# M7 Owner's Manual

** INCLUDED WITH YOUR M7**
- M7 Marker
- 1/2 oz. Dye Slick Lube™  
- Parts Kit  
- Barrel Sock  
- Owner’s Manual  
- Warranty Card  

**ADDITIONAL RECOMMENDED TOOLS**
- 3/8" Allen wrench  
- 5/16" Allen wrench  
- Canned Air

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Air Supply - The M7 should be operated using air/nitrogen gas only. This air needs to be supplied to the Hyper2™ in-line regulator at a regulated pressure of no more than 850 psi. The Hyper2™ in-line regulator comes factory preset at 185psi.

Gassing Up Your M7 - Screw in your air system to the on/off airport and turn the knob of the airport clockwise, all the way in.

Turning On Your M7 - The M7's power is controlled by two buttons. The top button turns the marker on and off, while the bottom button turns the eyes on and off. Hold the power button for 3 seconds to turn the marker on. The LED in the grip will illuminate during the boot sequence.

NOTE: If the eye is not working properly, try replacing the battery.

Yellow: - Boot sequence
Red: - Breech is clear, no ball (eyes on)
Green: - Ball in breech, ready to fire (eyes on)
Blinking Red: - Eyes are off
Blinking Green: - Eye failure (see M7 Board, page 4)

LPR - The LPR is pre-set from the factory at approximately 75-80 psi and should need no adjustment out of the box. If fine tuning adjustment is desired or needed, you must be sure that you are adjusting the LPR correctly. See page 11 for detailed instructions. If the LPR is improperly adjusted, you could dramatically hinder the M7's performance or prevent the marker from functioning at all.

NOTE: Turning the adjustment screw clockwise, or in, will lower the LPR's output pressure. Turning the adjustment screw counterclockwise, or out, will raise the LPR's output pressure.

Hopper - To get the best performance out of your M7, it is recommended that you use a motorized loader. Preferably one that force feeds the paint really, really fast!

Adjusting Velocity - The velocity is adjusted through the Hyper2™ in-line regulator. The Hyper2™ in-line is preset from the factory at approximately 185 psi. This pressure setting should have the marker shooting at about 285fps. Your paint-to-barrel fit will also have a noticeable affect on your velocity. Make sure that the paintball fits into the barrel loosely but does not drop through.

NOTE: For the Hyper2™, turning the adjustment screw clockwise, or in, will lower the output pressure, decreasing the velocity. Turning the adjustment screw counterclockwise, or out, will raise the output pressure, increasing the velocity.

NOTE: If the battery is too low, it may not be able to power the solenoid correctly. This will affect your M7's velocity, causing it to become inconsistent and/or low.

IMPORTANT SAFETY INSTRUCTIONS AND GUIDELINES

- The M7 marker is not a toy. Misuse may cause serious injury or death.
- Please read, understand and follow the directions in the M7 owner’s manual.
- Eye protection that is designed specifically for paintball and meets ASTM/CE standards must be worn by user and persons within range.
- Recommend 18 years or older to purchase. Person under 18 must have adult supervision.
- Always treat the M7 marker as if it were loaded and able to fire.
- Only use compressed air or nitrogen gas in the M7 marker. DO NOT USE CO₂.
- Do not exceed 850 psi input pressure.
- Ensure all air lines and fittings are tightened and secured before gassing up the M7.
- Always chronograph the M7 marker before playing paintball.
- Never shoot the M7 marker at velocities in excess of 300 feet per second, or at velocities greater than local or national laws allow.
- Never look into the barrel or breech area of the M7 when the marker is switched on and able to fire.
- Always fit a barrel blocking device to your M7 when not in use on the field of play.
- The owner’s manual should always accompany the product for reference or in the event of resale and new ownership.
- Do not point the M7 marker at anything that you do not intend to shoot.
- Do not shoot at people, animals, houses, cars or anything not related to the sport of paintball.
- Do not fire the M7 without the Fuse™ bolt screwed in completely.
- If you read these instructions and do not fully understand them or are unsure of your ability to make necessary adjustments properly, call DYE or your local pro shop for help.
BUTTONS AND LED INDICATOR

There are two buttons and a LED indicator mounted inside the frame of the M7. These are accessible on the back side of the frame. The top button is used to turn the M7 ON and OFF. The bottom button is used to turn the Eye feature of the M7 ON and OFF. To turn the M7 ON press and hold the top button until the LED turns on. The Eye feature is always on when the M7 is turned on, to turn off the Eye feature press and hold the bottom button until the LED starts blinking red indicating the Eye feature is turned off. If there is no ball and the LED is RED, you need to hold the trigger for 1 second to force the M7 to fire once.

In normal operation mode the LED indicator shows you the following information:

- **Yellow**: Boot up Sequence
- **Red**: No ball detected inside the M7, eyes are turned on
- **Green**: Ball detected inside the M7, eyes are turned on
- **Blinking Red**: Eyes are turned off
- **Blinking Green**: Eyes are blocked. Either the eyes are dirty, the marker is not gassed up, there is bad connection between the board and the eye’s or the battery is low.

SETTINGS AND CONFIGURATION MODE

There are five settings that can be altered in the M7 circuit board.

1. **ABS (Anti Bolt Stick)**: This helps to prevent bolt stick, but may result in higher velocity for the first shot.
2. **Trigger sensitivity**
3. **Dwell**
4. **ROF (Rate Of Fire)**
5. **Fire Mode**

To change settings 2-5 you will need to activate the configuration mode. To activate the configuration mode, turn your marker off, unscrew the two left side grip panel screws with a 3/32" allen key and set DIP switch #2 to the on position. Next, turn your marker on. The 3-color LED will cycle through all colors for one second to indicate that you have entered the configuration mode. To cycle through different settings, pull and release the trigger. Configuration mode has 4 settings that can be changed:

- **GREEN – TRIGGER SENSITIVITY**: VALUES 1-20 (factory default 5)
  - Trigger sensitivity is the amount of time that the trigger needs to be released before the next trigger pull is allowed. In some situations with too low of a value, the marker may begin to shoot full-auto.

- **YELLOW – RATE OF FIRE**: VALUES 1-20 (factory default 15)
  - The ROF setting is used to set the maximum rate of fire of the M7. The values do not correspond directly to a certain Balls Per Second (BPS) value. You will need to use the table below to locate your desired maximum ROF setting.

- **RED – DWELL**: VALUES 1-40 (factory default 18)
  - Dwell is the amount of time that the solenoid will be activated. Follow these steps for the best way to set your dwell:
    1. Remove loader and any paintballs from the M7 marker.
    2. With the dwell set at 15, start increasing the value until the marker begins to fire.
    3. When you reach the setting where the marker begins to fire, get some paint and a loader and go to a chronograph.
    4. Increase the dwell until you see no increase in the velocity. This is the optimal dwell setting to be used.

NOTE: The eyes are always activated when you turn the marker on.

YELLOW – RATE OF FIRE (VALUES 1-20)

- **Value 1**: Semi automatic mode
- **Value 2**: PSP mode
- **Value 3**: Millennium Mode

TO CHANGE A VALUE OF A SETTING

1. While in the configuration mode choose the color you wish to change by pulling the trigger.
2. When the LED indicates the color you wish to change pull and hold the trigger until the LED starts to flash.
3. The LED will flash as many times as the previous setting was and it will then turn off. Now pull the trigger as many times as you wish the new setting to be.
4. When done, the LED will cycle through all the colors again to indicate setting was saved and turn back to green. You can now change another setting or quit the configuration mode.
5. To exit configuration mode, set DIP 2 to the off position.

VALUE 1: **Semi automatic Mode**

VALUE 2: **PSP mode**

VALUE 3: **Millennium Mode**
BATTERY
The 9V battery will last for about 40,000 shots. Please be aware that there are substantial differences in performance between different brands of batteries. Use of high quality alkaline or lithium ion batteries is recommended for maximum battery life. If you plan not to use your marker for a long period of time (a month), it is recommended that you remove the battery from the marker. When the battery voltage starts to go too low, you will notice your velocity starts to decrease and the board can turn off. For tournament use, it is recommended to change the battery for each tournament. When changing your battery, take special care to ensure the wiring harness is not pinched under the battery.

CHANGING THE BATTERY
The battery is housed on the left side of the grip frame. To access the battery, remove the two screws holding the left side grip panel down. Use a 3/32" Allen wrench. Carefully lift the battery out of the frame, taking care not to damage the battery lead wires. Clip a new battery into the 9V connector and carefully place it back into the frame, making sure that no wires are pinched underneath the battery.

M7 BOARD SETTINGS AND FUNCTIONS

A low battery will not be able to power both the ACE and the trigger switch, causing ACE failure. If the battery is low, it may not be able to power the solenoid correctly. This will affect the M7’s velocity, causing it to become inconsistent and/or low.

WARNING

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TRIGGER ADJUSTMENT

WARNING

ON/OFF AIRPORT
The M7 comes equipped with an On/Off Airport attached to the bottom of the frame. To turn on the gas supply, twist the on/off knob clockwise, all the way in. To turn off the gas supply, twist the on/off knob counterclockwise, all the way out. As you turn the knob out, the residual gas between the Hyper2™ and the on/off airport is vented.

REMOVING THE ON/OFF AIRPORT
1. Follow the instructions on page 4 to remove the battery from the frame.
2. Using a 3/32" Allen key, turn the airport locking screw counterclockwise until the on/off airport is loosened.
3. Slide the on/off airport off of the frame.
4. To re-install the on/off airport, follow steps 3-1 in reverse order.

WARNING

The trigger’s forward travel and over travel are fully adjustable so that the user can fine-tune the trigger to his or her exact liking.

• Remove the grip frame from the body of the M7.
• As you pull the frame away from the body, take care so as not to damage the wires running between the two parts. Be careful not to lose the trigger spring.
• The trigger adjustment screws are located at the top of the trigger in the grip frame.
• Use a 3/32" Allen wrench to make the desired adjustments.
• The screw toward the front of the trigger controls the forward travel. Turning it in will shorten the trigger’s length of pull.

NOTE: If this screw is adjusted too far the trigger will be held down at all times and the marker will not fire.
• The screw toward the rear of the trigger controls the over travel. By turning this screw you can adjust how far the trigger will travel after it reaches the firing point.

NOTE: If this screw is adjusted too far the trigger will not be allowed to travel far enough to engage the switch and fire the marker.
• The trigger needs to be able to move freely and reach the firing point.
• Take care that the spring is seated properly. Using the trigger without a spring is not recommended and will cause the microswitch to fail much sooner than when a spring is used.
• Be sure that all wires are laid properly in their appropriate cavities.

NOTE: Be sure that the frame and trigger assembly are kept clean. If there is excess dirt or paint build up around the trigger, the trigger will no longer move freely. In addition, paint and dirt can cause the microswitch to not function properly or fail.

ADJUSTING YOUR TRIGGER

The trigger is designed to have a quick release break that is set at the factory. This will allow the trigger to be pulled and released quickly.

Removing the trigger spring will cause premature wear on the microswitch, resulting in failure.

Be sure you do not pinch the wires between the frame and body when reattaching the frame to the body.

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FUSE™ BOLT ASSEMBLY AND MAINTENANCE

FUSE™ BOLT ASSEMBLY AND MAINTENANCE

BOLT MAINTENANCE
Regular M7 FUSE™ bolt maintenance is vital to the performance of the M7. If the Fuse™ bolt is not kept well-greased and the o-rings in good shape, the performance of the M7 will be greatly hindered.

To remove the bolt, you will need a 1/4" Allen wrench. Unscrew the bolt from the rear of the marker. It only takes one and one half revolutions to unscrew the bolt so that it can be pulled out. After the bolt has been cleaned and greased and is ready to be inserted into the body, be sure all bolt sleeve components are screwed together snugly. Slowly push the bolt into the body. Take care not to cut or nick the o-rings as they pass the threads.

GREASE THE M7 FUSE™ BOLT EVERY 10-15 THOUSAND SHOTS.
BEFORE INSTALLING THE BOLT INTO THE MARKER, BE SURE ALL BOLT SLEEVE COMPONENTS ARE SCREWED TOGETHER SNUGLY.

If you do not grease the bolt, you will run the risk of damaging o-rings. This will create excessive friction and drag on the bolt, ultimately resulting in breaking the bolt. When greasing the M7 Fuse™ bolt, pay special attention to all o-rings that are on the bolt and that ride on a surface of the bolt. The first seven o-rings listed below should be generously greased during maintenance.

**FUSE™ BOLT O-RING LIST**
1. Bolt tip (014 BN70)
2. Bolt sail (015 BN70)
3. Inside bolt stem (009 BN70)
4. Rear bolt stem (009 BN70)
5. Front wall internal (017 UR70)
6. Top hat (017 UR70)
7. Top hat (013 BN70)
8. Outer sleeve (020 BN70)
9. Front bumper (015 BN70)
10. Rear bumper (111 BN70)

NOTE: All remaining o-rings should have a thin coating of grease as well.

FUSE™ BOLT OPERATION
To achieve top performance from your M7, it is important to understand the basic operation of the M7’s patented FUSE™ bolt system.

This design consists of three sleeves threaded together to capture the only moving part of the system, the bolt.

The FUSE™ Bolt has four components:
1. Cylinder
2. Bolt
3. Top Hat
4. Rear Cap

Air is supplied to the bolt at two points. A high-pressure supply of air is routed to the back of the bolt into the supply chamber. This air source is responsible for propelling the ball. Low-pressure air is supplied from the LPR to the solenoid. From the solenoid, the air is routed through two small holes to the section of the bolt referred to as the cylinder.

When the M7 is aired up, air is transferred by the solenoid to the front of the cylinder. This air pushes against the bolt sail and the bolt is held in the back position. When the bolt is held back, the 013 o-ring in the top hat seals around the bolt and contains the air in the supply chamber.

When the marker is fired, the microswitch is pressed, telling the solenoid to switch the flow of air from the front of the cylinder to the rear of the cylinder. Air that enters the rear of the cylinder will push on the bolt sail, moving the bolt forward. The air in the front of the cylinder is vented.

As the bolt moves forward, the tapered stem passes through the top hat. Once the bolt stem can no longer seal against the 013 o-ring, the air contained in the supply chamber is released. The air passes through the venturi ports in the bolt and out the front of the bolt to propel the ball. When the bolt is in the forward position, the inside bolt stem o-ring prevents the flow of air from continuously flowing through the marker when the bolt is forward. This helps the marker shoot much more efficiently.

NOTE: LOW OR ERRATIC VELOCITY MAY BE DUE TO A LOW BATTERY NOT SUPPLYING AMPLE ELECTRICAL CURRENT TO THE SOLENOID. IN THIS CASE, CHANGE THE BATTERY.

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When servicing your marker:
• Make sure your hopper is removed from the M7.
• Make sure there are no paintballs in the breech of the M7.
• Always remove the air supply and relieve all gas pressure in the M7 before disassembly.
• It is not recommended for the user to remove the LPR from the body and disassemble it.

LPR ASSEMBLY, CLEANING, TESTING AND CHANGING SEALS

The Low-Pressure Regulator (LPR) is located in the lower front of the M7 (see figure 1). The function of the LPR is to lower the air pressure supplied to the marker by the in-line, before it reaches the solenoid. Pressure is used to move the bolt forward and back. The factory setting is 75 PSI. You can fine-tune your M7 to its minimum cycle pressure. This will reduce the amount of force of the bolt hitting the ball (reducing ball breakage) and help with efficiency. Too low of pressure will cause the bolt to not cycle, move sluggishly or not at all. If you experience dramatic shoot down during rapid fire, the LPR may be adjusted too low. Too high of pressure will cause the marker not to shoot as smoothly, potentially increase ball breakage and cause undue wear and fatigue on the bolt components.

It is important to keep the seat and piston face clean of all dirt and debris. Clean the seat and piston face and grease the retainer O-ring every six months or 60,000 shots.

The LPR has five components and six seals:
1. Piston large O-ring (012 BN70)
2. Piston spring
3. Body o-rings (4pcs, 012 BN70)
4. Body
5. Piston small O-ring (006 UR90)
6. Main seal (mounted in the seal retainer)
7. Seal retainer o-ring (010 BN70)
8. Seal retainer (functions as an adjustment screw also)
9. Seal retainer (brass piece) inside the LPR and pulling it out.

The only user-serviceable part in the LPR is the seal retainer. This seal needs to be changed in the unlikely case the LPR is creeping up.

CHANGING THE SEAL RETAINER

1. Screw out LPR cap in front of the marker using a 1/4” Allen wrench.
2. Screw out LPR seal assembly (brass) using a 3/16” Allen wrench.
4. Screw LPR cap in place securely.

If the user needs to replace the whole LPR assembly, follow these instructions (refer to Figure 2):

1. Remove the air supply and relieve all gas pressure from the M7.
2. Take the hypot2 regulator off the marker (see page 12).
3. Screw out LPR set screw using a 5/64” Allen wrench.
4. Screw out LPR cap using a 1/4” Allen wrench.
5. Pull out the LPR by screwing a rod with a 10/32 thread into the seal retainer (brass piece) inside the LPR and pulling it out.
6. Put everything back in reverse order. Be sure to grease the #012 o-rings, so as to prevent cutting them upon installation.
7. Tighten LPR cap securely.

The LPR pressure can be set quite accurately even without an LPR test tool. Screwing the adjustment screw (seal retainer) all the way in will set the LPR pressure to approximately 25 psi. Now turning out the adjusting screw 180 degrees will increase the pressure by approximately 5 psi. For example, turning the screw 5 complete turns out will set the pressure to approximately 75 psi. Use a 3/16” Allen wrench to make all adjustments to the LPR. Turning the adjustment screw clockwise, or in, will lower the LPR’s output pressure. Turning the adjustment screw counterclockwise, or out, will raise the LPR’s output pressure.
HYPER2™ IN-LINE REGULATOR

ADJUSTMENTS AND MAINTENANCE

ADJUSTMENTS

The output pressure of the Hyper2™ is adjusted by turning the brass seat housing. The seat housing screw is located up inside the bottom of the reg. A 3/16” Allen wrench will be needed for this operation. By turning the housing clockwise, you will increase the output pressure of the regulator to the marker. By turning the housing counterclockwise, you will decrease the output pressure of the regulator.

After each adjustment of the output pressure of the Hyper2™ In-Line, you will need to cycle your marker a few times. This will allow your marker and air system to stabilize at their new operating pressure. The Hyper2™ will need a break-in period of about 2,500 shots to let its seat form to the piston and reach its optimum performance.

The Hyper2™ has eight components and six o-rings. See diagram for assistance.

MAINTENANCE

To ensure top performance from the Hyper2™, maintenance should be performed every six months or sooner, depending on the severity of playing conditions. Cold, wet weather will shorten the effective life of the grease. Heavy dust or fine sand can infiltrate the Hyper2™ and prevent the piston from moving smoothly and/or cut the o-rings.

1. Make sure the marker is off. Be sure to reassemble the internal components and their new operating pressure.
2. Examine all o-rings for nicks or cuts.
3. Carefully inspect the seat for excessive wear that might cause spiking and over-pressurizing.
4. Examine all springs for breaks, and carefully inspect the seat for excessive wear that might cause spiking and over-pressurizing.
5. Clean any accumulated dirt out of the air chambers and passages.
6. Clean the eyes every two months or 10,000 shots to eliminate any built up dirt.
7. Change the eye covers every 40,000 shots.
8. See diagram for assistance.

ADJUSTMENTS

The output pressure of the Hyper2™ In-Line is adjusted by turning the brass seat housing. The seat housing screw is located up inside the bottom of the reg. A 3/16” Allen wrench will be needed for this operation. By turning the housing clockwise, you will increase the output pressure of the regulator to the marker. By turning the housing counterclockwise, you will decrease the output pressure of the regulator.

After each adjustment of the output pressure of the Hyper2™ In-Line, you will need to cycle your marker a few times. This will allow your marker and air system to stabilize at their new operating pressure. The Hyper2™ will need a break-in period of about 2,500 shots to let its seat form to the piston and reach its optimum performance.

The Hyper2™ has eight components and six o-rings. See diagram for assistance.

MAINTENANCE

To ensure top performance from the Hyper2™, maintenance should be performed every six months or sooner, depending on the severity of playing conditions. Cold, wet weather will shorten the effective life of the grease. Heavy dust or fine sand can infiltrate the Hyper2™ and prevent the piston from moving smoothly and/or cut the o-rings.

1. Make sure the marker is off. Be sure to reassemble the internal components and their new operating pressure.
2. Examine all o-rings for nicks or cuts.
3. Carefully inspect the seat for excessive wear that might cause spiking and over-pressurizing.
4. Examine all springs for breaks, and carefully inspect the seat for excessive wear that might cause spiking and over-pressurizing.
5. Clean any accumulated dirt out of the air chambers and passages.
6. Clean the eyes every two months or 10,000 shots to eliminate any built up dirt.
7. Change the eye covers every 40,000 shots.
8. See diagram for assistance.

1. Retaining cap 6. Piston small o-ring (007 UR90)
2. Swivel 7. Piston large o-ring (018 BN70)
3. Seat housing 8. Reg body
4. Retainer o-ring (010 BN70) 9. Shim stack
5. Reg seat 10. Piston
11. Piston

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ANTI CHOP EYES/ BALL DETENTS

ANTI CHOP EYES

The Anti Chop Eye (ACE) system will prevent the M7 from chopping paint by not allowing the marker to fire until a full ball is fully seated in front of the bolt. The eyes use a beam across the breech. On one side there is a transmitter, and on the opposite side a receiver. In order for the marker to fire with the eyes turned on, the signal between the two eyes must be broken. After every shot, before the next ball drops in the breech, the eye transmitter and receiver must see each other. If the eyes are dirty and cannot see each other between shots, the LED on the board will start blinking green. This means that the eyes are dirty. This is an extremely reliable system as long as the eyes are kept clean. The most common reason for dirty eyes is broken paint. If the eyes become dirty the marker will default to a reduced rate of fire to prevent chopping. If this happens during game play, you can bypass this by turning the eyes off. Clean the eyes as soon as possible.

NOTE: IF THE BATTERY IS LOW, THE MARKER MAY ACT AS IF THE EYES ARE DIRTY OR NOT FIRE AT ALL. IN THIS CASE, REPLACE THE BATTERY.

CLEANING THE ANTI CHOP EYES

Quite often, just cleaning the breech out with a swab will clean the eyes well enough for them to read one another. For a thorough cleaning, the best method is to use air. Using an air hose or canned air (typically used for dusting keyboards) works best.

Blow the eyes clean from inside the breech. If you feel the eyes still need a more detailed cleaning, remove the eye covers to gain full access to the eyes.

To remove the eye covers, you will need a 1/16” Allen wrench.

Simply insert the allen wrench into the hole in the eye cover to access the retaining screw (see figure 3). As you back out the screw, the plate will be pushed up.

NOTE: Regular eye cleaning is recommended even if no paint is broken. Clean the eyes every two months or 10,000 shots to eliminate any built up dirt. Excess grease from the front bolt o-ring can build up in front of the eyes. Remember to check for this after greasing the bolt and cycling the marker a few times.

CHANGING BALL DETENTS

The ball detents are also located under the eye covers. If you are experiencing double feeding or chopping, check the condition of the ball detents. They should come to a soft point. If they are flat or heavily rounded, they should be replaced. Ball detents should be replaced about every 40,000 shots.

NOTE: TAKE CARE WHEN REPLACING THE EYE COVERS. OVER-TIGHTENING THE RETAINING SCREW COULD RESULT IN STRIPPING THE THREADS.

ANTI CHOP EYES/ BALL DETENTS

MAINTENANCE AND CHANGING

Figure 1

Figure 2

Figure 3
TROUBLE SHOOTING GUIDE

AIR LEAKS

AIR LEAKING FROM THE AIRPORT
- Check the o-ring on the air system. If needed change the o-ring and try again.
- The o-ring normally used is #15 but some manufacturers might use a different size. Consult the manual of the air system you are using.
- Check that the hose connector is tight. Remove the hose from the connector by pushing the gray plastic towards the connector and pull out hose. Insert a 1/16" allen key into the connector and tighten. If needed remove and apply thread sealant to the threads and re-tighten. If unsure consult expert advice.
- Check that the end of the hose is cut straight and is not worn out. If needed cut a small piece off the hose with a razor blade and re-insert the hose into the fitting. Make sure hose goes all the way to the end.

AIR LEAKING FROM THE HYPER2 REGULATOR
- First locate the position of the leak.
- For dis-assembly instructions consult the technical section under Hyper2 regulator.
- If the leak is coming from the small hole in the middle of the regulator there are two possible reasons making sure the o-ring is screwed in all the way.
- If the leak is coming from the swivel piece where the hose connector mounts you will need to change the bolt, the same piece that comes from the connector.
- If the leak comes from the small hole in the middle of the regulator there are two possible reasons making sure the o-ring is screwed in all the way.
- If above does not solve the leak, remove the bolt kit and change the #020 o-ring inside the body of the regulator.
- Change the #007 urethane o-ring inside the body of the regulator.

AIR LEAKING FROM BACK OF THE M7
- Check that the bolt kit is tightened all the way into the M7. If the bolt kit is loose, it will start to leak.
- If above does not solve the leak, remove the bolt kit and change the #020 o-ring on the back of the bolt kit. Also change the two #020 o-rings located in the stem of the bolt. Lubricate well and re-insert the bolt kit into the M7. Check bolt kit break down picture on page 9 for o-ring locations.
- Last, check that the gas passage blocking screw located on the center of the M7 is not leaking. If the leak is coming from this hole, remove screw and apply thread sealant to the thread and sealant to dry before re-gasisting marker.

AIR LEAKING FROM FRONT OF THE M7
- Remove the Bolt kit from the marker and change the #013 o-ring located inside of the cylinder. Lubricate well and re-assemble.
- If above does not help try changing the #020 o-rings located inside of the cylinder. Lubricate well before re-inserting bolt kit.

PROBLEMS WITH ELECTRONICS
M7 WON'T TURN ON
- Make sure battery is new and well charged.
- Check that battery is connected to the 9V clip inside the M7 and that the other #14 o-ring is connected to the board. Make sure there is no dirt or debris blocking the button from being pressed.
M7 WILL TURN ON / OFF BY ITSELF / THE EYES WILL TURN ON / OFF BY THEMSELVES
- Both of these problems are caused because the button(s) are pressed all the time.
- Remove board from the frame by removing the grip panel on the left hand side, disconnecting the cables and pulling the board out. Carefully remove the two buttons and clean them well.

RE-assembly and test. If problems persist, contact authorized service center for repair.

EYES WILL NOT WORK, LED KEEPS BLINKING GREEN
- For dis-assembly instructions consult the technical section.
- Check that the #013 o-ring on the inside of the tophat is screwed in all the way and in good condition.
- Try turning off the ABS feature by turning DIP #1 to the off position.

SOLENOID WILL NOT ACTIVATE / TRIGGER NOT WORKING
- Check that the trigger adjustment is not set so that the microswitch cannot activate. Re-adjust trigger.
- If the M7 fires once when turned on but not after that, the trigger is set so that the microswitch is always activated. Re-adjust trigger.
- If unable to correctly adjust but the M7 still won't fire check that the microswitch cable is well inserted into the board and to the correct connector (the connector is marked with the text "SWI" on the board).
- Change the battery if not positive about it's charge.
- Check that the solenoid cable is attached to the board and to the right connector (solenoid should be attached to the connector that is marked with the text "GO1").

TRIGGER BOUNCE / M7 SHOOTING MORE THAN ONE BALL PER PULL IN SEMI AUTOMATIC MODE
- Raise the trigger sensitivity level in the configuration menu.
- Check that the trigger is not stuck or too short.
- Make sure there is a trigger spring inside the frame.

ERRATIC VELOCITY / M7 WON'T FIRE
- Make sure your loader is working good and that the rate of fire is not set higher than the maximum feed rate of the loader.
- Check that the barrel you are using is not too tight for the paintballs you are using.

OTHER CATEGORIES

DOUBLE FEEDING
- If you get two balls firing at once change the ball detents by removing the eye plates, taking out the old ball detents and inserting new ones.

BREAKING PAINT
- Make sure you high quality paintballs and that they are stored according to the manufacturers instructions.
- Check that #14 o-ring on bolt tip is in place and in good condition.
- Make sure your loader is working good and that the rate of fire is not set higher than the maximum feed rate of the loader.
- Check that the barrel you are using is not too tight for the paintballs you are using.


FIRST SHOT IS TOO HIGH
- Change the seat inside the hyper2 regulator for dis-assembly instructions consult the technical section.
- Check that the #013 o-ring on the inside of the tophat is screwed in all the way and in good condition.
- Try turning off the ABS feature by turning DIP #1 to the off position.

VELOCITY IS NOT CONSISTENT
- Make sure the paintballs you are using fit the barrel good and are consistent in size. The stock barrel with the M7 is 0.68 size. You should be able to blow the paintball through the barrel but they should not roll through the barrel on their own.
- Change the bolt kit and tube. Lubricate well and re-attach screw to the body.
- Change the #14 o-ring on bolt tip for in place and in good condition.
- Raise the dwell.
- Change the pressure.
- Check that the hyper2 regulator is working good and that the pressure is consistent. A separate regulator testing tool is available for this, if needed, dis-assembly and change worn out o-rings in the hyper2 regulator.
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