



X-Calibre™ Operator's Manual

Document EX054

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COMPANY PROPRIETARY



WARNING: Never place objects, especially body parts, in front of the barrel. When firing, any object in the blast cone is subject to blast effects including very brief moments of intense heat. This flash effect can cause serious flash burns to exposed skin or ignite readily flammable liquids or material; i.e. gasoline, black powder, etc.



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WARNING: This symbol indicates that violating this item could cause serious personal injury.



CAUTION: This symbol indicates that violating this item could cause minor or medium personal injuries or material losses.

Unpacking the Model X-Calibre™

When your Model X-Calibre Gun Simulator arrives, the case will contain the following:

1. Model X-Calibre Body Assembly
2. Three User Choice Barrel options
3. Two Detachable Support Legs
4. Propane Regulator and Propane Regulator Adaptor
5. EMPTY Oxygen Cylinder and Oxygen Regulator
6. Oxygen and Propane Hoses
7. Gas Cylinder Bracket
8. Receiver Antenna
9. Operator's Manual in document holder
10. [OPTIONAL] Wireless Transmitters - X-MIT, X-LRT, or X-ACT Tablet
11. [OPTIONAL] X-IED Hardwired Trigger Cable

X-Calibre™ External Components

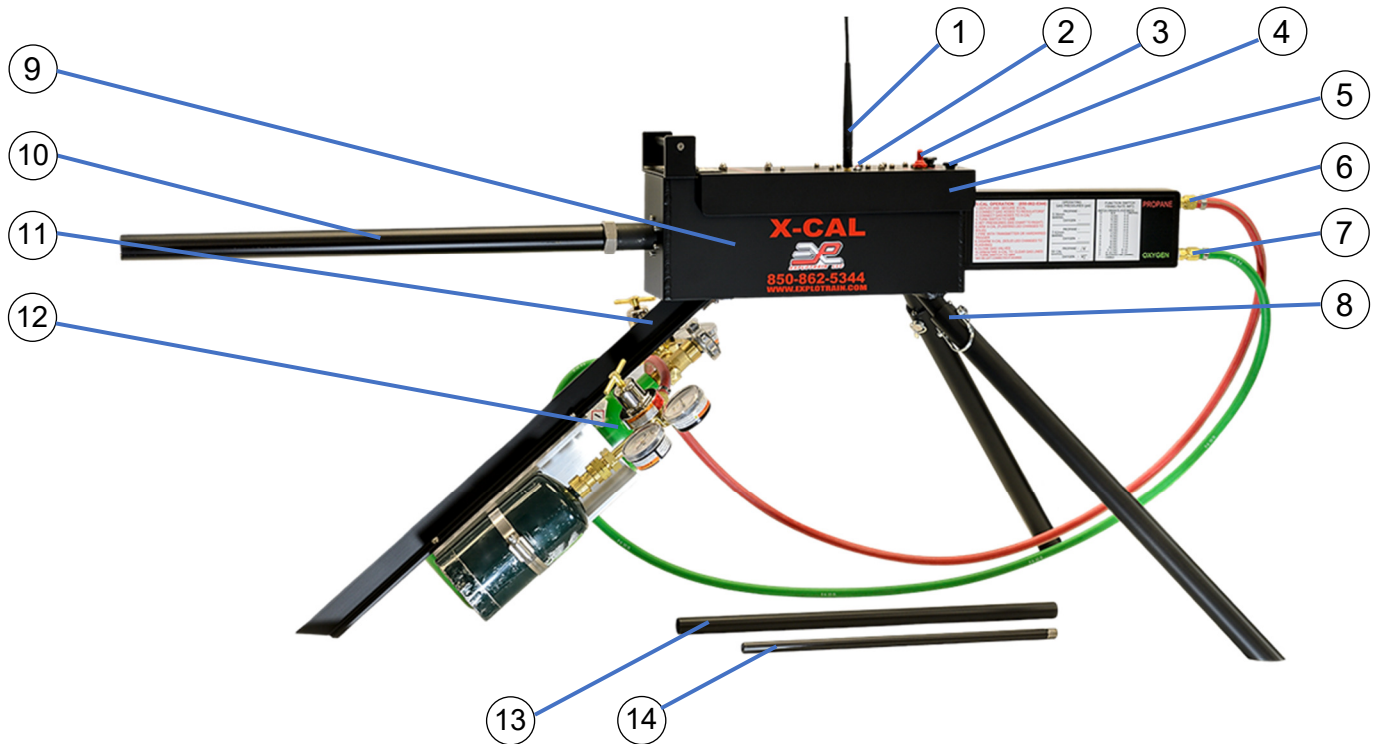


FIGURE 1

- | | |
|----------------------------|------------------------------------|
| 1. Receiver Antenna | 8. Rear Support Leg (2) |
| 2. Armed LED Indicator | 9. Main Body Assembly |
| 3. Main Power Switch | 10. .50 Cal Interchangeable Barrel |
| 4. Thumbscrews (2) | 11. Folding Front Support Leg |
| 5. Control Access Panel | 12. Gas Cylinder Assembly |
| 6. Propane Hose Connection | 13. 7.62mm Interchangeable Barrel |
| 7. Oxygen Hose Connection | 14. 5.56mm Interchangeable Barrel |

X-Calibre™ Internal Components

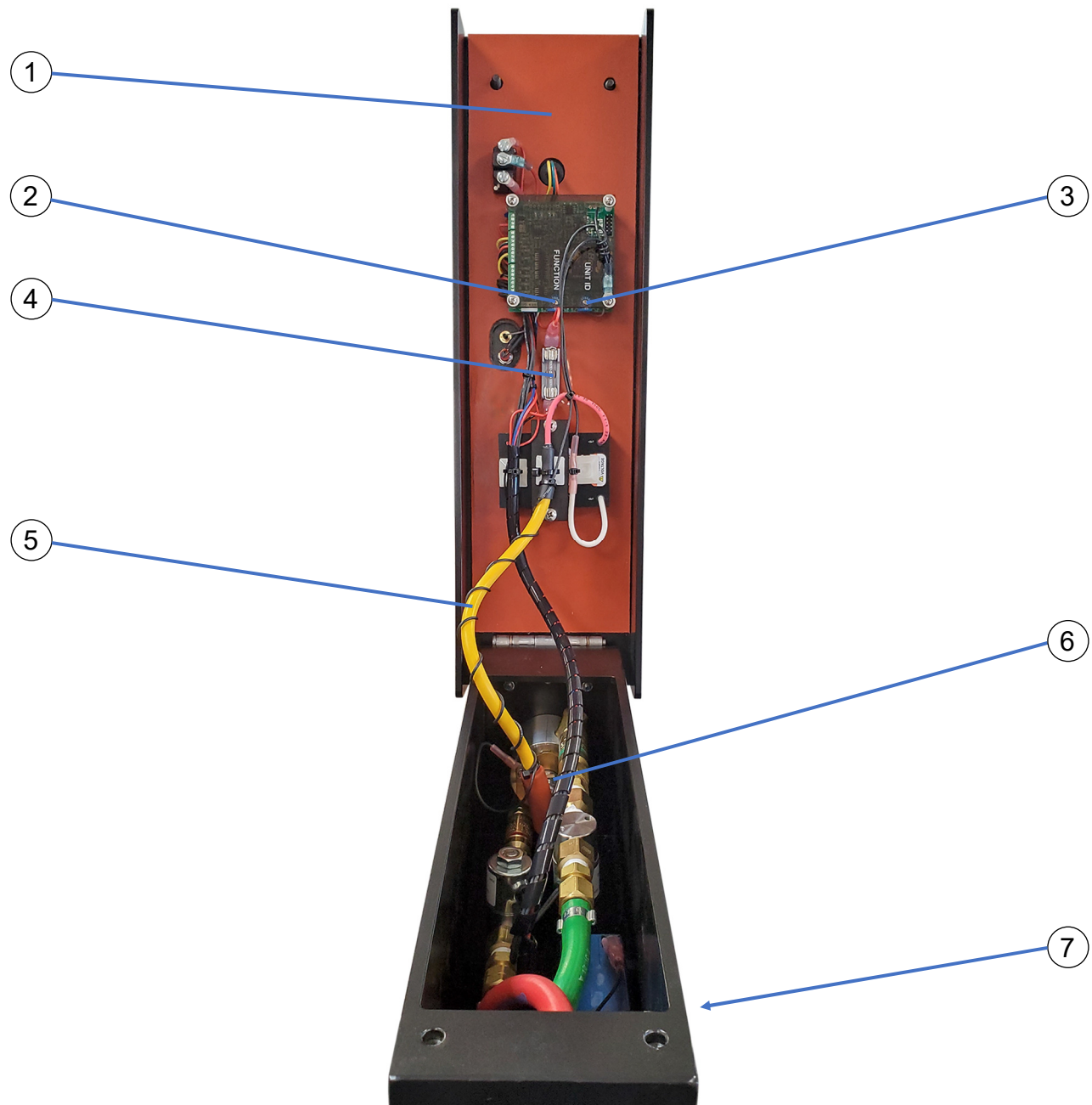


FIGURE 2

- | | |
|---------------------------|--|
| 1. Rubber Gasket | 5. Ignition Wire |
| 2. Rotary Function Switch | 6. Spark Plug |
| 3. Rotary Unit ID Switch | 7. Battery Charging Port (on Main Body, not visible in this photo) |
| 4. Fuse, 5A | |

Gas Cylinder Assembly Components

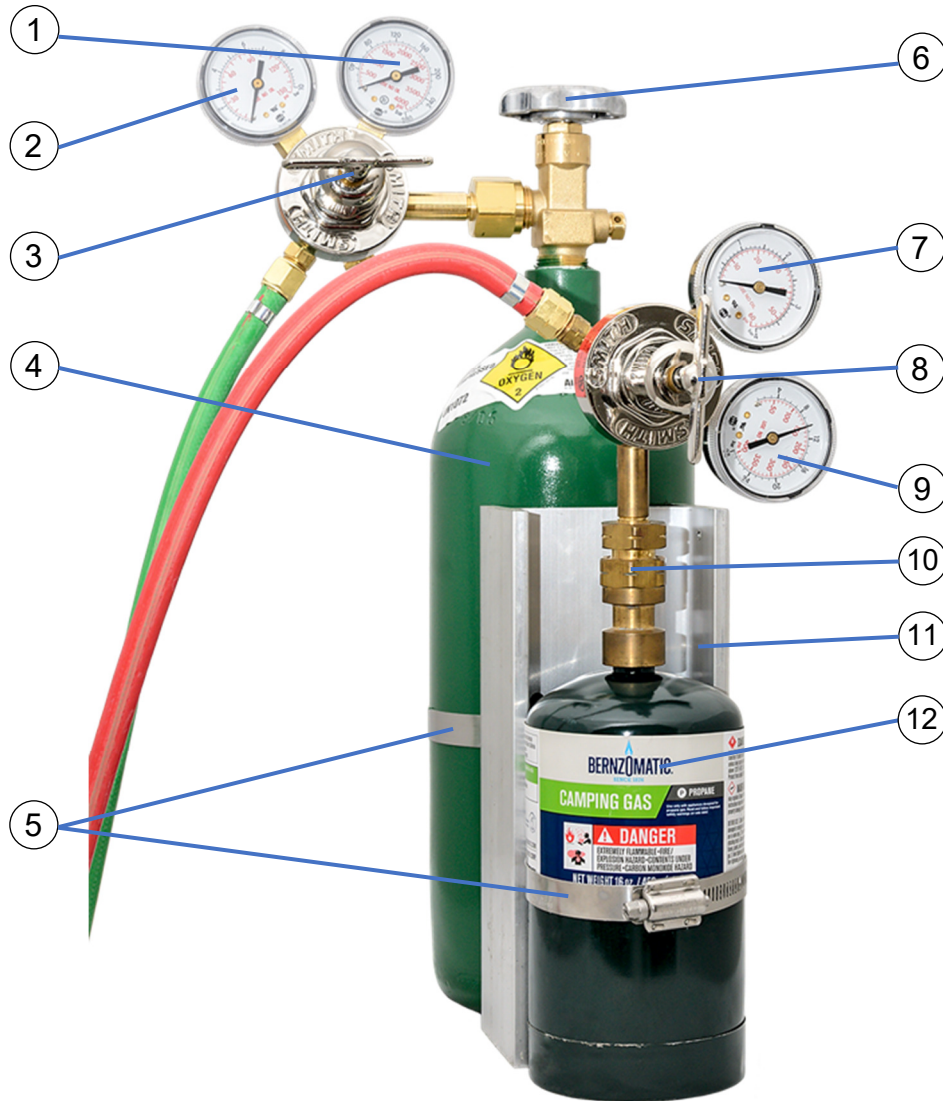


FIGURE 3

- | | |
|--------------------------------------|---------------------------------------|
| 1. Oxygen Primary Gauge | 7. Propane Secondary Gauge |
| 2. Oxygen Secondary Gauge | 8. Propane Regulator Adjustment Screw |
| 3. Oxygen Regulator Adjustment Screw | 9. Propane Primary Gauge |
| 4. Oxygen Cylinder | 10. Propane Adapter |
| 5. Gas Cylinder Clamps | 11. Gas Cylinder Bracket |
| 6. Oxygen Tank Main Valve | 12. Disposable Propane (not included) |



NOTE: The Oxygen Cylinder is shipped EMPTY and must be filled. The Propane Cylinder(s) must be purchased separately. If a Material Safety Data Sheet (MSDS) is needed, please visit our website to request a copy.



CAUTION: The introduction of foreign debris, e.g., sand or dirt, into the gas system of the blast simulator may cause the valve to malfunction by sticking in the open position, thereby allowing gas to flow freely causing a potentially unsafe condition. It is imperative to keep the ends of the hoses and valve fittings covered while they are not connected to each other. If you suspect dirt may have been accidentally introduced into a hose, before connecting it to the valve you may connect one end to its gas source and open the valve momentarily to blow the dirt from inside the hose. Be sure to wear eye protection and do not point the open hose toward any personnel or open flame.

Assembly of the Oxygen Cylinder

1. Exchange the supplied EMPTY Oxygen Cylinder for a full one or have the supplied tank filled (typically at a local welding facility). The Oxygen Cylinder is equipped with a CGA540 fitting. Note: Medical Grade oxygen is not recommended for use.
2. Note the difference between the Oxygen Regulator and the Propane Regulator in Figure 3 . The Propane Regulator has the Propane Adapter fitting already installed.
3. Install the Oxygen Regulator onto the full Oxygen Cylinder and install the assembly into the larger clamp on the proper side of the Gas Cylinder Bracket (see Figure 1). Rotate the Oxygen Cylinder/Regulator assembly to the proper orientation as shown in Figure 1 and securely tighten the clamp that holds the Oxygen Cylinder to the Gas Cylinder Bracket.
4. Securely tighten the Oxygen Regulator Mounting Nut with a 1-1/8" wrench to 40-60 ft/lbs. Note: Do not use pliers or any other size tools.
5. Attach the free end of the **green** Oxygen Hose to the Oxygen Regulator. Securely tighten the Oxygen Hose Coupler Nut with an 11/16" wrench (see Figure 2) while holding the regulator nut with an opposing 9/16" wrench.

Procurement and Installation of the Disposable Propane Cylinder

1. A disposable Propane Cylinder must be purchased and installed for proper operation.
2. Recommended commercially available types of disposable Propane Cylinders are those used typically for recreational camping, such as:



Bernzomatic 16.4 oz.



Coleman 16.4 oz.



3. The Propane Cylinder should be secured in an upright position ($>45^{\circ}$) during use.
4. **Caution:** Before installing the new Propane Cylinder, turn the Propane Regulator Adjustment Handle (#8, Figure 2) counterclockwise until minimal resistance is felt. **DO NOT COMPLETELY REMOVE THE ADJUSTMENT SCREW FROM THE REGULATOR!**
5. Insert the new disposable Propane Cylinder into the Propane Adapter on the Propane Regulator and carefully screw it clockwise into the adapter until it is hand tight. Do this quickly to prevent as little gas as possible from escaping.
6. Install the complete Propane Cylinder/Regulator assembly into the smaller clamp on the proper side of the Gas Cylinder Bracket (see Figure 1). Rotate the Propane Cylinder/Regulator assembly to the proper orientation as shown in Figure 1 and securely tighten the clamp that holds the Propane Cylinder to the Gas Cylinder Bracket.
7. Attach the free end of the **red** Propane Hose to the Propane Regulator. **Note: All Propane hose fittings are left-handed threads.** Securely tighten the Propane Hose Coupler Nut with an 11/16" wrench (see Figure 2) while holding the regulator nut with an opposing 9/16" wrench.
8. Connect the **green** Oxygen Hose and **red** Propane Hose to their respective input connectors on the X-Calibre (see Figure 1) with an 11/16" wrench and an opposing 5/8" wrench on the X-Calibre body. NOTE: Propane Fittings use Left-Handed Threads.



WARNING: Do not use Oxygen or disposable Propane Cylinders that have passed their date of certified use.



WARNING: Do not use Oxygen or disposable Propane Cylinders that show evidence of physical damage or corrosion; i.e. pitting, dents or rust.



CAUTION: The Propane Regulator Adapter is connected to the Propane Regulator with **left-handed threads** and is tightened with two opposing 1-1/8" wrenches. The Propane Hose fitting is connected to the Propane Regulator with **left-handed threads** and an 11/16" wrench and an opposing 9/16" wrench.

NOTE: Larger refillable propane cylinders may be used. If needed, the Propane Regulator Adapter may be removed from the Propane Regulator to allow attachment to a standard propane cylinder.



CAUTION: When removing or attaching hoses to the X-Calibre body **DO NOT** remove hose fitting from the X-Calibre body. This may create a hazardous condition, i.e. leaking gas.

Use the Gas Cylinder Clamp to firmly attach both the Oxygen and Propane Cylinders to the Gas Cylinder Bracket and mount the bracket to the front (folding) leg of the X-Calibre as shown in Figure 1.

Gas Cylinder Clamps



FIGURE 4



DO NOT POINT THE BARREL TOWARDS UNPROTECTED PERSONNEL

Preparation for Firing

Mounting the X-Calibre™

1. Fold-out the front leg and attach the rear legs to support the X-Calibre.
2. Ensure the rear leg retainer pins are latched closed (see Figure 1.)
3. Mount the Gas Cylinder Bracket Assembly to the front leg (see Figure 1).
4. The X-Calibre may also be used without the legs, if it is SECURELY clamped or otherwise held in position. In any case, the Gas Cylinder Bracket Assembly must be secured (where desired) with the Propane Cylinder in an upright (greater than 45 degree) orientation.
5. Connect the Oxygen and Propane Hoses as shown in Figure 1.
6. Mount the receiver antenna on the X-Calibre (finger-tighten ONLY – no tools).
7. Mount the desired Barrel option (hand-tighten ONLY – no tools). *Note: the 5.56 barrel uses tapered threads that will engage approximately 50% when tightened.*
8. If concealing the X-Calibre, do not put fragile or loose objects in the blast cone.



WARNING: Always verify that no foreign objects or debris are inside the barrel prior to use.

Caring for the Rechargeable 12V Battery

The X-Calibre incorporates the use of a 12V 2.9 AH SLA battery to provide a longer lasting period of operation. The user should easily get an entire day's use out of a fully charged battery. However, proper care of the battery is required to ensure long battery life. The battery is shipped from the factory with a full charge, but if the X-Calibre is stored for a period time before being used it is recommended to charge the battery before use. It is also recommended to charge the battery after each day's use.



Setting the Operational Mode

1. Loosen the two thumbscrews securing the Control Access Panel.
2. Open the Control Access Panel and locate the rotary Function Switch (Figure 2).
3. When triggered, the X-Calibre fires a single shot or a random count 4 to 12 shot burst at the selected firing rate. Set the Function Switch to the desired firing function, See Chart Below:

Switch	Fire Rate	# of Shots	Switch	Fire Rate	# of Shots
0	N/A	1 (sniper mode)	8	6/sec	7-9
1	5/sec	4-6	9	7/sec	7-9
2	6/sec	4-6	A	8/sec	7-9
3	7/sec	4-6	B	9/sec	7-9
4	8/sec	4-6	C	10/sec	7-9
5	9/sec	4-6	D	5-7/sec	6-12
6	10/sec	4-6	E	8-10/sec	6-12
7	5/sec	7-9	F	Reserved for Channel Change	

Setting the Unit ID

1. Ensure Main Power Switch is in the OFF position.
2. Loosen the two thumbscrews securing the Control Access Panel.
3. Open the Control Access Panel and locate the UNIT ID rotary switch.
4. Rotate the switch until the arrow points to the desired Unit ID (0 through 9) for use with an X-LRT. A through F can only be used with X-ACT or X-MIT Transmitters
5. Do not set multiple units to the same Unit ID as this interferes with communications since the Transmitter should only communicate with one unit per Unit ID.
6. Close and secure the Control Access Panel with the thumbscrews before firing.

Your Model X-Calibre is now ready for use.



CAUTION: While the electronic components of your X-Calibre are protected from rain and moisture when the Access Panel is closed and secured, opening this panel and exposing them to rain and/or moisture may damage the electronics.

DO NOT OPEN THE CONTROL ACCESS PANEL OR EXPOSE THE ELECTRONIC COMPONENTS TO WATER OR HIGH MOISTURE LEVELS, i.e. RAIN, SNOW, Etc.



FOLLOW SAFETY INSTRUCTIONS BELOW!

Safety Instructions to follow prior to Firing



CAUTION: Make sure Model X-Calibre is securely positioned before firing.



WARNING: Do not place hard objects such as gravel, rocks, nails etc. in the Blast Cone as they will create a fragmentation hazard during firing.



WARNING: Remove flammable objects from the Blast Cone of the X-Calibre.



CAUTION: Hearing and eye protection are strongly recommended.



CAUTION: While weather resistant, the Model X-Calibre cannot be submerged.



WARNING: After firing the X-Calibre, the Barrel will be HOT and may cause severe burns. Allow sufficient cooling time before touching the barrel.



WARNING: Never place objects, especially body parts, in front of the Barrel. When firing, any object in the blast cone (see Figure 5) is subject to blast effects including very brief moments of intense heat. This flash effect can cause serious flash burns to exposed skin or ignite readily flammable liquids or material; i.e. gasoline, black powder, etc.



FIGURE 5

**Perform Maintenance and Inspection prior to each use of the Model X-Calibre
(See Maintenance and Inspection Procedures below)**

Operating the Model X-Calibre™

The Model X-Calibre is programmable to operate in single-shot or multiple-shot bursts. The operational mode of the X-Calibre is determined by the Function Switch. Actual firing of the X-Calibre is controlled by a Hardwired Trigger Cable, X-MIT, X-LRT or an X-ACT transmitter. If your unit has been custom programmed, please see the attachment for a description of operating the Model X-Calibre with your customized programs.

LIVE Mode

In LIVE Mode, the Model X-Calibre will provide a burst of loud reports when a Fire Signal is received from the transmitter. This report can be extremely loud and may cause hearing loss if protective equipment is not used. Typical decibel readings are: 50 cal barrel - 153+dB Peak ; 7.62 barrel - 149+dB Peak; 5.56 barrel - 144+dB Peak.



Caution: Personnel should stand back at least 15 feet when firing and stay clear of the Blast Cone. Personal hearing protection is recommended.

1. Make sure the X-Calibre is securely positioned.
2. Turn the X-Calibre Power Switch to **LIVE**.



3. Open the Main Valve on the Oxygen Cylinder slowly by turning counterclockwise until FULLY open.
4. The Primary Pressure Gauge will indicate the amount of pressure in the cylinder. A full cylinder is 2015 PSI.
5. The disposable Propane Cylinder has no main valve, so the Primary Pressure Gauge will always register pressure when the Propane Regulator is attached.
6. Turn the handle on the Regulator Adjustment Screws of both the Oxygen and Propane Regulators clockwise until the proper operating pressures are reached on the Secondary Pressure Gauges. **The nominal recommended secondary pressures are listed on the label on the side of the X-Calibre.** Typically, 45 PSI for the Oxygen and 10-20 PSI for the Propane.
7. With the Oxygen Secondary pressure set at 45 PSI, set the Propane pressure at 10 PSI and begin working the Propane pressure up slowly until consistent firing is achieved.
8. If adjustments are needed, leave the Oxygen at 45 PSI and make slight adjustments to the Propane pressure.

SAFETY FEATURES AND PROCEDURES FOR FIRING

ARMING

To operate and fire the Model X-Calibre, the unit must be powered on and Armed. The Model X-Calibre will not fire when Disarmed.

1. Flip the X-Calibre Power Switch from **OFF** to **LIVE**. The Armed LED on the X-Caliber will begin flashing.
2. Turn-on the X-MIT or X-LRT transmitter. A **green** light on the transmitter will indicate when it is communicating with an X-Calibre unit (refer to the X-MIT or X-LRT Manual).
3. Briefly press the appropriate X-Calibre unit ID button of the transmitter. The Armed LED on the top of the X-Calibre changes from flashing to solid ON, and the unit ID LED on the transmitter changes to **red** when the X-Calibre is Armed (refer to the X-MIT or X-LRT Manual).
4. The Model X-Calibre may be Armed or Disarmed at any time by briefly pressing the appropriate X-Calibre unit button of the transmitter.



WARNING: Do Not Use more than one Transmitter or use more than one X-Calibre with the same Unit ID within range of each other. Maintain minimum 2-mile separation.



PURGING

When the X-CALWR is first powered up and the necessary FIRING conditions are met, the unit will purge the Propane system to remove excess air. This purging is performed so that a more uniform mixture of Propane is available to ensure improved consistency of performance afterwards. To purge the X-CALWR, the unit must be powered on and Armed as described above in the ARMING section.

1. Once Armed, press and hold the appropriate X-Calibre Unit ID button of the transmitter for at least one second.
2. The Propane valve will open and purge the Propane chamber for 1 second to bleed off excess air in the system. Oxygen will not flow and the unit will not spark. Allow any purged Propane to dissipate, typically 30 seconds or more, before firing.
3. After purging, the X-Calibre can be fired normally, as described below.
4. This purging operation is performed every time after the unit is powered up.



WARNING: Do Not Purge the X-Calibre in enclosed areas or tightly confined spaces.

FIRING

The Model X-Calibre can be Fired only when Armed.

1. Once armed, the Model X-Calibre can be Fired by pressing and holding the appropriate X-Calibre unit button of the transmitter for at least one second to initiate a Firing sequence (refer to the X-MIT or X-LRT Manual).
2. A brief flow of gas into the Model X-Calibre is immediately followed by a loud report as the gas mixture is ignited by the Spark Plug.
3. The Model X-Calibre can be Fired again by repeating the sequence above.

If a continuous Fire Signal is received, the unit will still only allow a single firing burst.

Hardwire Input

Your Model X-Calibre has an **INPUT** port on the top of the Control Access Panel and uses a Hardwired Trigger Cable [OPTIONAL] to allow for hardwired operation.

1. Momentarily grounding Conductor **2** of the hardwired input (connect Black Conductor **2** to the Green/Yellow Ground Conductor) will toggle the X-Calibre between Armed and Disarmed status.
2. Momentarily grounding Conductor **1** will send a Fire signal to the X-Calibre.



3. Hardwire inputs and X-MIT inputs can be used at the same time, i.e. a pressure plate switch connected to the Hardwired Trigger Cable and an X-MIT can both be used to Fire the X-Calibre



CAUTION: The only time you should hear gas flow is at the beginning of each Firing Sequence. If you should hear gas flowing at any other time, immediately turn the unit to OFF, close the main valves, and check all hose and regulator fittings.

Turn Off Instructions

Disarm the Model X-Calibre by briefly pressing the appropriate X-Calibre Unit ID button of the transmitter. This action toggles the unit between Armed and Disarmed status. Once the X-Calibre Armed Indicator LED changes from solid to flashing, the unit is Disarmed and will not fire.

Once the unit is Disarmed, flip the X-Caliber Power Switch to the center, **OFF** position. Switch off the transmitter.



WARNING: After firing the X-Calibre, the Barrel will be **HOT** and may cause severe burns. Allow sufficient cooling time before touching the barrel.

Recharging the 12V Battery

1. To charge the Battery, set the Main Power Switch to the CHARGE position.
2. Plug the Battery Charger (supplied) into a 120V AC outlet. The Green LED indicates power to the charger is on.
3. Remove the dust cap from the Battery Charger Port on the right side of the X-Calibre and insert the battery charger cable plug into the Charger Port. The RED indicator should come on, indicating the battery is charging. Once the battery is fully charged, the GREEN indicator on the charger should come on, indicating the charger has switched to a float charge status.
4. Unplug the battery charger first from the power outlet then unplug the cable from the X-Calibre. Insert the dust cap into the Charger Port.



CAUTION: It is recommended to disconnect the charger once the battery is fully charged. Use only the supplied charger – do not use a charger with an output greater than .5A (500mA) or long-term damage to the battery will result.



Storage Requirements

When storing the Model X-Calibre, the fuel lines should be depressurized:

1. Once the unit is Disarmed, close the Main Valve on the Oxygen Cylinder.
2. Turn regulator adjustment screw counterclockwise until minimal resistance is felt.
DO NOT REMOVE THE ADJUSTMENT SCREW FROM THE REGULATOR!
3. Arm and Fire the unit several times to release any residual fuel gasses in the lines.
4. It is recommended to fully charge the battery before storing the X-Calibre.



WARNING: While the quantities of residual gasses released may not be sufficient for the unit to actually Fire, this bleeding operation should be treated as an actual Firing sequence for safety reasons.

Replacing Cylinders

Replacing an Oxygen Cylinder

1. Turn-off the Model X-Calibre.
2. Depressurize the fuel lines (see **Storage Requirements**, above).
3. Remove the Oxygen Cylinder and remove the regulator with a 1-1/8" wrench.
4. Attach the Oxygen Regulator firmly to the replacement Oxygen Cylinder in orientation (see Figure 3) with a 1-1/8" wrench. Do not use pliers or any other size tools.
5. Inspect the gas fittings-to-regulator attachments for leaks by checking for bubbles when sprayed with soapy water.

Replacing a Disposable Propane Cylinder

1. Turn-off the Model X-Calibre.
2. Depressurize the fuel lines (see **Storage Requirements**, above).
3. Remove the disposable Propane Cylinder.
4. Install the replacement disposable Propane Cylinder (hand tighten only.)
5. Inspect the gas hose fittings-to-regulator attachments for leaks by checking for bubbles when sprayed with soapy water.



CAUTION: The Propane Regulator Adapter is connected to the Propane Regulator with left-handed threads and should be tightened with two 1-1/8" wrenches.

Maintenance and Inspection Procedures

Before Each Use

- Ensure that the Battery is sufficiently charged (greater than 11.5 Volts).
- Ensure the Control Panel thumbscrews are fully secured (finger-tight).
- Inspect the Regulators and Gauges for cracks or obstruction of the indicator pointers.



WARNING: Before re-attaching Oxygen and Propane hoses and connections, clean and inspect to ensure that no foreign particles such as dirt, sand, etc. are

- Make sure no water, dirt, or other foreign materials are in the firing chamber or barrel.
- Make sure the barrel is firmly secured to the X-Calibre body (hand-tighten only!). The 50 Cal and 7.62 barrels should be fully seated. The 5.56 barrel uses tapered threads, and 50% engagement is typical.
- Make sure the Oxygen Cylinder has sufficient charge by checking primary pressure gauge. A fully charged Cylinder contains 2015 PSI.
- Check that the Disposable Propane Cylinder contains liquid Propane (the Primary Pressure Gauge is not an accurate indicator of remaining liquid Propane).
- Ensure Oxygen and Disposable Propane Cylinders are firmly secured before use (the Propane Cylinder must be in an upright position).

Periodic Checkpoints

Inspect the barrel and welds of the X-Calibre body for visible cracks or other indications of fatigue.



- Inspect the Spark Plug body for cracks or other indications of fatigue. Make sure the Spark Plug is tightly seated - if not, use a 13/16" wrench and tighten securely.
- Ensure the Spark Plug ignition wire is fully seated and firmly attached to the Spark Plug (NGK GR4 2635 recommended).
- Ensure battery is fully charged. Low battery voltage is the most frequent cause of performance problems.

Tuning and Troubleshooting Procedures

Tuning

Your X-Calibre Machine Gun Simulator uses a precisely blended mixture of Oxygen and Propane inside a small combustion chamber. This requires valves opening and closing in as little as 50 mS and near exact timing of the ignition to allow for proper combustion to produce the desired report and allow the chamber to be cleared of any residual gas, heat, and flame before the next shot. Most problems are the result of improper ignition of a gas mixture that produces a brief flame instead of a loud report.

Changing barrels may change the combustion chamber characteristics enough to result in the need to readjust the gas pressures. You may have to adjust pressures after changing barrels to maintain peak performance.

If you are having issues with flames instead of reports, the problem is likely with the gas pressures. Please note that ignition of the gas mixture, even if it produces a flame instead of a report, indicates that all components of the X-Calibre are functioning. If repeatedly fired with flames, the barrel will overheat and must be allowed sufficient cooling time. DO NOT touch the barrel until sufficiently cooled.

Start with the Function Switch in Position 9 and the .50 caliber barrel attached. The most effective way to find the proper gas pressures is typically by setting the Oxygen and slowly adjusting the Propane settings. It is recommended to set the Oxygen pressure at 45 PSI and leave it there and adjust the Propane pressure until consistent firing is achieved.

Outside Temperature	Recommended Oxy PSI	Recommended Propane PSI
80° F and above	45 PSI	10-20 PSI
65° F and below	45 PSI	8-20 PSI



Begin with the Oxygen secondary pressure set at 45 PSI and the Propane secondary pressure set at 10 PSI. Arm and Fire the X-Calibre. After the initial PURGE sequence is completed, the X-Calibre will begin to fire. Adjust the Propane pressure slowly upwards until the gas mixture becomes properly balanced and the X-Calibre produces a consistent, loud report. As you continue to raise the Propane pressure past this optimum point, the mixture will become too rich and the X-Calibre will flame out with a bluish colored flame. Back the Propane pressure back down until the optimum point is reached again. Make note of this pressure – this will be the optimum Propane pressure for the current temperature. From this point it should require only small Propane pressure adjustments (approximately +/- 1 PSI) to fine tune your X-Calibre to fire reliably.

If, during the tuning procedure a Propane pressure of 20 PSI is reached without consistent firing, start over with the pressure set at 5 PSI and slowly work up from there. To do this, turn the Propane Regulator Adjustment Screw counterclockwise a couple of turns and fire the X-Calibre until the Propane pressure drops to 5 PSI and then turn the Adjustment Screw clockwise to slowly raise the pressure to find the optimum firing pressure. If you are still unable to find the optimum firing pressures, call Explotrain for assistance.

Troubleshooting

If your X-Calibre is producing brief flames instead of a series of loud reports, then the issue is most likely one of tuning (see above) and not troubleshooting.

If, however, your X-Calibre produces neither flames nor reports when fired, use the troubleshooting guide below:

No Power (X-Calibre is completely unresponsive, no LEDs lit on circuit board or cover)

Ensure battery is fully charged and wires are connected to the terminals. Check fuse and replace if necessary.

External Gas Leak (excessive smell of Propane, excessive use of gas, particularly during periods of light use)

To check for leaks, apply solution of soapy water to the exterior of all gas line fittings and look for bubble formation. Or, to check the Oxygen side of the system, slightly open the main valve of the Oxygen cylinder and close the valve before the pressure in the secondary pressure gauge reaches its set level. A leak is evidenced by a drop in the pressure indicated by the secondary pressure gauge. By shutting the main valve before the primary pressure gauge indicates a pressure reading, only the volume of gas that is pressurizing the secondary gauge is available to the system thereby making any leak show up much sooner than if an additional gas were available from the primary gauge or main cylinder.



If a leak is found, tighten the leaking fitting. DO NOT OVERTIGHTEN - simply wrench tight fittings are sufficient. If still leaking, contact Explotrain at 850-862-5344.

If still unable to get the X-Calibre to produce report or flame you may have an issue with dirt or debris in one or both valves. Please contact us for repair at 850-862-5344.

Internal Gas Leak (Continuous flow of gas into Chamber, possibly resulting in flame output from Barrel)

Internal leaks are likely the result of dirt in one of the valves. Contact Explotrain at 850-862-5344 for a flushing procedure or to return the unit for repair.



USE CONSTANT CARE TO PREVENT DIRT FROM ENTERING THE HOSES OR THE VALVES.

Tuning Adjustable Chamber

The X-Calibre is equipped with a stainless steel insert that can be adjusted in or out. This changes the combustion chamber size affecting the tone of the report.

To Adjust the Insert

To adjust the insert, use a 1-11/16" wrench and loosen the large nut on the chamber where the barrels are screwed on. Once the nut is loose, you should be able to turn the insert by hand.



Warning: Do not attempt to adjust the insert immediately after firing as this may cause severe burns.

Turning the insert inward will make the combustion chamber size smaller, creating a sharper tone. Conversely, turning it outward makes the combustion chamber larger, creating a deeper tone. If multiple pressure adjustments do not result in satisfactory performance, try adjusting the chamber size as described above.

Once the insert is set to the desired size, retighten the nut using a 1-11/16" wrench to approximately 10 ft/lbs.



Operation Summary Checklist

- ☐ **Power:** ensure batteries are new or fully charged
- ☐ **Communication:** ensure transmitter has fresh batteries and ensure simulator and transmitter are on same Channel and Unit ID
- ☐ **Gas pressures:** oxygen @ 45 psi; propane @ 10 psi (see label on side of unit)
- ☐ **Hose connections:** ensure gas hoses are properly connected between regulators and simulator
- ☐ **Spark plug:** ensure spark plug is tight and spark plug cable is securely connected



**Thank you for purchasing your
Model X-Calibre Gun Simulator.**

**We at Explotrain, LLC truly appreciate your
business.**

**If you have any questions or comments on this,
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