ESI/2 Operating Instructions:

ASHEVILLE, NORTH CAROLINA
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Step 1. For safety always remove the ignition tip from the machine when loading the shock tube.

Step 2. Load shock tube per step-by-step instructions on OPPOSITE SIDE OF THIS PAGE.

Step 3. When you are ready to fire the shot, then and only then push the ignition tip into the two mating connectors located on the top of the machine. Viewing port should be facing away from the user.

Step 4. To Arm the machine push the "ARM" switch for 1-2 seconds and the "READY" lamp should illuminate.

Step 5. To Fire the shot maintain the "Arm" switch AND with the Ready lamp illuminated depress the Fire switch.

TO ABORT THE SHOT:

Once the charge sequence has been initiated simply release the charge switch. The high voltage will be discharged internally.

BATTERY REPLACEMENT:

To replace the battery remove the four (4) screws on the back cover. Remove the nine volt cell from the battery clip. Duracell ® part number MN1604 is the recommended battery or any American made 9 volt alkaline cell as a replacement. Reattach the rear cover being careful to align the back cover and replace and tighten screws. Do not over tighten screws. Gradually tighten the screws making 2 passes so that the pressure is applied uniformly to the rear cover and gasket.

ESI/2 TESTING & MAINTENANCE PROCEDURES

TESTING

- Test the tip prior to insertion of the shock tube for spark. An audible 'pop' should be heard indicating the tip works
- If tip fails to spark, check first to see if switch lever is in '**Armed**' position.
- Test ignition tip with a short (less than 4 inch) piece of shock tube. Used shock tube is okay.
- Proceed to calibration procedure if spark is not present.
- If spark is still weak or missing, test the tip on another ESI. If second ESI is not available, verify battery voltage (It should be greater than 8.5 volts). If battery is okay then calibrate the tip per instructions on the opposite side of this page.

MAINTENANCE

- During normal usage, no maintenance is required for the electronics except battery replacement. Expected battery life (Duracell 9V Alkaline) is 500 - 1000 shots.
- Maintenance of the ignition tip consists of calibration procedure outlined on the opposite side of this document. Expected life of tip is well over 10,000 shots.
- Case may be cleaned with water or a damp cloth.

➔ **TECH TIP**: Improperly shipped or stored shock tube can have 'dead' spots that will not easily fire. Always store a roll of shock tube on its side!

➔ **TECH TIP:** The small rectangular opening on the back of the rubber boot can be used as a strain relief for the shock tube. Simply thread the shock tube through the opening twice before inserting it into the tip.

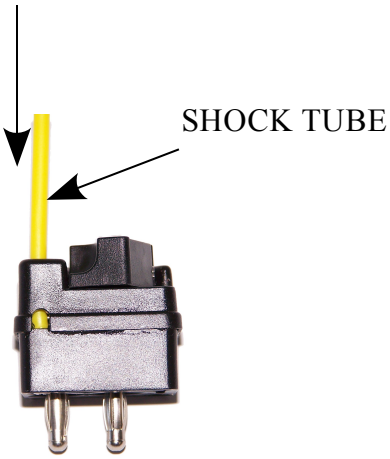
ESI Tip
Operating Instructions
and
Calibration Procedure

www.dukepro.com
Asheville, North Carolina
866-587-3853

STEP ONE
PLACE CROSS-PIERCING ELECTRODE CONTROL LEVER IN THE SAFE POSITION (*AWAY FROM SHOCK TUBE HOLE*)

FIRE ⟷ SAFE

STEP TWO
PUSH SHOCK TUBE THROUGH THE LOADING HOLE UNTIL THE CENTER ELECTRODE IS INSIDE OF THE SHOCK TUBE. DO NOT TWIST THE SHOCK TUBE WHILE INSERTING OR REMOVING.



STEP THREE
MOVE THE CONTROL ARM LEVER TO THE FIRE POSITION.

****** IMPORTANT ******
ALWAYS MOVE PIERCING CONTROL ARM LEVER TO SAFE POSITION *BEFORE* REMOVING SHOCK TUBE

CALIBRATION PROCEDURE:

1. MOVE CONTROL HANDLE TO SAFE POSITION.
2. BACK OFF ADJUSTMENT SCREW 3 OR 4 TURNS.
3. MOVE CONTROL HANDLE TO FIRE POSITION.
4. INSPECT THE POSITION OF THE CROSS-PIERCING ELECTRODE. WHEN LOOKING FROM THE SIDE, THE CROSS-PIERCING ELECTRODE SHOULD BE STRAIGHT AND NOT HAVE AN UP OR DOWN TILT. WHEN LOOKING FROM THE TOP, IT SHOULD PASS DIRECTLY OVER THE CENTER ELECTRODE.
5. SCREW CENTER ELECTRODE IN UNTIL IT TOUCHES CROSS-PIERCING ELECTRODE. *TIP: AN OHM METER CONNECTED TO BANANA PLUGS CAN BE USED TO DETECT ELECTRODE CONTACT.*
6. BACK OFF 1/3 - 1/2 TURN COUNTER- CLOCKWISE.
7. TEST UNIT.
8. BACK OFF CENTER ELECTRODE AS NECESSARY TO PREVENT PREMATURE ARCING.