

## SmartMag (irM4) User Manual

Thank you for your purchase of the iCOMBAT system. This highly realistic law enforcement training tool has been developed to meet the needs of training programs world wide. The system is very dependable and can be used for a variety of exercises suiting the user. The patented SmartMag is the core of the iCOMBAT system. It allows the corresponding weapon to fire and operate. The SmartMag is extremely durable so its design allows it to be used just like the real thing. Now you'll be able to train cheaper, faster, and anywhere.

### Safety



#### WARNING

The iCOMBAT system is designed to be very realistic in order to meet the needs of law enforcement training programs. Users must take care in keeping the irM4 separate from real firearms at all times. Training with the iCOMBAT system must never occur in areas where real firearms and other hazardous equipment are being used. Serious injury or death may occur. Prior to using the SmartMag, please ensure that it visibly appears to be in good shape. If something seems loose or odd, contact iCOMBAT.



#### CAUTION

The developers at iCOMBAT have taken great care in designing a product that can be used safely. The irM4 is unable to fire a projectile and cannot be made to fire a projectile in any way. Instead, an infrared laser is emitted to 'simulate' a projectile. This beam of infrared light is completely invisible and eye safe. The irM4 is designed to emit this infrared light at safe levels that do not constitute a health hazard. However, as with any light source, we recommend that the user take precautions to avoid any unnecessary exposure such as intentionally aiming the rifle at someone's eyes or staring down the barrel at close range for extended periods of time.



#### CAUTION

Always pay attention to the training organizer and safety briefings when instructed. Be aware of any signs or special hazards in area. iCOMBAT doesn't provide any training.



#### CAUTION

Never modify your SmartMag or iCOMBAT gear in any way at any time for any reason. Repairing the SmartMag or replacing parts may only be done by a certified iCOMBAT technician or with their permission. Disassembly of the SmartMag might damage sensitive electronics or internal components and immediately voids the factory warranty.

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## Liability Statement

This product is surrendered by iCOMBAT with the understanding that the purchaser and or user assumes all liability resulting from unsafe handling or any action that constitutes a violation of any applicable laws or regulations. iCOMBAT shall not be liable for personal injury, loss of property or life resulting from the use of this product under any circumstances. All information contained in this manual is subject to change without notice. iCOMBAT reserves the right to make changes and improvements to products and manuals without incurring any obligation to incorporate such improvements in products previously sold.

## Warranty

iCOMBAT warrants that this product is found free from defects in materials and workmanship for a period of one year from the original date of purchase by the initial owner/purchaser. This warranty does not apply to a) defects discovered after purchase which were caused by the unauthorized modifications, alterations or misuse of the purchased product; b) consumable parts such as batteries, o-rings, or other components designed to diminish or may wear out over time; c) cosmetic damage, including but not limited to, scratches, dents, rips, tears, or broken plastics and metals; d) damage caused by accident, abuse, misuse, liquid contact, fire, flood, or other external cause; e) damage occurring from operating product outside of iCOMBAT's published guidelines found in this manual or otherwise; f) damage caused by service such as upgrades and expansions performed by anyone who is not a representative of iCOMBAT; g) iCOMBAT products that have been functionally or capability modified without written permission from iCOMBAT; h) defects caused by normal wear and tear or otherwise due to normal aging of the iCOMBAT product; i) an iCOMBAT product in which the serial number has been removed or defaced, or is otherwise illegible. Determining a product's warranty status is solely the responsibility of iCOMBAT. iCOMBAT will repair or replace, without charge, any of its products that have failed through defect in material or workmanship.

**IMPORTANT: Do not open or otherwise disassemble your iCOMBAT product without express written permission from an authorized iCOMBAT representative. Opening or disassembling the product may cause damage that is not covered under warranty.**

EXCEPT AS EXPRESSLY STATED HERIN, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, OF THE PRODUCTS OR SERVICES FURNISHED BY iCOMBAT. iCOMBAT SPECIFICALLY DISCLAIMS AND EXCLUDES ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. iCOMBAT SHALL NOT BE LIABLE FOR, NOR DOES iCOMBAT AUTHORIZE ANY PERSON TO ASSUME FOR iCOMBAT, ANY LIABILITY IN CONNECTION WITH THE PRODUCTS OR SERVICES FURNISHED BY iCOMBAT INCLUDING, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, LIABILITY FOR LOSS OF PRODUCTION, PRODUCT, EQUIPMENT OR PROFITS OR LIABILITY FOR DIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES TO PERSONS OR PROPERTY. PURCHASER AGREES THAT PURCHASER'S SOLE REMEDY FOR LIABILITY OF ANY KIND, INCLUDING NEGLIGENCE WITH RESPECT TO THE PRODUCTS AND SERVICES FURNISHED BY iCOMBAT SHALL BE LIMITED TO THE REMEDIES PROVIDED IN THIS LIMITED WARRANTY.

## Service

If you begin to notice odd performance with any of your iCOMBAT gear, please contact iCOMBAT Customer Service at 888-950-1221 right away. You may also email iCOMBAT Service at [support@iCOMBAT.com](mailto:support@iCOMBAT.com).

All iCOMBAT products are covered under a 1 year limited warranty from the time of purchase. If your iCOMBAT product must be serviced, contact iCOMBAT Customer Service at [support@iCOMBAT.com](mailto:support@iCOMBAT.com) to receive return instructions. If your product is found to be outside of warranty, iCOMBAT will contact you with any charges before proceeding to repair your product. You are responsible for all shipping charges to and from iCOMBAT for both warranty and non-warranty repairs. In most cases, iCOMBAT can simply send you the parts you require for repair if a technician has approved.

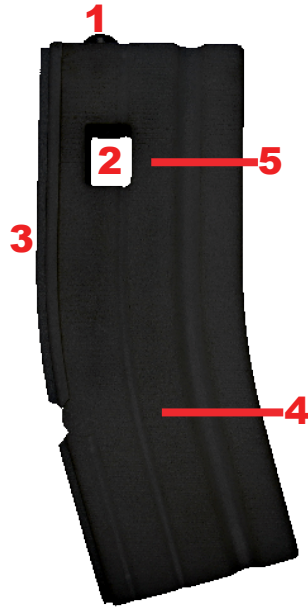
AS STATED ABOVE, YOU ARE RESPONSIBLE FOR ALL SHIPPING CHARGES TO AND FROM iCOMBAT FOR ANY/ ALL SERVICES BOTH UNDER WARRANTY AND NOT UNDER WARRANTY.

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# SmartMag User Manual

## The SmartMag

Take a few minutes and orientate yourself with the SmartMag. Become familiar with its functions and design. Users of the AR15 type of rifles should quickly become accustomed to the SmartMag. It shares the same basic design and weight as a real magazine. It is constructed of glass-filled nylon for strength. There is a complex one way valve that connects to the weapon and a quick release handle that secures a 12 gram CO2 cartridge. The SmartMag is controlled by its internal circuit board.



- 1. Valve
- 2. Status and Venting Windows
- 3. Quick Release Door
- 4. SmartMag Body
- 5. Electronics (internal)

## Battery Power

The SmartMag's power works in a very unique way. It has a small onboard battery that powers the reset electronics only. It does not require charging and cannot be recharged. The SmartMag is actually powered by the irM4 it is inserted into over a short range radio connection.

## Preparation

The SmartMag requires very little preparation before use, but there are a few things to keep in mind. The SmartMag requires a 12 gram CO2 cartridge to work. These cartridges are universally available at a variety of locations and are commonly used in air guns and beverage carbonators. Use ONLY standard 12 gram CO2 cartridges as other types (threaded, shorts, different gasses) may damage the SmartMag or irM4.



# SmartMag User Manual



## WARNING

Wear safety glasses while loading and unloading the SmartMag



## WARNING

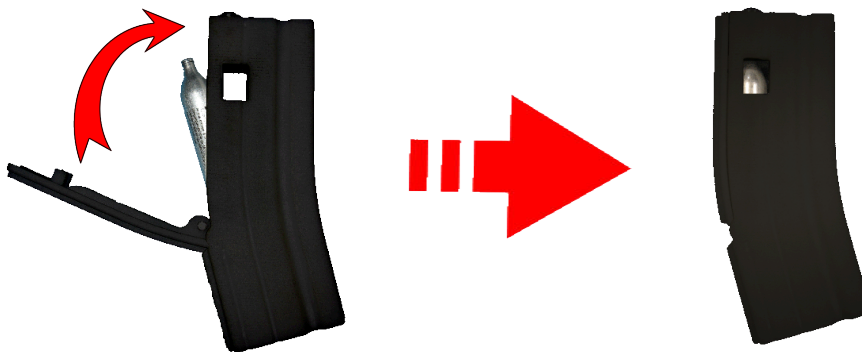
Do not use any type of cartridge aside from a standard 12 gram CO2 cylinder as outlined in Preparation.

### Step 1

Open the SmartMag's Quick Release Handle by prying it down from the top of the mag near the valve. It should swing freely down about 90 degrees before it stops. Do not force it past this point or it may break.

### Step 2

Insert a standard 12 gram CO2 cartridge into the SmartMag at an angle as shown, so that it slides in rounded end first with the cartridge neck protruding outwards. Then snap the protruding portion of the cartridge into the SmartMag past the detents so that sits completely inside the mag.



### Step 3

Firmly grab the SmartMag and Quick Release Handle and swiftly snap the handle completely back to its secured position. The CO2 cartridge will be punctured during this time, so beware of high pressures. The design of the SmartMag utilizes the detents and pressure to keep the Quick Release Handle secure. The ammo count of the magazine will be reset at this time.

### Step 4

Insert the SmartMag into the irM4 until it clicks. It should not fall out unless the magazine release button is pressed. When the ammo count on the SmartMag reads zero, the irM4 will no longer operate until the SmartMag is reloaded with a new CO2 cartridge.

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## Worth Noting...

Each shot will reduce the ammunition count from the SmartMag by one. SmartMags come preset at 30 rounds. Changing the CO2 cartridge will reset the ammo count. The irM4 will not function if the SmartMag reaches an ammo count of zero.

Due to our valving system, the SmartMag can be ejected from the irM4 at any time with minimal air loss. The SmartMag will contain its pressure until inserted into a rifle. This means you can fire 20 shots, eject and pass the SmartMag to your partner, so that he can load up his rifle and fire the remaining 10 rounds.

There is more than enough air pressure in the SmartMag to fully operate the irM4 until the SmartMag count reaches zero, even after ejecting and reinserting it several times.

## Step 5

To empty the SmartMag, first eject it from the weapon. Open the quick release handle and be prepared for escaping gasses. Excess CO2 will bleed safely from the mag through the side venting windows. Take care to avoid placing bare skin near these windows while unloading the SmartMag.

Once completely drained, pop the cartridge forward by using your fingers through the venting windows. The cartridge neck should now be sticking out of the mag at an angle. Pull out the cartridge at this angle, so that it slides upwards freely towards the top of the mag. You can partially shut the door (it will not be able to shut all the way) again to pop the cartridge loose prior to pulling it out.

**DO NOT GRAB THE CARTRIDGE NECK AND PULL IT STRAIGHT BACK. PULLING THE CARTRIDGE STRAIGHT OUT MAY DAMAGE THE INTERNAL MICROSWITCH.**



## WARNING

Wear safety glasses while unloading the SmartMag.  
Pressurized gas and/or debris might be released.

## Using the SmartMag

### Maintenance

The SmartMag's simplified design requires very little regular maintenance. The gasket seat that seals the CO2 cartridge in the valve does require regular oiling. Apply 2-3 drops of the supplied oil to this seal as shown every 3-5 cartridge changes. Apply 2-3 drops of oil to the top of the valve at the same time. You will need to keep an eye on these seals to ensure they do not dry out or become damaged. Do not use any other oil or substance except that which was provided or approved by iCOMBAT. For information on maintaining your SmartMag, please read the SmartMag Maintenance Guide.

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## Handling

The SmartMag is constructed of glass-filled nylon, with steel and aluminum parts. This makes it very sturdy and strong. It can be handled just like a real magazine and withstand impacts from being dropped or slapped in and out of the irM4, even when under pressure. However, it is recommended that you care for the SmartMag like any other piece of valuable equipment.

## Performance Specifications

### RF Range

The SmartMag communicates with the irM4 through a very short range radio. It only works when the SmartMag is fully inserted into the irM4. Nearby SmartMags will not be affected.

### Shot Count

The SmartMag as sold with the irM4 comes preset at 30 rounds. Separate 2-packs are sold, each with a 150 round capacity.

### Battery Life

The SmartMag has an onboard battery that only provides power to the microswitch for resetting the ammo count when a new CO2 cartridge is inserted. This battery lasts approximately 3 years or 100,000 resets. The SmartMag is fully powered by the irM4 through the wireless connection when fully inserted into the rifle.

### Environmental Conditions

As with the rest of the iCOMBAT system, the SmartMag is built to be used in a variety of environmental conditions. The SmartMag can be used in temperatures ranging from 32 - 110 degrees Fahrenheit (0 - 43 degrees Celsius). Colder weather may begin to decrease performance. The electronics are all coated to provide moisture resistance. Damp or dry playing areas will not affect the SmartMag. Using the mag in light rain is fine. Be sure to let it completely dry out before using again.



## WARNING

Do not leave the SmartMag under pressure for an extended period of time. Remove CO2 cartridge from SmartMag if not in use for more than a day.