



# THE QUEST

OWNERS MANUAL

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## WARNINGS

- The Quest paintball marker is not a toy. Misuse may cause serious injury or death.
- Read entire owners manual before operation.
- Paintball industry standard gear designed specifically for paintball and meet ASTM standard F1776 (USA) or CE standard (Europe) must be worn at all times under operation by user and anyone within range of a paintball projectile.
- Recommend at least 18 years of age to purchase and use. Persons under the age of 18 recommend adult supervision.
- Do not exceed 850 psi input pressure.
- Use compressed air/nitrogen only. Do not use CO2 as a source of air.
- Use only factory-approved grease in The Quest. All others will void warranty.
- Always turn off and insert a barrel-blocking device while The Quest is not in use.
- Always chronograph The Quest not to exceed 300fps before each game of play.
- Never look down the barrel or unscrew the bolt/pin assembly while The Quest is aired up.
- Never insert any item other than a 0.68 caliber paintball into The Quest breach.
- Always dry fire The Quest after air has been removed to ensure no air is stored in the marker.
- If you do not understand any information included in this manual please contact technical support found on the last page of this manual for further instructions.

## WARRANTY

**First Endeavor Paintball, Inc.** will warranty all electrical and mechanical components, except the battery, o-rings, and seals, against defects in material and workmanship for a period of one (1) year from date of purchase. The solenoid is warranted for a period of thirty (30) days from date of purchase. This warranty card must be returned to First Endeavor Paintball, Inc. in order for the warranty to be in effect. All returned markers must be accompanied by a RMA number and proof of purchase in order to be accepted. Return shipping will be paid by customer. Use only approved lubrication in the marker. Please contact technical support with any questions about this limited liability warranty. For further information regarding returns please visit [www.firstendeavorpaintball.com](http://www.firstendeavorpaintball.com) or call 1 (805) 487-5297.

### **The following Items/Occurrences are not covered under this warranty under any circumstances:**

Damage due to accident, misuse, or alteration; Damage due to environmental conditions (surface scratches and nicks) or aftermarket products; Damage caused by lack of maintenance, or the cost of the maintenance service itself; Items requiring replacement or repair due to routine wear, use and exposure; Damage resulting from causes other than defects in materials and workmanship, including but not limited to, lack of technical skill, competence, or experience of the user.

## SPECIFICATIONS

Operation	-----	Electro-Pneumatic Electronics
Power	-----	9V Battery
Length/Height/Width	-----	9.8"/7.5"/1.2"
Weight	-----	11lb 14oz w/o Barrel - 21lb 3oz w/ Barrel
Max Rate of Fire	-----	23+ bps
Modes of Fire	-----	Semi-Auto, PSP, NXL
Eye Sensor	-----	Break-Beam Anti-Chop Eyes
Propellant	-----	Compressed Air/Nitrogen Only
Operating Pressure	-----	220 psi
Cycling Pressure	-----	85 psi
Efficiency	-----	1500rds per 68/4500 Fill
Barrel Threads	-----	Cocker Barrel
Barrel	-----	14" 0.690 2-Piece w/ 7" Control-Bore
Lubricant	-----	Dow 55 O-Ring

## INTRODUCTION

**Congratulations and Thank You** for purchasing The Quest Paintball marker. In this manual you will find useful information for setting up, adjusting, and maintaining your The Quest paintball marker. Should you have any additional questions feel free to give us a call at the number found at the end of this manual.

**First Endeavor Paintball, Inc.** has made every effort to make sure your experiences with The Quest are trouble free and enjoyable. A lot of designing and testing has gone into the creation of The Quest paintball marker so that you will never have to choose another marker again. Period.

## HP & LP REGULATORS

The Quest is equipped with a high pressure (HPR) and a low pressure (LPR) regulator. The HPR can be found on the marker as the vertical grip just in front of the trigger guard. The HPR is used to adjust the velocity of the paintball exiting the marker and is set between 210-240 psi. The LPR can be found just under the area where the barrel inserts into the marker in a horizontal position. The LPR is set to cycle the bolt inside the marker and is set between 80-100 psi.

**Setting The Regulators** – In order to set your The Quest marker to optimal setting please follow the following instructions.

- 1) Turn the HPR in (clockwise) about 3 threads past flush on the bottom of the regulator housing.
- 2) Turn the LPR regulator in (clockwise) until the marker begins to fire and stop.
- 3) After the marker starts to fire, turn the LPR 1/4 - 1/2 a turn further in and leave alone.
- 4) Take the marker to a chronograph and turn the HPR in for an increase in velocity or out for a decrease in velocity to achieve 300 fps.

## CARE & MAINTENANCE

The Quest paintball marker has been designed to need little care and maintenance. The main thing to check is the bolt. After every day of play we recommend that you wipe the current Dow 55 grease off of the bolt and re-apply fresh Dow 55 grease. Observe the o-rings and look for any undue wear or tears, replacing them as necessary. Should a leak occur within the marker try replacing the outer bolt o-rings first then moving to the pin o-rings. If those do not cure the leak check that the solenoid is properly mounted or that the LPR is not over pressurizing it. After a few days of play check and re-grease the HPR and LPR pistons by unscrewing the caps on each and removing the pistons themselves. Check to see if there is any debris inside the chambers that might cause undue wear to the side of the piston and piston wall.

At the end of the day wipe down all paint from the marker and, if necessary, clean the eyes by removing the eye covers and eyes, and wiping the area down with a q-tip. If a breach break occurs remove the bolt and pin from the marker, clean as needed, and insert a battle swab through the body to clean the internals.

## TRIGGER ADJUSTMENT

The Quest is equipped with a triple adjustable trigger. The firing point, stopping point, and magnetic return can all be adjusted as follow.

**Firing point** – Adjust the firing point by inserting a 1/16” allen wrench into the bottom trigger adjustment screw seen in the trigger. To shorten the firing point, turn the screw clockwise. To lengthen the firing point, turn the screw counter-clockwise.

**Stopping point** – Adjust the stopping point by inserting a 1/16” allen wrench into the middle trigger adjustment screw seen in the trigger. To shorten the stopping point, turn the screw clockwise. To lengthen the stopping point, turn the screw counter-clockwise.

**Magnetic return** – Adjust the magnetic return by inserting a 1/16” allen wrench into the upper trigger adjustment screw seen in the vertical position on the trigger. To diminish the return, turn the screw clockwise. To strengthen the return, turn the screw counter-clockwise.

## ELECTRONICS & OPERATION

As of March 2006, The Quest paintball marker is equipped with a Wicked Air Sportz Equalizer board. First Endeavor Paintball, Inc. feels that WAS has a highly successful electronic package thus allowing you, the customer, the ability to have the best possible product we can offer. Prior to March of 2006, First Endeavor Paintball, Inc. supplied our own software. If you have an original Quest contact us for the Electronics & Operation manual for those electronics. We do still plan to supply the original boards as they are upgradeable with aftermarket chips made by companies such as NOX, and Virtue, where as the Equalizer is not. Please contact us if you are interested in purchasing this board for use with an aftermarket chip.

## THE QUEST EQUALIZER

Turning ON and OFF the Equalizer – To turn ON the Equalizer, press and hold the POWER button (located on the back of the grip frame) for ½ a second, and release it. The LED will light up yellow and stay that way for several seconds after releasing the button. Tapping the trigger any time the LED is yellow will immediately make the marker active and ready to fire. After several seconds, the LED will then turn either green (normal mode) or red (competition mode) to indicate the tournament lock status.

To turn OFF the Equalizer, press and hold the POWER button until the LED becomes solid red, and then release the button.

Bypassing the Eye System – When the eye system is enabled, the marker will not fire unless there is something in the breach. In order to be able to “dry fire” the marker, the eye system must be bypassed. To bypass the eye system, press and hold the POWER button for ½ a second. The LED will blink yellow, indicating that the eye system has been bypassed. Repeating this procedure will enable the eye system.

General Usage Tips – The LED boot sequence is as follows: solid yellow (booting), followed by either solid green (normal mode) or solid red (competition mode). If the trigger is held in the back position while the power is turned on, the LED will light up solid green. If trigger is further held (5 seconds), the LED light up solid blue to indicate the board is in maintenance mode™.

## LED Colors and Meanings

*The Equalizer uses the LED to tell the user when certain events are occurring. This is a breakdown of what the LED colors represent:*

**BLINKING GREEN (ONCE PER SECOND)** – Normal operation, anti-chop system is enabled, Eye Mode 1 (rate of fire capped at user preset).

**BLINKING GREEN (TWICE PER SECOND)** – Normal operation, anti-chop system is enabled, Eye Mode 2 (unlimited rate of fire, monitors bolt).

**BLINKING YELLOW** – Normal operation, anti-chop system is disabled.

**BLINKING RED** – Battery is extremely low.

**RED/GREEN TOGGLE** – There is an error with the anti-chop system.

**FLICKERING GREEN** – Object is in the breech.

**SOLID BLUE** – Marker entering maintenance mode™.

**RED/BLUE TOGGLE** – Tournament lock toggled.

**TOURNAMENT LOCK** – It is possible to enable the tournament lock (competition mode) with the Equalizer. You can do this by shorting the two pads on the Equalizer board (labeled “LOCK”) while turning on the power. Each time this procedure occurs, the tournament lock toggles from on to off or off to on. While the board is in competition mode (locked), it is not possible to access the trigger-programming mode

## TRIGGER PROGRAMMING

The Dwell, Debounce™, Eye Mode, BIP Delay™, ROF Cap, Eye Power, and Firing Mode functions are programmable by following these instructions:

**Make sure the marker is turned off. During programming, make sure that your marker has a barrel condom in place and the air supply shut off. Although it is not possible to fire the marker while in programming mode, it is always good to practice safe marker handling.**

- 1) Pull the trigger, and hold it in the back position. Now, press and hold the **POWER** button for ½ a second. During this time, the LED will light up green.
- 2) Now, release the trigger. The LED will light red. The marker is now in “trigger programming mode”.

Pulling and releasing the trigger will change the LED color, advancing to the next programming feature. This is also known as the “programming menu”. The following colors equate to the feature selected:

**RED** – Dwell programming mode.

**GREEN** – Debounce™ programming mode.

**YELLOW** – Eye Mode programming mode.

**BLUE** – Ball In Place (BIP) Delay™ programming mode.

**PURPLE** – Rate of Fire (ROF) cap programming mode.

**TEAL** – Eye Power programming mode.

**WHITE** – Firing mode.

Once you have reached the last feature (Firing Mode), an additional trigger pull will start the sequence of colors over again.

When you decide which programming feature you want to change, pull the trigger and hold it until the LED goes out, and then release the trigger. There will be a 2 second pause, and then the LED will flash the same color of the programming mode you are in (**red** – Dwell, **green** – Debounce, **yellow** – eye mode, etc.) the number of times that represents something associated with that feature. For example, if you were programming the Debounce™ and the settings were the factory default (10ms), you would see the LED **flash green** 10 times in a row, indicating the Debounce™ is set to 10ms. The flashing of the LED shows you the current setting before you change it.

Once the LED is done flashing, there is a 5 second time period to begin programming the new setting. To change the setting, pull and release the trigger the number of times equal to how you wish to program the feature(i.e. 20 pulls for dwell is 20ms). All settings start at 0. On each pull of the trigger, the LED will light up (indicating that the pull has been detected).

If you decide not to change the feature setting at all, simply do not touch the trigger at all for 5 seconds. The LED will then **blink green/red** alternately to indicate there was a programming error, and then go back to the programming menu. The feature setting will not be changed.

Once you have pulled and released the trigger the number of times you wanted the feature setting to be, do not touch the trigger.

After 5 seconds, the LED will flash a rainbow of colors indicating that the feature setting change has been accepted. After this, the marker is in the programming menu again. If you program a feature outside of its specifications (for example, programming the dwell to 1ms) the LED will blink green/red alternately indicating that there was a programming error.

Each feature and its programming are described in detail below:

**DWELL** – Trigger programming for changing the dwell is different than any other feature as there are two steps involved instead of one due to allowing for .1ms (tenths) increments. After selecting the Dwell programming feature, and once the LED stops flashing, you can now pull and release the trigger once for every full 1ms of time you want the dwell to be. Once you have pulled the trigger the number of times you want the full milliseconds to be, after a 2 second pause the LED will blink yellow and then off. You can then pull the trigger again, but this time with each trigger pull being 1/10th of a millisecond (.1ms). So, if you wanted to set the dwell to be 6.3ms, you would select the dwell programming mode by pulling/releasing the trigger until the LED was solid red. Next, you would hold the trigger until the LED went out. Next, the current dwell setting (say 7.5ms) would be shown as 7 red flashes, a pause, a yellow, a pause, and then 5 red flashes. The yellow flash is there to separate the full milliseconds from 1/10th of a millisecond (.1ms) intervals. The shortest allowable dwell time is 6.0ms and the longest allowable time is 50.0ms.

The default dwell is 8.0ms.

**DEBOUNCE™** – Pull and release the trigger once for every 1ms of time you want the setting to be. For example, if you were programming the Debounce to 5ms, you would pull and release the trigger 5 times.

The default Debounce™ setting is 10ms.

**EYE MODE** – Pull and release the trigger the number of times necessary to set the Eye Mode to what you want to use.

The following is a list of the possible Eye Modes and the flashes (also trigger pulls required):

- 1 flash - Bypassed mode
- 2 flashes - Eye Mode 1 (uses ROF cap)
- 3 flashes - Eye Mode 2 (monitors bolt)
- 4 flashes - Simulate mode

If you pull and release the trigger more than 4 times, then the LED will toggle green/red alternately to indicate there was a programming error, and then go back to the programming menu.

The default Eye Mode is Eye Mode 2.

**BIP DELAY™** – Pull and release the trigger once for every 1ms of time you want the setting to be. For example, if you were programming the BIP Delay™ to 5ms, you would pull and release the trigger 5 times.

The default BIP Delay™ setting is 3ms.

**ROF CAP** – Pull and release the trigger once for each number of times you want the Rate of Fire (ROF) cap to be. For example, 20 pulls/releases would be 20 bps. The ROF cap is only used with Eye Mode 1. In Eye Mode 2, the rate of fire is unlimited.

The default ROF Cap is 15 bps (ignored if using Eye Mode 2).

**EYE POWER** – Pull and release the trigger once for the number of times you want the Eye Power to be. Each trigger pull represents a power increase. So, a setting of 6 would make the eye more powerful than a setting of 5.

The default Eye Power is 10.

**FIRING MODE** – Pull and release the trigger the number of times necessary to set the Firing Mode to what you want to use.

The following is a list of the possible Firing Modes and the flashes (trigger pulls required):

- |             |                              |
|-------------|------------------------------|
| 1 flash -   | Semi-auto (NPPL legal)       |
| 2 flashes - | 3 shot ramping (PSP legal)   |
| 3 flashes - | 3 shot full auto (NXL legal) |

If you pull and release the trigger more than 3 times, then the LED will toggle green/red alternately to indicate there was a programming error, and then go back to the programming menu.

The default Firing Mode is 1 (semi-auto).

**PROGRAMMING COMPLETE** – Once you pulled and released the trigger the number of times necessary to set the function, wait a few seconds. The LED will flash a rainbow of colors in rapid succession (numerous times) to let you know that the new setting has been saved. After this, the LED will return to the color representing what the current programming menu item is. At this point, you can once again pull and release the trigger to toggle between Dwell, Debounce™, Eye Mode, BIP Delay™, ROF Cap, Eye Power, and Firing Mode programming modes, or you can shut the marker off to end the programming sequence.

## TERMINOLOGY

**DWELL** – is the amount of time that the solenoid will be activated. This time is measured in milliseconds (1/1000th of a second). Possible values are from 6.0ms to 50.0ms. Changes are made in .1ms units via the trigger.

Increasing your Dwell will increase the velocity of your marker only if the LPR is set too low (which will result in inconsistent chrono results). Due to the design of The Quest, an excessively long dwell will not increase the velocity (only make it more stable). If you are experiencing a great variance in your chrono results, try increasing the Dwell and lowering the high pressure regulator. If your dwell is too low, consistency and efficiency will suffer greatly.

**DEBOUNCE™** – is the amount of time the trigger switch must be stable in the up position before checking for another trigger pull. This time is measured in milliseconds. Possible values are from 1ms to 50ms. Changes are made in 1ms units.

If you find that your marker is double firing, increase the Debounce time. Contrary to popular belief, a high Debounce™ time does not slow your marker down unless the time exceeds the total cycle time of the marker. This means that if your Debounce is 10ms, it is capped at 100bps, which is well beyond what the marker is capable of cycling.

**EYE MODE** – can be set to one of four different modes:

**BYPASS** - The anti-chop system is disabled. When this occurs, the maximum rate of fire is limited to 13 balls per second to help prevent chopping of balls in the breech.

**EYE MODE 1** – In this mode, the marker will not fire unless there is a ball in the breech. This mode uses a rate of fire cap to determine the speed of the cycling. The bolt is not monitored.

**EYE MODE 2** - In this mode, the marker will not fire unless there is a ball in the breech. This mode works by monitoring the bolt position, and thus the rate of fire is unlimited. This is the default eye mode.

**SIMULATE** – In this mode, a ball is simulated to be in the breech. This allows you to fire the marker with just air, at the full speed that the marker is capable of firing! This mode can be used for practicing trigger pull methods, without wasting paint. Do not shoot paint in this mode!

**THE BIP DELAY™** – is a feature that allows you to adjust for the differences in hopper feed rates. When using a slower gravity-feed loader or if the eye sensor is not installed correctly, it may be necessary to have a longer BIP Delay™ to prevent balls from being chopped. Possible values are from 1ms to 50ms. Changes are made in 1ms units.

**ROF CAP** – sets the maximum cycle speed of the marker when Eye Mode 1 is used. Setting this value to low will reduce the usable speed of the marker. Possible values are from 10 bps to 30 bps. Changes are made in 1 bps units. The ROF cap is only used in conjunction with Eye Mode 1.

**EYE POWER** – controls how much power is used to drive the transmitter eye. Setting this value too low will cause problems if debris such as liquid paint gets into the breach. Changing this option is only necessary when using transparent types of paintballs with glow-in-the-dark fill. Possible values are from 1 to 20. Changes are made in 1 unit increments. It is unlikely that you will ever need to change this setting.

**FIRING MODE** – determines how the marker will fire. Possible modes are semi-auto (one pull/release of the trigger fires the marker one time), 3 shot ramping (adheres to the 2005 PSP rules), and 3 shot full auto (adheres to the 2005 NXL rules).

The firing mode controls how the marker fires regardless of other settings. For example, if the Eye Mode is set to Eye Mode 2 (unlimited rate of fire), and the Firing Mode is set to 3 (full auto), then the marker will fire in full auto as fast as the hopper can feed. If you changed the Eye Mode to Eye Mode 1 (capped), then the ROF Cap would determine the maximum rate of fire while in full auto.

To setup your marker to be legal for PSP competition, set the Eye Mode to 1 (capped), the rate of fire cap (ROF Cap) to 15bps, and the Firing Mode to 2.

**RESET** – This option will reset all of the settings to the factory default! If you find that you are having problems remembering the factory defaults, just use this option to reset your board and start over! The user can reset the board only when in normal mode.

You can perform a complete reset while in programming mode. This will restore all settings to the factory defaults. To do this, just hold down the trigger for 6 full seconds. It does not matter what programming mode you are currently in. The LED will start flashing red, letting you know that a reset operation is being performed. After this occurs, you will be back to the programming starting point. Do Not release the trigger until you see the LED flashing red or the reset will not occur.

## **Maintenance Mode**

If you hold the trigger for 6 full seconds (until the LED lights up blue) while turning on the power, the marker will be in ‘maintenance mode™’.

This mode allows you to determine if you have any leaks in your bolt assembly.

The Quest is a very unique marker design. When the bolt is fully in the back or the front position, it should never leak or otherwise transfer air through the bolt. The only time air is transferred to the bolt assembly (to expel a ball) is while the bolt is in the forward motion, moving from the back to the front position.

While in maintenance mode, when you pull the trigger the solenoid will stay engaged for as long as the trigger is held, causing the bolt to move and stay locked forward until you release the trigger. This is a great way to determine if you have an o-ring problem on the forward stroke of the bolt. Without this capability, you would never be able to diagnose a problem with some of the o-rings. Never hold the trigger for more than just a few seconds, as this could possibly cause the solenoid coil to overheat and become damaged.

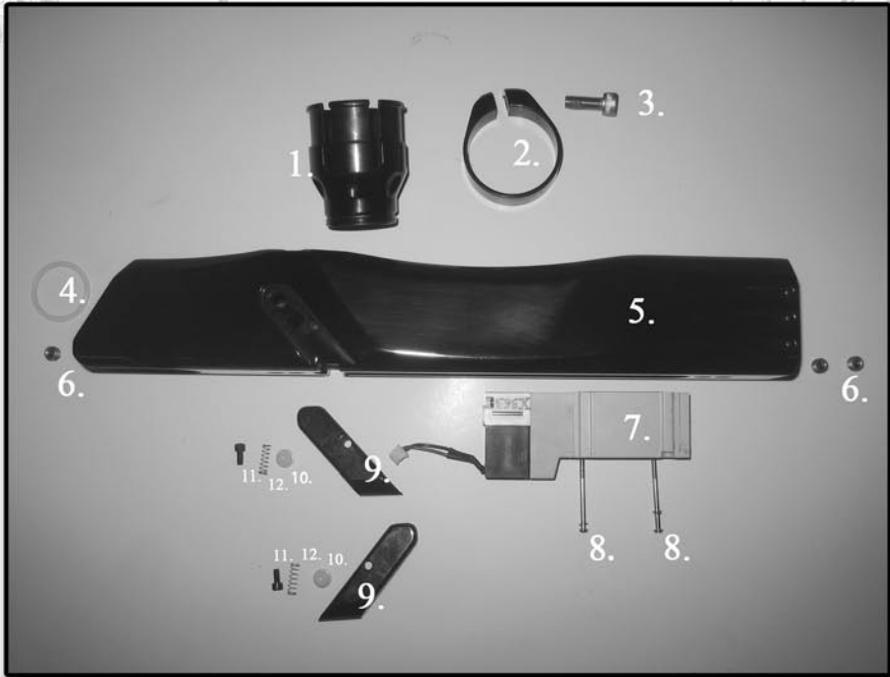
### **THE QUEST EQUALIZER SPECIAL FEATURE**

The Equalizer always monitors the breech, looking for a ball to enter. When a ball has entered the breech, the LED will change from a blinking green to a flickering green. Due to the height of the eyes in the breech, a delay period is necessary to make sure the ball is fully in the breech before the marker is fired. This delay period is known as the BIP Delay™ and can be fine tuned to allow the highest possible rate of fire. Too short of a BIP Delay™ will result in chopping. The default setting works with any type of hopper, including non-agitated types. This delay period can be viewed by the addition of a blue color into the sequence. To indicate this, you will notice as a ball is dropping the LED will briefly turn blue between the blinking green and flickering green. If the blue color is brief or non-existent, then the loader is feeding rapidly thus the speed of the marker should be very fast. If the blue color is noticeable for an extended amount of time, then the loader is feeding slowly, thus making the marker shoot slowly. This indicator is a great way to diagnose speed problems. It can determine if the speed problem is a slowly feeding loader or a marker problem itself. If you do see an extended blue light, try replacing the batteries in your loader or if you are not using a force feed loader we recommend trying one for the fastest possible firing results.



The Quest

## Body/Solenoid.

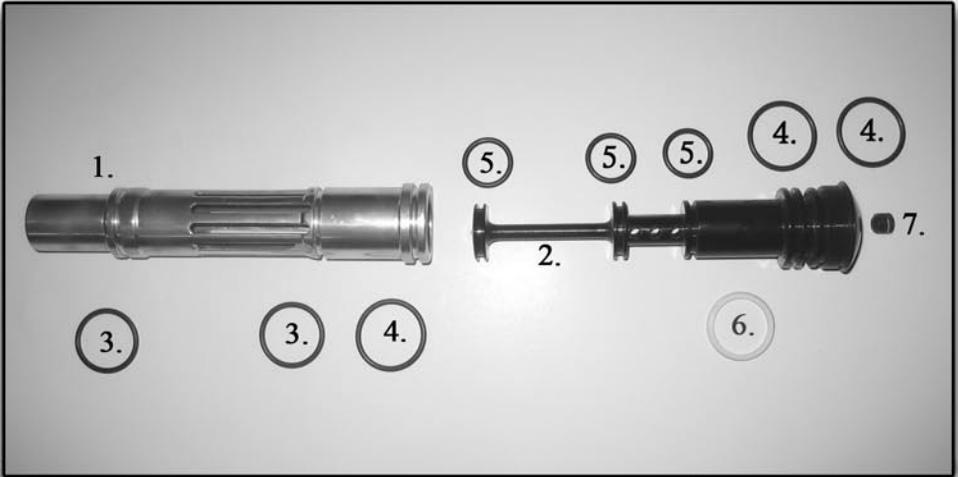
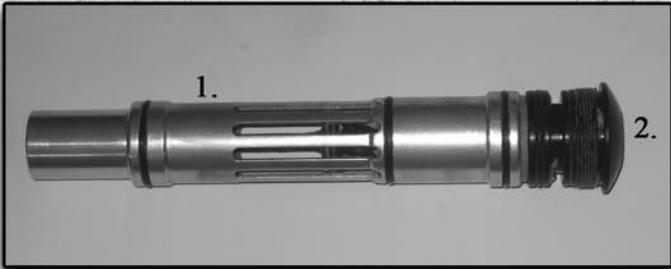


1. Feedneck.
2. Feedneck Clamp.
3. Feedneck Screw.
4. Size 017 Urethane O-Ring.
5. Quest Body.
6. Body Plugs.
7. Solenoid.
8. Solenoid Screws.
9. Eye Covers.
10. Ball Detents.
11. Eye Cover Screws.
12. Ball Detent Springs.



**The Quest**

# Ram Valve System.

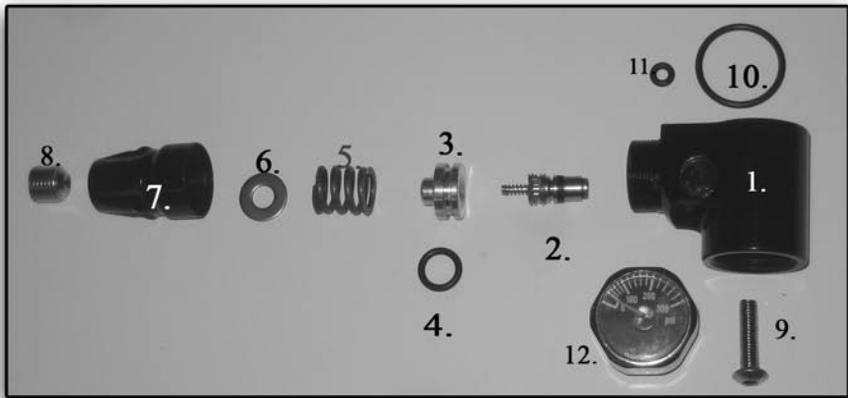
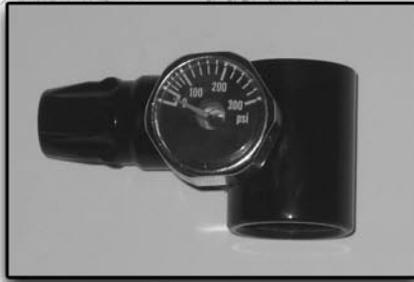


- 1. Bolt.
- 2. Pin.
- 3. Size 017 O-Ring.
- 4. Size 018 O-Ring.
- 5. Size 014 O-Ring.
- 6. Bolt / Pin Washer.
- 7. Pin Plug.



**The Quest**

# Low Pressure Regulator.



1. LPR Housing.
2. LPR Valve Core.
3. LPR Piston.
4. Size 011 O-Ring.
5. LPR Spring.
6. LPR Washer.
7. LPR Cap.
8. LPR Adjustment Screw.
9. LPR Mounting Screw.
10. Size 018 O-Ring.
11. Size 006 O-Ring.
12. 0-300PSI Gauge.

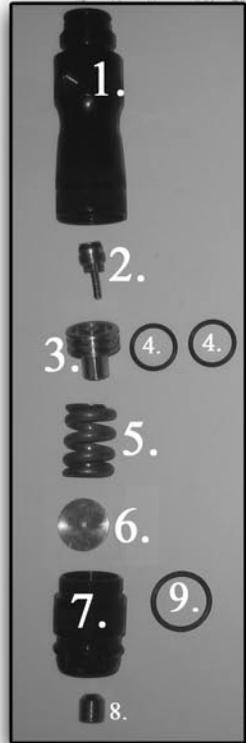


The Quest

# Inline Regulator



Tank O-ring

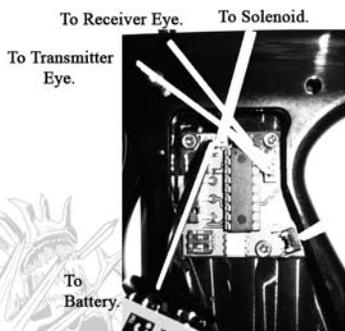
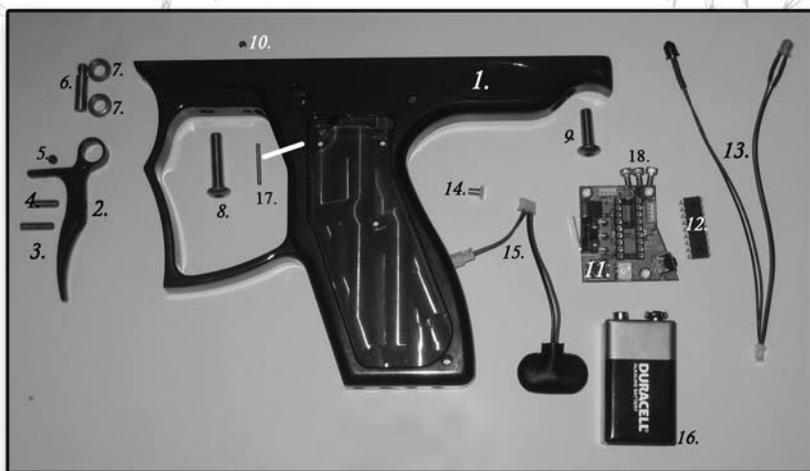


1. Regulator Body.
2. HPR Valve Core.
3. HPR Piston.
4. Size 15 O-Ring.
5. HPR Spring.
6. HPR Washer.
7. Reg Cap.
8. Reg Adjustment Screw.
9. Size 17 O-Ring.



# The Quest

## Frame/Board.



1. Quest Trigger Frame.
2. Quest Trigger.
3. Trigger Pull Adjust Screw.
4. Trigger Stop Adjust Screw.
5. Trigger Return Adjust Screw.
6. Trigger Screw.
7. Trigger Bearings.
8. Front Frame Screw.
9. Back Frame Screw.
10. Trigger Return Magnet.
11. Quest Board.
12. Quest Chip (Psp, Nxl, Ramping)
13. Eye Harness.
14. On/Off Button.
15. Battery/Solenoid Harness.
16. Battery.
17. Trigger Stop Pin.
18. Board Screws.

## TROUBLE SHOOTING

Problem/Diagnosis	Repair	Problem/Diagnosis	Repair
<b>First Shot Drop Off</b>  1) Battery low 2) LPR pressure too low 3) Tank malfunction 4) Poor maintenance	1) Replace battery 2) Increase LPR pressure 3) Check and replace tank 4) Clean and re-grease marker	<b>Marker Bouncing</b>  1) Trigger adjusted too close to stop 2) Debounce set too low 3) Trigger magnet or screw missing	1) Adjust trigger to middle of actuation 2) Increase Debounce Setting 3) Check and replace missing magnet or screw
<b>Not Firing While Pressurized</b>  1) Battery low 2) Dwell too low 3) LPR pressure too low 4) Obstruction in breech 5) Solenoid wire broke 6) HPR spiking 7) No ball in breech 8) Trigger out of adjustment 9) Poor maintenance	1) Replace battery 2) Increase Dwell 3) Increase LPR pressure 4) Check breech 5) Check wires 6) Remove and check HPR 7) Make sure ball is in breech 8) Readjust trigger 9) Clean and re-grease marker	<b>Poor Efficiency</b>  1) LPR pressure too low 2) Dwell too high 3) Dwell too low 4) Breech o-ring missing 5) Poor paint 6) Poor maintenance	1) Increase LPR pressure 2) Decrease Dwell 3) Increase Dwell 4) Check and replace breech o-ring 5) Try different paint 6) Clean and re-grease marker
<b>Inconsistent Velocity</b>  1) Dwell too low 2) HPR piston sticking 3) LPR pressure too low 4) Tank malfunction 5) Breech o-ring missing 6) Poor paint 7) Poor maintenance	1) Increase Dwell 2) Grease HPR piston 3) Increase LPR pressure 4) Check and replace tank 5) Check and replace breech o-ring 6) Try different paint 7) Clean and re-grease marker	<b>Leak Down Barrel</b>  1) Front pin o-ring bad 2) Front bolt o-ring bad	1) Replace front 014 pin o-ring 2) Replace front 017 bolt o-ring
<b>LPR Spiking</b>  1) LPR valve not sealing 2) Outer bolt o-rings bad 3) Rear Pin o-rings bad 4) LPR piston sticking 5) HPR spiking 6) Debris in marker	1) Check and replace LPR valve 2) Replace 017 and 018 bolt o-rings 3) Replace 018 pin o-rings 4) Re-grease LPR piston 5) Check and re-grease HPR piston 6) Remove Bolt/Pin assembly and check body and assembly for debris. Check LPR internals for debris.	<b>Breaking Paint</b>  1) Eye malfunction or off 2) Slow loader 3) Missing ball detents 4) Paint too large for barrel 5) Paint too brittle or poor for climate 6) LPR/HPR pressures off stock	1) Check if wire is broke or eye software is off 2) Replace loader batteries or try different loader 3) Check and re-place ball detents 4) Barrel check the paint 5) Drop check the paint 6) Reset pressures according to manual

## NOTES

### **TECHNICAL SUPPORT**

Our technical support department is open Monday through Friday from 9am to 5pm (PST), and can be reached at (805) 487-5297. Additional support is available through our website, [www.FirstEndeavorPaintball.com](http://www.FirstEndeavorPaintball.com).



1601 Pacific Ave. #204 Oxnard, CA 93033  
Phone: (805) 487-5297 Fax: (805) 487-5462  
Email: [Info@FirstEndeavorPaintball.com](mailto:Info@FirstEndeavorPaintball.com)