-5 and ANSI/ESD S20.20. The unit is supplied with a socket-to-socket adaptor and a test certificate.

This device is intended to verify the settings of Vermason testers 222508, 222514, 222518 and 222535. If a faulty unit is found it is recommended that you return the unit to Vermason Ltd for recalibration. If you wish to perform recalibration yourself, it is possible using a method of trial and improvement.

Inspection

Remove the calibration unit from the carton and inspect for shipping damages. Each unit includes the following:

1 Calibration unit, item #223002
1 10mm socket to 10mm socket adaptor

Calibration Test Procedures

The calibration unit was specifically designed for use in calibration of Vermason brand test equipment. The following step by step procedures will cover calibration for specific test units. The procedures will not cover adjustment of the test equipment. For detailed information regarding adjustment of specific Vermason brand testers contact our Customer Service Department at 00 44 (0) 1462-672005.

How to test a wrist strap tester

1. Connect the calibration unit lead that is terminated with a 10mm socket to the 10mm stud of the tester.
2. Turn the knob to the 'FAIL LOW' setting on the upper part of the dial marked 'Wrist strap'.
3. Place the probe with the conductive rubber base onto the test button of the tester, making sure that the probe is placed in the middle of the test button for optimal reading.
4. Push and hold the probe onto the test button.
5. The tester should indicate 'FAIL LOW'
6. Repeat this procedure for the other wrist strap knob settings, in each case the indication on the instrument should correspond to the knob setting. (Note that the "Low mid" and "High mid" positions refer to the "<10 megohms" and "<35 megohms" thresholds of the tester.)
7. If the response is different to the one selected, the tester will need to be re-calibrated.
8. If the response is as expected release he test button and switch the calibration unit to the next limit.

How to test a footwear tester

1. When calibrating the footwear tester use the adapter supplied to connect the tester lead to the calibration box.
2. Repeat the same procedure as above for wristband, but use the footwear side of the calibration box.

Recalibrating a faulty tester

1. If a tester is found to be out of calibration it is recommended that you return it to Vermason Ltd for recalibration. If you wish to adjust calibration yourself you may follow this procedure.
2. Adjustments are made via two trim pots, which can be accessed via holes on the left hand side of the unit. The lower trim pot adjusts the 10 megohms and 35 megohms limits. The upper trim pot adjusts the 100 kegohms and 750 kegohms limits.
3. The trim pots adjust the footwear and wrist strap circuits simultaneously.
4. Adjust the trim pots in ¼ turn increments. When you have made a change repeat the test to see if you have adjusted sufficiently.
5. If the LED to the left of the expected LED is illuminating turn the relevant trim pot clockwise. If the LED to the right of the expected LED is illuminating turn the pot anti-clockwise.
6. When you have adjusted the trim pot enough test the associated position on the calibration unit to ensure you have not adjusted too far.
7. When complete perform a full set of tests again.

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Calibration

All resistances are in-built using matched fixed resistors. They are measured using an ohmmeter, which is of known accuracy and standards used are traceable to UKAS. No variable resistors e.g. potentiometers are used. The resistances should nonetheless be re-checked once a year.

Specifications

Resistance Ranges

Wrist straps:	Low - 730 kegohms Pass - 770 kegohms Pass - 34 megohms High - 36 megohms
Foot wear:	Low - 97 kegohms Pass - 103 kegohms Pass - 34 megohms High - 36 megohms
Accuracy:	±1%
Weight:	approximately 0.17kg
Dimensions:	145 x 90 x 30mm

Limited Warranty

Vermason expressly warrants that for a period of one (1) year from the date of purchase, Vermason Calibration Units for Personnel Testers will be free of defects in material (parts) and workmanship (labour). Within the warranty period, a unit will be tested, repaired or replaced at Vermason's option, free of charge. Call Customer Service at 0044 (0) 1462 672005 for a Return Material Authorisation (RMA) and for proper shipping instructions and address. Any unit under warranty should be shipped prepaid to the Vermason factory. You should include a copy of your original packing slip, invoice, or other proof of purchase date. Warranty repairs will take approximately two weeks.

If your unit is out of warranty, Vermason will quote repair charges necessary to bring your unit to factory standards. Call Customer Service at 0044 (0) 1462 672005 for a Return Material Authorisation (RMA) and proper shipping instructions and address.

Warranty Exclusions

THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH ARE SPECIFICALLY DISCLAIMED. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

Limit of liability

In no event will Vermason or any seller be responsible or liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.

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