

Buzz-mo® BCT-2/2E

Bridgewire Continuity Tester
Operating Instructions &
Technical Information



IMPORTANT: PLEASE READ COMPLETELY BEFORE USE.

Rev 2.0 – visit www.blasterone.com for any updates

It is unlawful to operate the **Buzz-mo®** in any way other than instructed. Doing so indemnifies the manufacturer, voids the warranty, may cause damage, and/or serious injury or death.

Thank you very much for your purchase. The **Buzz-mo®** tactile bridgewire continuity tester is precisely engineered to safely indicate a complete bridgewire circuit in commercial electrically-fired initiators, detonators, matches, and pyrotechnic devices manufactured following I.M.E. guidelines.*

*The Institute of Makers of Explosives (I.M.E.) recommends that the minimum ignition current of an electric detonator manufactured by its member companies be not less than 250 mA. The lowest ignition current documented by the U.S. Bureau of Mines was 170 mA (USBM Contract #H0210068). It is your responsibility to verify that the device you are about to test complies with this standard before you begin.

Restrictions

- 1) **ONLY USE** on commercially manufactured devices which you have verified follow I.M.E. guidelines, or have a minimum ignition current greater than 170 mA.
- 2) **DO NOT USE** if you are unfamiliar or not licensed to work with explosives
- 3) **DO NOT USE** on electronic (RF controlled, digitally secure, etc.) detonators – the BCT-2 has not yet been tested for this application.
- 4) **DO NOT USE** on homemade, hobby, or improvised explosive devices
- 5) **DO NOT USE** while under the influence of alcohol, drugs, or fatigue
- 6) **DO NOT USE** on energized circuits - damage or detonation may occur
- 7) **DO NOT USE** to test any electrically fired explosive devices under any of the following conditions:
 - a. In any way not described in these instructions
 - b. Electrical storms (lightning)
 - c. In close proximity to high voltage power lines or electrical cables
 - d. In close proximity to operational two-way radios
 - e. In the presence of static electricity
 - f. Near any source of open flame or EMI producing device
 - g. When devices are wired in a parallel circuit – this type of circuit causes a positive reading if any one device is good
 - h. Underwater – although the BCT-2 is waterproof, this environment is not conducive to electrical testing
- 8) **DO NOT USE** if dropped over 5 feet, or if the case shows any signs of physical damage, **without first** testing for **Verification Of Safe Testing Current** (outlined below)

Directions

- 1) Verify functionality by testing with a known good conductor (paper clip, wire, etc.) - hold for a few seconds if necessary.
- 2) Test each device separately, and then test the complete circuit from a safe distance after all previously tested devices are attached
- 3) Ground yourself to discharge any static electrical current before handling any electrically fired explosive device
- 4) Unshunt and unfold the leadwires of the device you wish to check
- 5) Place the device as far away from you as the leadwires will permit
- 6) Where practical, place device under a sandbag, in the ground, or otherwise orient it so that an accidental detonation would be deflected away from you
- 7) Touch one leadwire to one stainless steel contact, and the other leadwire to the other stainless steel contact
- 8) If the two wires form a complete circuit, the BCT-2 will vibrate, indicating the bridgewire has electrical continuity
- 9) If the device is questionable (no vibration), dispose of it according to its MSDS – otherwise:
- 10) Immediately re-shunt the leadwires of the device, or connect it to a shunted system
- 11) Test completed compound devices (detonator plus primary charge, etc.) from a safe distance only.

Verification of Safe Testing Current

– performed at 75° F

Each **Buzz-mo®** is factory certified to operate well below the 50 mA testing limit.

- 1) Use a multi-meter capable of testing milliamps and set to mA mode
- 2) Place one test probe to one stainless steel contact and the other test probe to the other stainless steel contact
- 3) The BCT-2 will vibrate, and the multi-meter will display the current draw in milliamps – the reading should be below 7 mA
- 4) If the current draw is higher than 10 mA, do not use your BCT-2; promptly contact your dealer for replacement

Operational Limits – verified at 75° F

- 1) 6 mA maximum testing current draw (5.5 – 6.5 mA average)
- 2) 10° to 158° F, for optimal battery life operate between 65° and 105° F
- 3) 50,000+ one-second tests on a standard 1 ohm blasting cap test load
- 4) 1200 ohms maximum test load before tactile sensation become negligible

Care and Maintenance

- 1) Clean polymer case using a damp cloth, do not use solvents or abrasives
- 2) Clean dirty contacts by gently polishing with a soft cloth*
- 3) Do not store in direct sunlight, for longest life store within 10° to 90° F
- 5) Store in the protective pouch, do not to store near conductive objects

*Due to conductivity requirements, the blackened stainless-steel contacts on the BCT-2E can scratch and/or wear under normal use. This is to be expected.

Limited Replacement Warranty

A free replacement warranty is offered against manufacturer's defects only. This warranty does not apply to loss, or damage due to misuse, abuse, physical damage, or battery expiration, it does not cover the cost of shipping and handling or pouch. Original product must be returned to determine warranty coverage. Blaster-ONE shall not be held liable for any damages caused by improper use of this product. Visit www.blasterone.com for more details.

Blaster-ONE EOD Equip.
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 - c. In close proximity to high voltage power lines or electrical cables
 - d. In close proximity to operational two-way radios
 - e. In the presence of static electricity
 - f. Near any source of open flame or EMI producing device
 - g. When devices are wired in a parallel circuit – this type of circuit causes a positive reading if any one device is good
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- 8) **DO NOT USE** if dropped over 5 feet, or if the case shows any signs of physical damage, **without first** testing for **Verification Of Safe Testing Current** (outlined below)

Directions

- 1) Verify functionality by testing with a known good conductor (paper clip, wire, etc.) - hold for a few seconds if necessary.
- 2) Test each device separately, and then test the complete circuit from a safe distance after all previously tested devices are attached
- 3) Ground yourself to discharge any static electrical current before handling any electrically fired explosive device
- 4) Unshunt and unfold the leadwires of the device you wish to check
- 5) Place the device as far away from you as the leadwires will permit
- 6) Where practical, place device under a sandbag, in the ground, or otherwise orient it so that an accidental detonation would be deflected away from you
- 7) Touch one leadwire to one stainless steel contact, and the other leadwire to the other stainless steel contact
- 8) If the two wires form a complete circuit, the BCT-2 will vibrate, indicating the bridgewire has electrical continuity
- 9) If the device is questionable (no vibration), dispose of it according to its MSDS – otherwise:
- 10) Immediately re-shunt the leadwires of the device, or connect it to a shunted system
- 11) Test completed compound devices (detonator plus primary charge, etc.) from a safe distance only.

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– performed at 75° F

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- 3) 50,000+ one-second tests on a standard 1 ohm blasting cap test load
- 4) 1200 ohms maximum test load before tactile sensation become negligible

Care and Maintenance

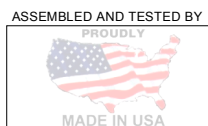
- 1) Clean polymer case using a damp cloth, do not use solvents or abrasives
- 2) Clean dirty contacts by gently polishing with a soft cloth*
- 3) Do not store in direct sunlight, for longest life store within 10° to 90° F
- 5) Store in the protective pouch, do not to store near conductive objects

*Due to conductivity requirements, the blackened stainless-steel contacts on the BCT-2E can scratch and/or wear under normal use. This is to be expected.

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Blaster-ONE EOD Equip.
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