

user manual



.68 CALIBER ELECTRONIC PAINTBALL MARKER

Meets or exceeds ASTM standards.

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/\! WARNING: This is not a toy. Misuse may cause serious injury or death. Eye protection designed specifically for paintball must be worn by the user and persons within range. Recommend 18 years of age or older to purchase. Persons under 18 years of age must have adult supervision. **READ OWNER'S MANUAL BEFORE USING.**

RULES OF SAFE MARKER HANDLING

1. Treat every marker as if it were loaded.
2. Never look down the barrel of a paintball marker.
3. Keep your finger off the trigger until ready to shoot.
4. Never point the marker at anything you don't wish to shoot.
5. Keep the marker on safe until ready to shoot.
6. Keep the barrel blocking device in/on the marker's muzzle when not shooting.
7. Always remove paintballs and propellant source before disassembly.
8. After removing propellant source, point marker in safe direction and discharge until marker is degassed.
9. Store the marker unloaded and de-gassed in a secure place.
10. Follow warnings listed on propellant source for handling and storage.
11. Do not shoot at fragile objects such as windows.
12. Every person within range must wear eye, face and ear protection designed specifically to stop paintballs and meeting ASTM standard F1776.
13. Always measure your marker's velocity before playing paintball and never shoot at velocities in excess of 91.44 meters (300 feet) per second.



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WARRANTY INFORMATION

STANDARD WARRANTY:

The manufacturer warrants to the original customer that this product is free from defects in material and workmanship under normal use and service for a period of 90 days from the original date of purchase by the initial owner/purchaser. The manufacturer agrees to repair or replace (at its discretion) any product within a reasonable period of time. This warranty does not cover: o-rings, scratches, nicks, normal wear and tear of parts, any modifications or normal fading of anodizing or damage caused by dropping or hitting of the product. This warranty shall not apply if it is shown by the manufacture that the consumer caused the defect or malfunction because of misuse. This warranty only covers original factory parts. Any modifications or tampering of original factory parts will not be covered by this warranty. Warranty work can only be conducted by the manufacture technicians and or authorized technicians. If product needs to be repair, package it carefully and send it together with your name, address, phone number and a brief description of the malfunction to:

Paintball Solutions
570 Mantua Blvd
Sewell, NJ 08080

EXTENDED WARRANTY:

By returning the enclosed warranty registration card or registering your warranty on-line at www.paintballsolutions.com, within fifteen days of purchase, the warranty will automatically be extended to one year.



Welcome

...Thank you, for purchasing this Mongoose Paintball Marker. The Mongoose represents the culmination of a great deal of research by the Diablo Paintball staff along with input from players such as you. The Mongoose is designed to deliver many advent at a reasonable price. With its 21 ball per second cycling rate, the Mongoose is one of the fastest markers available at any price. The Vise Grip Feed Neck, Quik-Strip Delrin bolt, vertical expansion chamber, ported barrel and inline regulator are all features usually available on much pricier markers or only through a great deal of after-market expense. We believe that the affordability of a reliable, feature packed marker will improve your playing experience and winning percentage. While winning isn't everything, it sure beats the alternative!

Play hard, play safe, play to win!



PAINTBALL



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Numbers shown in parentheses following part names correspond to the numbers on the Parts key located on the centerfold pages of this manual.

INITIAL ASSEMBLY

1. Screw Barrel (23) hand tight into the Main Body (34) making sure the Barrel O-Ring (16) is properly seated between the Barrel and the Main Body to prevent the Barrel from vibrating loose during rapid firing.
2. Screw Volumizer (26) hand tight into the Vertical ASA (33) making sure a Multi-use O-Ring (16) is properly seated between the Volumizer and the Vertical ASA to properly seal this connection.
3. Screw Velocity Adjuster (12) into the Hammer Plug (24) approximately 2 complete turns.
4. Insert the Barrel Plug into the end of the Barrel (23).

BATTERY INSTALLATION

1. Find the On/Off switch located on the left side of the marker just above the Left Grip Panel (36).
2. Make sure the switch is in the "Off" position which is toward the rear of the marker.
3. Using a screwdriver remove the three Grip Panel Screws (20) from the left side (side facing you if the barrel is pointing to your left) of the Grip Panel (36).
4. Install 9 volt battery.
5. Push the On/Off switch forward towards the "On" position.
6. Confirm that the LED light located on the grip is lit to signify that the battery is good and properly installed.
7. Push the On/Off switch forward towards the "Off" position.
8. Replace Grip Panel using the three Grip Panel Screws, being careful not to pinch the wires leading to the battery connector and those leading to the circuit board.

ATTACHING PROPELLANT SOURCE

1. Confirm that Barrel Plug is properly installed.
2. Cock the marker by pulling the Bolt Pull Pin (28A) in the rearward direction until it "clicks" into place. This compresses the Main Spring (2) and allows the Valve Stem/Seal (7) to properly seat.
3. Confirm that the On/Off switch is in the "Off" position
4. Point the marker downward and in a safe direction.
5. Place the leading end of the propellant cylinder threads into the threaded interface of the Tank Adapter (14).



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6. Without pushing, twist the propellant cylinder in a clockwise direction and allow the cylinder threads to “draw” it into the Tank Adapter. DO NOT force the cylinder which could cause cross threading.
7. Screw the propellant cylinder completely in until it is firmly seated.

ATTACHING FEEDER/ HOPPER

Due to the extremely high rate of fire capability of this marker, we highly recommend the use of a motorized hopper such as the Diablo TSA or Empire Reloader B.

1. Confirm that Barrel Plug is properly installed and the On/Off switch is in the “Off” position
2. Twist the Clamp Feed Adjustment (11A) in a counter-clockwise direction until it is loose but do not remove. If accidentally removed, screw back on one complete turn.
3. Press neck of Feeder/Hopper into the Vertical Feed Neck (11) until completely seated.
4. Orient the Feeder/Hopper so that the lid is facing the rear of the marker and the Feeder/Hopper is parallel to the Main Body (34).
5. Twist Vise Ring in a clockwise direction until it fits snugly against the Feeder/Hopper neck.

LOADING PAINTBALLS

The performance of your marker is directly related to the quality of paintballs used. We highly recommend Diablo paintballs to give you satisfaction and success on the playing field.

1. Confirm that Barrel Plug is properly installed and the On/Off switch is in the “Off” position.
2. Point marker in a safe direction and load paintballs in the Feeder/Hopper. If you are using a non-motorized hopper, be sure to leave some room in the hopper for the balls to feed properly.



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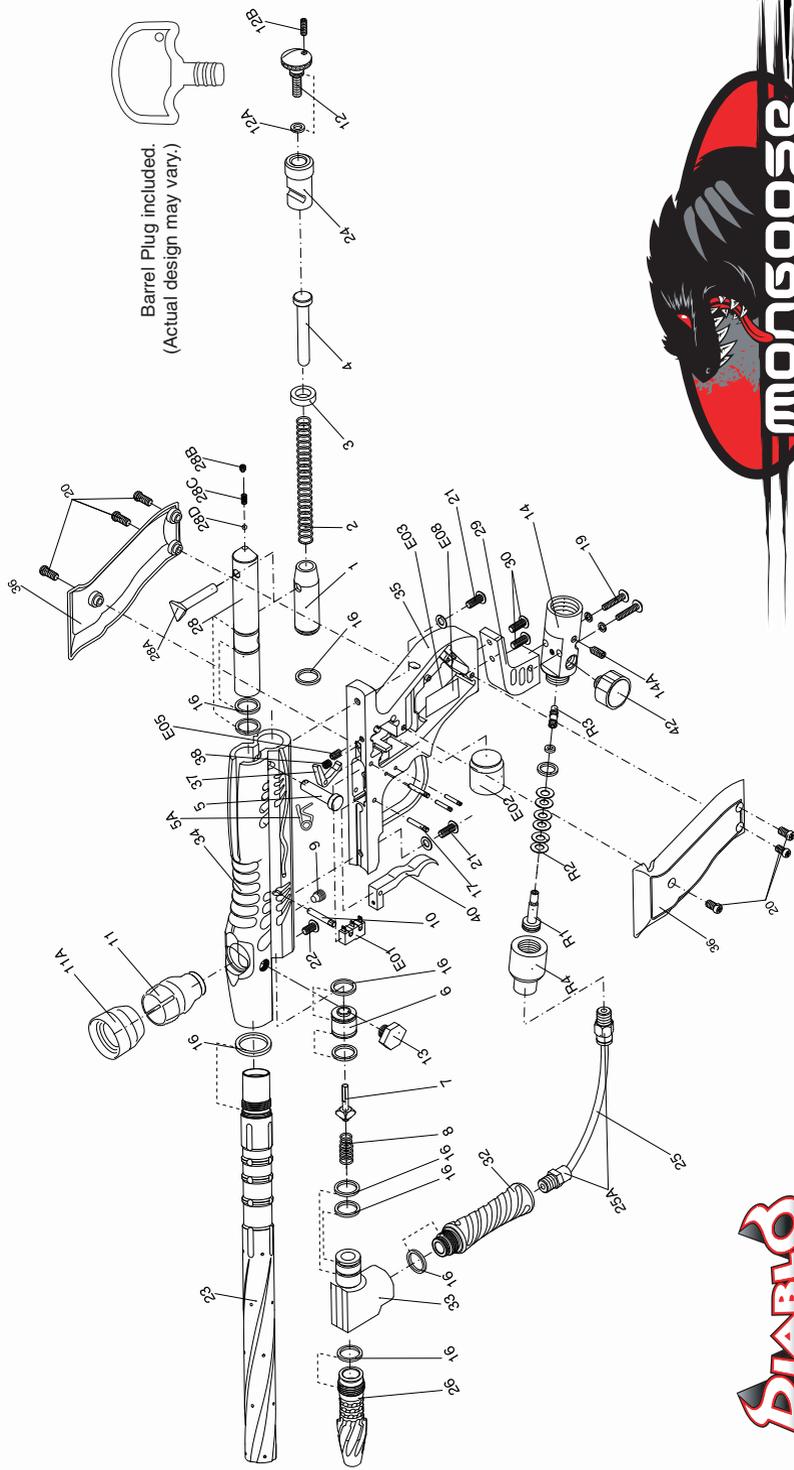
PARTS KEY:

6.

Part Number	Part Name
1	Hammer
2	Main Spring
3	Recoil Pad
4	Spring Strut
5	Quick Strip Pin A. R-Clip
6	Gas Valve
7	Cup Seal
8	Valve Spring
9	Valve Gas Plug
10	Valve Stop Pin
11	Vertical Feed Neck
12	A. Clamp/Feed Adjustment Velocity Adjuster A. Anti-Vibration O-Ring B. Locking Set Screw
13	Metal Ball Detent
14	Tank Adapter
16	A. Regulator Adjustment Screw Multi-Use O-ring
17	Grip Frame Pin Set
19	Bottomline Screws
20	Grip Panel Screws
21	Grip Frame Screws
22	Vertical ASA Screw
23	Barrel
24	Hammer Plug
25	Gas Line A. Macro Line Fittings

Part Number	Name
26	Low Pressure Chamber
28	Bolt A. Connecting Pin B. Set Screw C. Spring D. Ball Bearing
29	Drop Forward
30	Drop Forward Screws
32	Gas-Thru
33	Vertical ASA
34	Main Body
35	Grip Frame
36	Grip Panels
37	Electronic Sear
38	Sear Spring
40	Trigger
42	0-1200 PSI Gauge
R1	Regulator Drive Pin
R2	Beveled Washers
R3	Regulator Piston
R4	Regulator Cap
E01	Wiring Harness/ Trigger Switch
E02	Solenoid
E03	Circuit Board
*E04	On/ Off Switch Screws
E05	Solenoid Set Screws
*E06	Circuit Board Screws
*E07	Battery Lead
**E08	LCD Screen

* Not Shown In Schematic / ** In LCD Version Only



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CHRONOGRAPHING

Never operate your marker without first checking the velocity and confirming that you are firing below that required on the field of play. At no time should the marker fire paintballs in excess of 300 feet per second. Higher velocities are not only potentially dangerous, they often result in a substantial increase in paintballs broken in the marker.

1. Confirm that Barrel Plug is properly installed, the On/Off switch is in the "Off" position and the Bolt Pull Pin is cocked to the rear.
2. Using a 5/64 hex key make sure the Locking Set Screw (12B) is backed out without removing it.
3. Make sure that you and anyone within range is wearing eye protection designed specifically for paintball.
4. While pointing the paintball marker in a safe direction, remove the barrel plug and move the On/Off switch to the "On" position.
5. Point the marker over the chronograph and in a safe direction.
6. Pull the trigger and observe the reading on the chronograph.
7. To increase the velocity, turn the Velocity Adjuster (12) clockwise.
8. To decrease the velocity, turn the Velocity Adjuster counter-clockwise.
9. Once the desired velocity has been reached, use the 5/64 hex key to turn the Locking Set Screw in until it binds against the Hammer Plug. This will prevent the velocity adjuster from moving during play and is required on most playing fields.
10. Move the On/Off switch to the "Off" position.
11. Insert Barrel Plug
12. Proceed to playing field.
13. Keep the On/Off switch in the "Off" position and barrel plug in place until ready to play and instructed to remove the barrel plug by a playing field staff member.



DE-GASSING

1. Make sure that you and anyone within range is wearing eye protection designed specifically for paintball.
2. Set the On/Off switch to the "Off" position.
3. Point the marker in a safe direction
4. If you are using a motorized feeder, turn it off.
5. Twist the Clamp Feed Adjustment (11A) in a counter-clockwise direction until loose.
6. Invert the marker so that the hopper/feeder is upside down so that paint balls are no longer feeding into the marker.
7. Remove the hopper/feeder from the marker.
8. Twisting the barrel in a counter-clockwise direction, remove it from the marker.
9. While pointing the paintball marker in a safe direction, move the On/Off switch to the "On" position.
10. Pull the trigger and allow the marker to cycle to confirm the absence of paintballs in the marker's breech. If a ball discharges, repeat until no more paintballs come out of the marker.

!/\ WARNING: When removing the cylinder from the marker, it could fly off with enough force to kill if the valve unscrews from the cylinder. LOOK at valve when removing cylinder. STOP if valve starts to unscrew from the tank. Screw it back on and take it to a trained person for repair.

11. Unscrew the propellant cylinder approximately one complete revolution.
12. Pull the trigger until the marker fails to recock (if this takes more than 10 shots, unscrew the cylinder an additional 1/2 turn and repeat).
13. Remove **(See Warning Above)** the propellant cylinder.



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MAINTENANCE

Bolt

1. Pull the Bolt Pull Pin (28A) upwards until it “clicks”.
2. Pull the Bolt Pull Pin rearward until the Bolt (28) comes out of the back of the Main Body (34).
3. Clean the bolt thoroughly to include rinsing in warm water if needed.
4. Lubricate the bolt with non-corrosive lubricant such as Empire Lube or Empire Oil.
5. Return the bolt to the rear of the Main Body making sure to put the open end in first.
6. Slide the bolt forward until the Bolt Pull Pin lines up with the hole in the top of the Hammer (1).
7. Press the Bolt Pull Pin downward until it clicks in place.

Cleaning/ Lubricating/ Assembly

1. De-gas the marker according to previous directions.
2. Wipe all outer surfaces with a clean soft cloth or paper towel.
3. DO NOT submerge marker in water or cleaning solutions. This may destroy the circuit board and will void your warranty.
4. Remove and service Bolt as previously instructed.
5. Remove the Retainer Clip from the end of the Quik Strip Pin (5).
6. While maintaining some pressure on the back of the Hammer Plug (24), pull out the Quik Strip Pin.
7. Remove the Main Spring (2), Recoil Pad (3), Spring Strut (4) and Hammer Plug (24) from the marker.
8. Using a 1/8” hex wrench remove both Grip Frame Screws (21) from the Grip Frame (35). NOTE that these are located on the trigger frame and NOT on the Main Body.
9. Pull the Trigger Frame away from the Main Body.
10. Remove the Hammer (1) from the rear of the Main Body.
11. Lubricate the Hammer with a non-corrosive lubricant such as Empire Lube or Empire Oil.
12. Replace the Hammer with the open end facing rearward and the flat side down.
13. Insert the Bolt (28) in the top of the Main Body.
14. Line up the hole in the bolt with that in the Hammer and push the Bolt Pull Pin downward until the two are linked together. This will prevent the Hammer from rotating during assembly.
15. Place the Main Spring (2), Recoil Pad (3), Spring Strut (4) and Hammer Plug (24) back in the marker.
16. While holding the Hammer Plug in place replace the Quik Strip Pin (5) and secure with the R-Clip (5A).

STORAGE:

Always turn off the marker, remove the hopper/feeder, all paintballs and propellant source and place it in a secure location where it cannot be accessed by unauthorized persons.

TROUBLE SHOOTING GUIDE:

Symptom	Cause	Cure
Does not Fire	Not Cocked	Cock the Bolt Pull Pin (28A) to the rear.
	Not On	Turn Switch "On"
	Bad Battery	Replace Battery
	Out of Gas	Refill or Replace Propellant Source
Leaks air down Barrel	Bad Cup Seal (7)	Replace Cup Seal (7)
Leaks air from ASA/Bottle Interface	Bad Bottle O-Ring	Replace Bottle O-Ring
Does not Re-cock	Low on Gas	Refill or Replace Propellant Source
Goes "Full Auto"	Sear not catching	Tighten Grip Frame Screws (21)
	Low on Gas	Refill or Replace Propellant Source
	Bad Striker O-Ring	Replace Multi-use O-Ring (16) located on front of Striker
Excessive Ball Breakage	Low Quality Paintballs	Use better Paintballs Such as Diablo Brand
	Ball Chopping	Use motorized feeder Such as Diablo TSA

When in doubt, thoroughly clean and lubricate the marker. Many marker function problems are caused by excessive dirt or lack of lubrication.

NOTES ON MONGOOSE:

