

Tester Calibration Unit Operation and Maintenance



Figure 1. Charleswater [99090](#) Tester Calibration Unit

Description

The Charleswater [99090](#) Tester Calibration Unit is designed to simplify the process of calibrating the Charleswater [99000](#) and [99004](#) Combo Wrist Strap / Footwear Tester. The calibration unit allows the user to quickly and easily verify whether the tester is operating within specifications. The Calibration Unit is a passive device, and requires no power source. It is manufactured with industry accepted test ranges for both wrist straps and foot grounders. The wrist strap pass range is set at 825k- 35M, and the foot ground test range is set at 825k - 35M. The Calibration Unit is supplied calibrated to NIST traceable standards.

Packaging

- 1 Tester Calibration Unit
- 2 Test Leads
- 1 Certificate of Calibration

Operation

WRIST STRAP TEST CIRCUIT

Step 1: Connect one of the test leads to common point banana jack "E" on the Calibration Unit. Connect the opposite end of test lead to the banana jack labeled "WRIST CORD" located on the face of the Combo Wrist Strap / Footwear Tester.

Ensure that the rocker switch on the tester is set to WRIST CORD.

Step 2: Connect the second test lead to the 675k jack labeled "A" on Calibration Unit. Touch the opposite end of test lead to tester's test plate and press down with enough pressure to activate the test circuit. Observe the LED's for the proper response as indicated below. Be sure to hold the cord at an insulated point, so that the resistance value is not affected by the body.

Resistance Value	Test Output - LED
Red jack "A" - 675k:	Red (FAIL LO)
Green jack "B" - 825k:	Green (PASS)
Green jack "C" - 35M:	Green (PASS)
Yellow jack "D" - 40M:	Red (FAIL HI)

Step 3: Repeat the procedure testing across jacks B, C, and D on the Calibration Unit. The different resistance ranges should give the display shown above. If the tester does not meet calibration specifications, contact Charleswater for calibration.

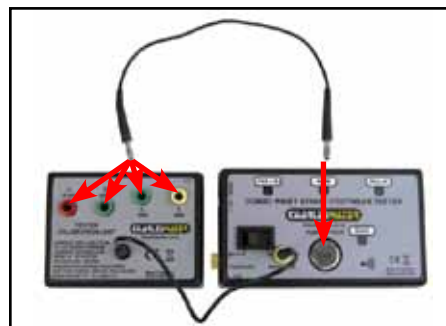


Figure 2. Testing the Combo Tester's Wrist Strap Circuit

FOOTWEAR TEST CIRCUIT

Step 1: Connect one of the test leads to common point banana jack "E" on the Calibration Unit. Connect the opposite end of test lead to the banana jack labeled "FOOTPLATE" located on the side of the Combo Wrist Strap / Footwear Tester.

Ensure that the rocker switch on the tester is set to FOOTPLATE.

Step 2: Connect the second test lead to the 675k jack labeled "A" on Calibration Unit. Touch the opposite end of test lead to tester's test plate and press down with enough pressure to activate the test circuit. Observe the LED's for the proper response as indicated below. Be sure to hold the cord at an insulated point, so that the resistance value is not affected by the body.

Resistance Value	Test Output - LED
Red jack "A" - 675k:	Red (FAIL LO)
Green jack "B" - 825k:	Green (PASS)
Green jack "C" - 35M:	Green (PASS)
Yellow jack "D" - 40M:	Red (FAIL HI)

Step 3: Repeat the procedure testing across jacks B, C, and D on the Calibration Unit. The different resistance ranges should give the display shown above. If the tester does not meet calibration specifications, contact Charleswater for calibration.

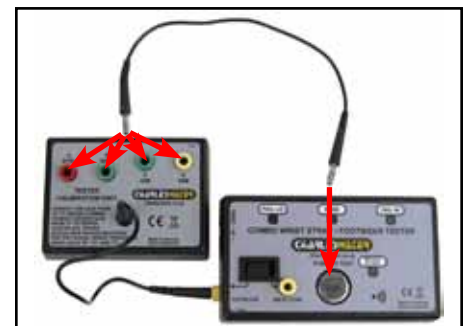


Figure 3. Testing the Combo Tester's Footwear Circuit

Specifications

Power Source: Passive device, no power source required

Resistance Ranges

Wrist Straps: Fail Low: 675k
Pass: 825k
Pass: 35M
Fail High: 40M

Footwear: Fail Low: 675k
Pass: 825k
Pass: 35M
Fail High: 40M

Calibration NIST calibrated

Accuracy ±2%

Weight 283 grams

Dimensions 11cm x 8cm x 2.5cm

Limited Warranty

Charleswater expressly warrants that for a period of one (1) year from the date of purchase, Charleswater Tester Calibration Units will be free of defects in material (parts). Within the warranty period, the material will be tested, repaired or replaced at Charleswater's option, free of charge. Call Customer Service at 00 44 (0) 1892-665313 for a Return Material Authorisation (RMA) and for proper shipping instructions and address. You should include a copy of your original packing slip, invoice, or other proof of purchase date. Any unit under warranty should be shipped prepaid to the Charleswater factory. Warranty replacements will take approximately two weeks.

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 Charleswater 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.