



USTI-ECO
Universal Shock Tube Initiator with Electric Cap Output
User Manual

Warning: Potentially lethal voltages are present on binding posts when firing. Serious injury or death may occur if any part of your body comes into contact with binding posts when firing.

This unit uses a single internal 9V battery as a self-contained power source to deliver 9 Joules of energy at 350 Volts when triggered. It is capable of firing commercial or MIL-SPEC shock tube, or eighty 2-ohm electric caps through a 5-ohm lead line.

To Trigger:

To fire the unit, a trigger signal must be applied to the black and red wires of the cable and must be between 450V and 18V lasting between 20 - 100 ms, respectively.

Warning: If LED are illuminated unit has been triggered and charge / fire cycle has commenced, firing will occur in 3~10 seconds depending on battery condition.

Warning: If unit self triggers do not use! Remove battery and return for warranty repair!

When using a fresh battery, the unit will fire approximately 3 to 5 seconds after the trigger signal is activated. This charge time will increase as the battery is used. If the battery is too low, the unit will shutoff automatically after 10 seconds and will not fire.

To Fire Electric Caps

Warning: Do not connect lead line until you are ready to fire a shot. Use a blasters galvanometer to verify load resistance on lead lines.

1. Remove tip from binding posts.
2. Connect lead lines to binding posts.
3. Apply a trigger signal to the red and black wires of the cable as described above.

To Fire Shock Tube

Warning: Do not connect shock tube until you are ready to fire a shot.

Warning: Eye Hazard. Never look into shock tube tip when firing.

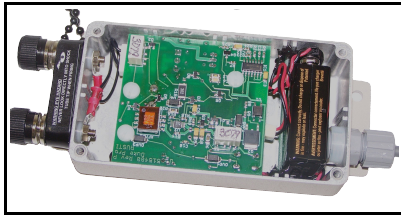
1. Remove tip from binding posts.
2. Insert shock tube into shock tube fitting on tip. Use the blue shock tube fitting for commercial shock tube or the black shock tube fitting for MIL-SPEC shock tube.
3. Mount tip onto binding posts, tightening thumbscrews firmly.
4. Apply a trigger signal to the red and black wires of the cable as described above.

Caution: Do not insert any metal objects into either terminal.

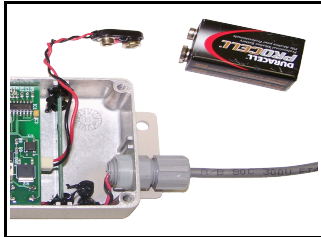
To Release Shock Tube

Push the retaining ring on shock tube fitting toward the pneumatic fitting, gently pull the shock tube out of the fitting. Use of excessive force on shock tube will jam the shock tube in the fitting and result in permanent damage to shock tube fitting.

To Replace Batteries



1. Remove 4 lid screws and remove the lid. remove battery.
2. **Warning:** To prevent static damage, avoid contact with circuit board components.



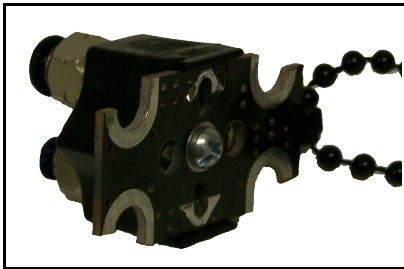
Replace battery with a 9-volt alkaline cell (Duracell MN1604B2 or equivalent).

3. Place new battery into case and carefully tuck excess wire into case. Be sure the battery cable is contained entirely inside case to assure a good seal with lid gasket.



4. Orient lid so lens is above LED power on indicator replace lid and tighten lid screws until snug.

To Use New Tip Block



Operational Tip: Each block in the shock tube tip will last approximately 250 shots. When replacing the battery, it is a good idea to go ahead and rotate the tip block.

Operational Tip: It is recommended that the operator use a shock tube splice about 2-3 feet away from the tip to prevent entanglement with wheels or treads from damaging the unit or tip.

1. Remove tip from binding posts.
2. Remove retaining screw using #2 phillips head or flat blade screw driver.
3. Remove black mounting board.
Remove tip block.
4. Rotate tip block 90 degrees and replace.
5. Replace black mounting board and retaining screw. Be sure to tighten screw firmly (black mounting board should bend slightly).



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Parts List:

- 1 USTI-ECO with 9-V alkaline battery
- 1 Tethered shock tube tip assembly consisting of:
 - 1 Quad Tip Block
 - 1 Tip Block Holder
 - 1 Mounting Board & Screw