

STATICO

Global Supplier of Static Control & Cleanroom Products

541 Taylor Way, #1, San Carlos, CA 94070 USA | www.statico.com
Phone: (650) 592-4733 | Fax: (650) 508-0761 | Email: sales@statico.com

Model No. MTB1 ***Test Box for S2555 Monitoring System*** ***Product Information & Calibration Procedure***



Description

The Model MTB1 is a test device designed for periodical performance check of the S2555 Monitoring System. The Test Box Size is 2.5" X 2.5" X 0.5" (65X65X25mm), with the following indicators. NIST Certified.

- "BENCH" on the top left corner of the Top Panel
 - For the Bench Red Button on the top panel & the 21" long Bench Cord, with Mono Plug end termination, on the back panel.
- "OPERATOR" on the top right corner of the Top Panel
 - For the Operator Red Button on the top panel, & the 21" long Operator cord, with Banana Plug end termination, on the back panel.
- "GROUND" on the lower center of the Top Panel
 - For the 21" long Ground cord, with Banana Plug end termination, on the front panel.

Operation

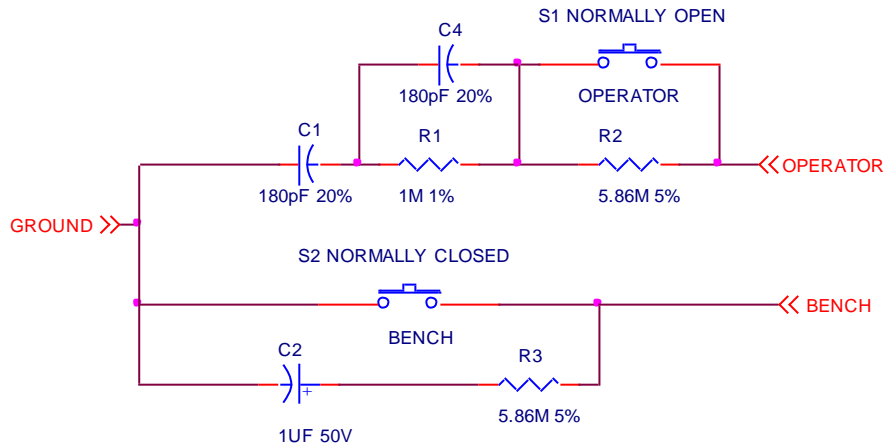
1. Connect the GROUND cable of the Test Box, to the Common Point Ground (CPG) on the Mat/Bench.
2. Power up the S2555 Monitor, using the Adapter. Both LEDs on the front panel of the Monitor, the "OPERATOR" & the "BENCH", will turn to Blinking Red, while a pulsating buzzer sound is heard.
3. Connect "BENCH" cable of the Test Box, to the Bench System Ground on the back panel of the Monitor. The BENCH LED on the front panel of the S2555 Monitor should turn to Green while its buzzer stops. This will test & indicate proper functioning & connection of ground wire.
4. Note: Pressing the BENCH RED Button on the Test Box will disconnect the Ground connection & both LEDs will turn to Blinking Red with a pulsating buzzer sound. Releasing the Red BENCH Button will turn the BENCH LED to steady Green & the OPERATOR LED to Blinking Red.
5. Insert the OPERATOR cable of the Test Box into the Wrist Strap Receptacle on the front panel of the S2555 Monitor, then press the GREEN Button marked OPERATOR on the Test Box, the LED for Operator on the Monitor should turn to steady Green, indicating proper functioning of the wrist strap monitoring and connection.
6. Note: Releasing the Red Button will cause 7-8 pulsating buzzer sound turning the LED to steady Blinking Red.

Calibration of MTB1 Test Box

Required Equipment

1. Calibrated multi-meter with resistance measurement range of 10Mohm and accuracy of 1% or better. Recommended type Fluke 87 or better.
2. Calibrated capacitance meter with measurement range of 300-1000 pF and accuracy of 2% or better.

Schematic of the MTB1 Test Box is given below for reference.



Calibration Procedure

1. Connect one lead of the ohm meter to the "GROUND" plug and another to the "BENCH" mono plug tip on the MTB1 Test Box. Ohm meter shall read less than 10 Ohm resistance.

Pass	Fail
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2. Press "BENCH" button on the MTB1 Test Box. Ohm meter shall read "open" (>10M) resistance. The reading will change slowly as C2 capacitor charges.

Pass	Fail
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3. Disconnect ohm meter from the MTB1 Test Box.
4. Remove two screws at the bottom of the MTB1 Test Box and carefully remove bottom cover.
5. Connect one lead of the ohm meter to the "OPERATOR" plug and another to the connection between C1 and R1. Ohm meter shall read from 6.4M to 7.2M resistance.

Pass	Fail
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6. Press "OPERATOR" button on the MTB1 Test Box. Ohm meter shall read resistance from 950K to 1.05M.

Pass	Fail
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7. Disconnect ohm meter from MTB1 Test Box.
8. Connect one lead of the capacitance meter to the "GROUND" plug and another to the connection between C1 and R1. Capacitance meter shall read from 144 pF to 216 pF.

Pass	Fail
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9. C4 capacitor is not accessible and can't be tested.
10. Disconnect capacitance meter. Install back cover and tighten two screws that hold it.

If any steps above have "failed" send MTB1 Test Box to the factory.

If all steps above have "passed" MTB1 is ready for testing the S2555 Monitoring System.