

LWDD Owner's Manual

LWDD - Light Weight Demolition Device



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Please take a few minutes to read this manual thoroughly.

To Fire Electric Caps:

- Step 1.** Make sure electric terminals on the tip are over the 2 bumps (to the right of the front label) on the main body of the case. If not, unscrew the 4-40 thumb screw on top and rotate the tip 180 degrees and replace it.
- Step 2.** Attach lead lines to each of the terminal blocks by pressing the plastic buttons on the top of the tip and inserting each wire in the channel. (Tip: form a U in the end of the wire and slide it into the channel.)

Proceed to Step 3 below under "To Fire Shock Tube".

To Fire Shock Tube:

- Step 1.** Make sure the shock tube fitting on the tip is over the 2 bumps (to the right of the front label) on the main body. If not, unscrew the 4-40 thumb screw on top and rotate the tip 180 degrees and resecure tip.
- Step 2.** Load shock tube by pushing it into the pneumatic opening. To remove the shock tube **push down on the release ring and gently** pull the shock tube out.
- Step 3.** Press and hold the ARM button. A green LED indicates battery is above 80% of it's rated voltage. Note: As the batteries wear, the green light will illuminate briefly at the start of charging then go out. It will also illuminate when the charge is complete. This does *not* mean that the batteries are bad or unusable. **When the green LED fails to illuminate at all, the batteries need replacing.**
- Step 4.** The proper voltage has been reached and the LWDD is ready to fire when red LED illuminates. If the red LED does not illuminate within 8 seconds, release the ARM button, wait about 8 seconds, and try again. If the second attempt to arm still fails the machine is malfunctioning and should be sent back to Duke Pro for repair. With the red LED illuminated and while maintaining the ARM button in the depressed state, press the FIRE button. After pressing the FIRE button, immediately release BOTH buttons. Automatic hold-in controls will keep the fire circuit active during the discharge phase until the capacitor has discharged.



Pressing ARM before the discharge phase is complete can severely damage the machine. Doing so will place an abnormally high load on the charging circuit which can damage it permanently. Wait at least 10 seconds for the discharge phase to complete before pressing the ARM button. Simply put, the machine can not FIRE and ARM at the same time.

WARNING: When using shock tube lengths in excess of 30 feet it is advisable to provide a vent for hot gasses escaping the shock tube. The vent can be a splice of Tygon tubing, a "T" coupler. Always wear protective gloves as hot gas temperatures from the shock tube are high enough to melt stainless steel.

TO ABORT THE SHOT:

Release the ARM switch *without* pressing the FIRE switch. The high voltage will be discharged internally.

WARNING: ... How NOT to Destroy Ceramic Bead When Changing Shock Tube Fittings: Follow carefully.

Select the proper pneumatic fitting for shock tube size. Ensure that the shrink tubing gasket is in place over the ceramic bead, otherwise shorting of electrodes or an improper seal will occur.

Green Dot = Military .150" White Dot = Commercial .125" Silver Dot = Mini tube .086" ~ 0.100"
Tighten fitting 1/4 turn beyond finger tight do not over tighten!!!

Important: Insert a short piece of shock tube into the fitting. Blow into the shock tube while slowly tightening the fitting. When the fitting seals the air flow will stop. This is the correct height for the fitting. It is normal to have thread showing above the housing. **WARNING:** *Further tightening will destroy the bead.*

BATTERY REPLACEMENT:

To replace the battery remove the battery screw on the bottom cover. The slot was designed to accept a quarter, though most coins will fit. Remove the two 123 cells and replace. Be sure the proper battery polarity is observed; the **positive +** end of each battery should be **inserted first**. Replace the battery screw plug to a snug fit. The battery screw was designed to be loosened and tightened with a coin. The back side of the specialty wrench included with the LWDD kit was designed to the same size.

MAINTENANCE

- During normal usage, no maintenance is required except for battery replacement.
- Dry fire the shock tube adapter occasionally to clear out any residue or debris.
- Each shock tube ceramic block should last approximately 2,000 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! If you have been carrying your shock tube in a field pack a simple procedure is: After inserting the shock tube in the firing tip hold the shock tube three feet vertically above the machine and thump the shock tube along its length 3~5 times to insure you have no barren areas in the shock tube.

Caution: High speed particles may be ejected from shock tube tip when firing. NEVER look directly into the tip when test firing. Eye damage may occur.

LWDD Specifications

Size	: 4.5" x 1.0" x 1.5"
Weight	: 0.370 lbs or 167 grams
Power Requirements	: Two CR123A Lithium 3 volt batteries
Charge Time	: 3~5 seconds
Output Firing Pulse Energy	: 375 Volts @ 10 joules
Blasting Cap Capacity	: 80 standard 2-ohm electric caps
Shots per Battery Set	: 250 (more depending on temperature and time between shots)
Shots per Ceramic Block Assembly	: 2,000 (typical)
Color	: Desert Tan
Temperature Range	: -20°C ~ +85°C (electric output) -10°C ~ +85°C (shock tube output)

MD82 is the Duke Pro, Inc internal model reference designation for the LWDD Light Weight Demolition Device.

Replacement ceramic blocks are available from Duke Pro.

See www.dukepro.com or call us toll-free at 1-866-587-3853 (1-TOOL-UP-DUKE) for pricing. Outside the U.S. call +1-828-683-6022.

MD82 and LWDD Part Numbers

Duke Pro Part Number	Description
514680	LWDD – Light Weight Demolition Device Includes: 514650: MD82 initiator 514680-1: Custom pouch 514680-2: Specialty wrench 514690-1: Fitting for 1/8" shock tube 514690-2: Fitting for 2.5mm shock tube 514690-4: Fitting for 4mm shock tube
514650	MD82 Combination electric initiator. Includes: 514710-1: Combination electric / shock tube tip, 1/8" shock tube fitting
514680-1	Custom Pouch for LWDD
514680-2	Specialty wrench for LWDD
514710-1	MD82 Combination electric / shock tube tip Includes 1/8" shock tube fitting (514690-1)
514710-2	MD82 Combination electric / shock tube tip Includes 2.5mm shock tube fitting (514690-2)
514710-4	MD82 Combination electric / shock tube tip Includes 4mm shock tube fitting (514690-4)
514720-1	Dual Tip with two 1/8" shock tube fittings (514690-1)
514720-2	Dual Tip with two 2.5mm shock tube fittings (514690-2)
514720-4	Dual Tip with two 4mm shock tube fittings (514690-4)
514720-12	Dual Tip with one 1/8" and one 2.5mm shock tube fittings (514690-1 and 514690-2)
514720-14	Dual Tip with one 1/8" and one 4mm shock tube fittings (514690-1 and 514690-4)
514720-24	Dual Tip with one 2.5mm and one 4mm shock tube fittings (514690-2 and 514690-4)