

AIRSOFT

TSD tactical

**TEAM
SID**

**HOP
UP**

**INSTRUCTION
MANUAL**

1. Refilling Liquidized Gas (LG)

(1) Press down the magazine catch to release the magazine and pull off the magazine. Caution shall be exercised to feel the temperature of the magazine while pulling it off.

! When the temperature of the magazine is too high, it is hard to refill LG to the magazine to the full level.

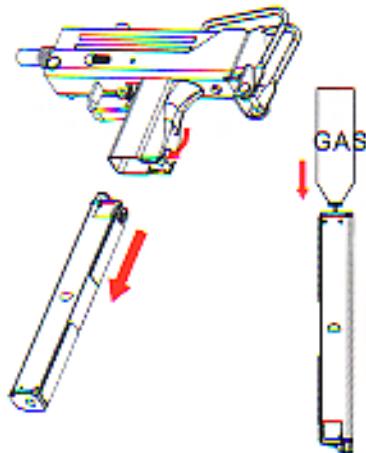
(2) Hold the magazine bottom upward, and insert vertically and press hard the nozzle of the LG can into the refill valve of the magazine, the LG will flow into the magazine and a "si-si" sound is heard.
※Vertically pressing down the LG can.

(3) As the refilling goes on, when the magazine is refilled to the full level, some white fog will emerge between the nozzle and the valve, it is an indication that the magazine is full of LG. (LG is volatile material and generates great amount of pressure while evaporating. It serves as a power source and as heat absorption for the BB Gun. It is normal when the magazine frost or freeze after being used for a while.)

※While LG is evaporated, it consumes a great deal of heat energy, care shall be taken not to get frostbite.

※Precaution to handle the magazine: After the magazine is refilled with full LG, which absorbs a great amount of ambient heat, the temperature of the BB gun parts may become extraordinarily low and the gaps among parts are therefore widened and an escape of gas takes place temporarily. After a while, the escape of LG stops and the gaps recover to normal.

※While in firing, the great atmospheric air flow is likely to dry up the lubricant on the magazine, so the magazine requires replenishing of lubricant more frequently.



Precaution to handle LG can:

- (1) store it in a dry and cool place;
- (2) never heat the LG can and the LG filled magazine;
- (3) never directly contact the LG, itself.



2. Lubricating Points (Please refer to the Maintenance Manual)

- (1) When the ambient temperature is below 20°C (Winter time), and the BB gun is set in the AUTO position, it may not work well because LG has not yet obtained enough heat energy to produce the necessary pressure required to force the bolt backward and the trouble occurs. (Condition analysis: the magazine is very cold, and there is even frost on it. When the slide is pulled, it permits to fire one bullet at a time only. Or the blow back is powerless to force the slide backward.) Use the hands or body heat to warm up the magazine. Care shall be taken not to get frostbite, particularly in the condition that the indoor temperature is extremely low.
- (2) Never store the LG refilled magazine in the poorly vented high temperature environment, near the fire nor in the extremely humid environment, for it will render the magazine damage or gas escape. The LG can shall be entirely emptied before storage.
- (3) It is strongly recommended to apply the HFC brand LG can only to avoid unspecified high pressure contained in the can or the inclusion of extraneous material mixed in the LG to render damage to the magazine.
- (4) In case it is hard to refill LG into the magazine, it may be the case that the magazine temperature is too high and the refilled LG absorbs a great amount of heat thus produces sufficient pressure inside, which makes it impossible to continue injecting LG.

(Condition analysis: The magazine loses the pressure after firing 3 or 4 rounds of bullet or the magazine valve is hard to open.)

(Solution: Place the magazine in the refrigerator for 10 minutes to cool it down, or repeat the processing of bleeding / refilling / bleeding for 1 and two times to reduce the temperature of the magazine, and finally refill the magazine to the full level. This practice would render an easy damage to the rubber seal.)

(5)The magazine is very heavy, so be careful not to fall it to the ground or collide it against the hard material, for it would cause deformation to the magazine and make it unworkable.

(6)After firing practice, the magazine shall be emptied entirely. The high pressure contained inside of the magazine would cause trouble and shorten the life span of the magazine.

(7)Caution: The fast bleeding of LG from the magazine would consume a great amount of heat energy in the ambient; caution shall be taken to prevent the hurt to the face, eyes and hands, including footbite.

3 Secrets to Maintain Good Performance of Magazine

HFC blow back series BB Guns use especially-pure and hazardless LG to produce an evaporating pressure served as the recoil force. Playing BB guns would invite greatest fun. The following instructions will familiarize the users with the characteristics of HFC series BB gun.

(1) The LG is capable of absorbing a great amount of heat energy and evaporate to 10 or hundred times volume of propane and chloro-fluoride bran liquidized gas.

(2) Most LG available in the market is flammable, so use it with great care.

(3) Normal BB guns require 5~8kg cm² air pressure to operate.

(4) Each LG differs in pressure and operation because of its composition. Secure the operation instruction from the seller before using it.

(5) Never use cooking LG or lighter LG, which are not a good substitute. (They produce insufficient pressure and they are susceptible to burning and explosion.)

Safety rules to use the magazine

(1) When the magazine is filled with too much LG or the magazine absorbs too much heat energy, the pressure inside the magazine will become too high, thus the bleeding valve requires a force 10 times greater than the normal operational force to open it. The useful practice is to strike the bleeding valve slightly with hand or tools to release the LG pressure and consequently lower the magazine temperature to the operational range and resume the smooth operation of BB gun.

(2) Always try to maintain the magazine working temperature at 25°C ~ 30°C to ensure the optimal operation pressure and firing rate. If the magazine is cold, warm it up with hands ; if too hot, bleed the pressure in accordance with the procedure stated in section (1) of this paragraph.

※ In Winter or cold environment (below 20°C), the atmospheric reaction supplies less heat energy and produces insufficiency of pressure, so BB gun could not act smoothly and the Auto fire would fail to respond.

※ In summer or hot environment, it is the case that the high pressure causes no fire (no way to bleed the pressure by striking the bleeding valve) or white fog emerges in the first few shots. It is a normal operation condition. The firing operation comes to normal after the magazine temperature comes down to normal. If not, use adequate tools to strike the bleeding valve to release the extra pressure.

4 Loading BB Bullets into Magazine

Precaution to operate BB bullets

※ Use HFC brand BB bullets only or the BB bullets whose real roundness of the bullet diameter is exactly 6mm.

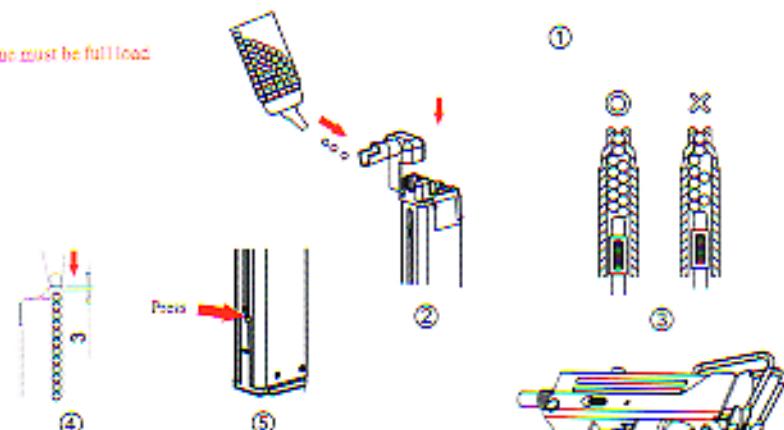
※ This company would not honor the claim for repair and after-sales service on the BB gun which is damaged by applying non-HFC brand bullets (or the diameter of the bullet is less than 6mm such as 6mm-5.85mm and the weight of the solid bullet is 0.08-0.42g.)

※ The fired bullets shall be recovered and collected in an attempt to prevent the kids and birds from eating them and generating hazard to the environment.

※ Store the BB bullets properly and keep out of reach of children.

Loading Procedures

1. For avoid the release spring strong power break the load structure, please note the magazine must be full load the BB pellets(40pcs).
2. Pull button to the bottom and fixed. (as illustration ①)
3. Load BB pellets by speed loader. (as illustration ②)
4. The BB pellets must be stack one by one (as illustration ③) there is several 3mm space after loading when presses down the top BB. For avoid the blow back system breaking, please take out one BB pellet if the BB is unable to press down (as illustration ④).
5. Press button and release it. (as illustration ⑤)



5>Loading Magazine

Insert the top of the magazine onto the magazine housing in the hand stock till a "click" is heard, then pull down the magazine to ensure it is securely held in the magazine housing of the hand stock.

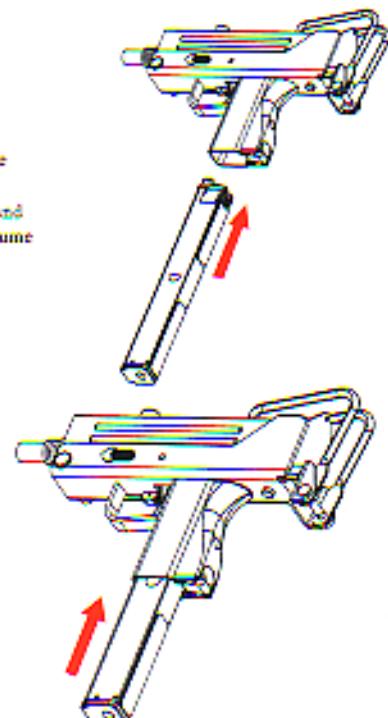
Caution: The hand stock of M-11 Gun is a compact design, be careful not to wound the palm when inserting the magazine into the hand stock. In the event there is an overload with more than 40 rounds of bullets, it will fail to fire. Remove the extra round of bullets to resume the fire condition.

6.Charging Bullet to Firing Chamber

Pull the bolt handle backward till it is caught at the rear position. (Caution: Never point the loaded gun to any person or animal and never extend your finger into the trigger guard irrespective of whether the fire safety is on or not.)

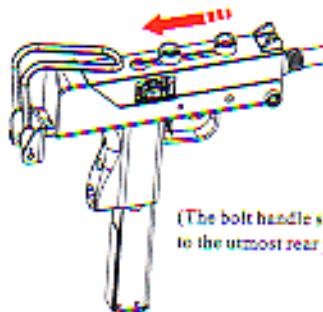
Open type bolt: The early submachine gun took this design. When it is in a ready to fire position, the bolt is held at the rear position and the shell ejection mouth is open. The advantages of this design are less parts and easy production, and the disadvantage is that the reciprocating movement of the heavy bolt generates a vast vibration which affects the accuracy of shot to the maximum extent.

Blow Back System: The pressure of the LG filled system differs in line with the change of temperature. Long firing is certain to recline the pressure and deactivate the performance of the blow back, because no sufficient pressure to force the bolt back to the rear position and the auto fire is therefore interrupted.

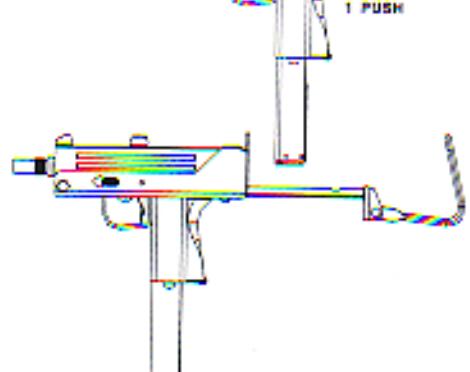
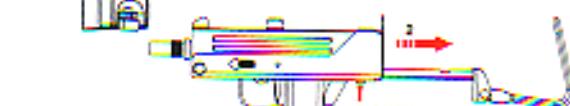
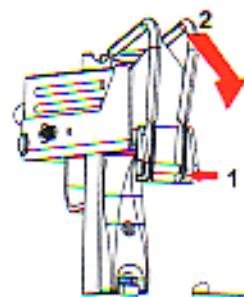


7. Warning:

- ④ due to the operation of blow back in the M11 gun, pay attention all the time not to point the muzzle to any person in order to prevent injury. Even when the pressure is very low and the firing practice discontinues, be careful not to point the muzzle to any person.
- ④ Cultivate a good habit not to touch the safety and the trigger at any time.



(The bolt handle shall be pulled to the utmost rear position.)



Operation and Application of Retractable Hand Stock

- ① Hold two legs of the shoulder rest and press them to the center to disengage the clamps, and take off the shoulder rest from the hand stock.
- ② Put back two legs of the shoulder rest into the clamps till a "click" is heard. Check to make sure that the shoulder rest is fastened in place.
- ③ Press down the clamps on the lower back of the hand stock and extend the shoulder rest to the full length. Press down the clamps on the upper back of the hand stock to retract the shoulder rest.
- ④ Never completely disengage the shoulder rest from the hand stock.
- ⑤ If the bolt fails to retract to the rear due to the fact that the pressure is too weak or too strong, repeat the action: pulling back the bolt, pressing the trigger, pulling back the bolt, pressing the trigger for several times to find where the trouble is.
- ⑥ The bolt vibration created in the fire will affect the shooting impact density.
- ⑦ The auto firing usually produces a great amount of recoil force; however, a good shooter will utilize the shoulder rest and the sling to his best advantage.

8. Warning Precaution in Firing:

- ④ As the BB bullet hits the hard surface, it produces a ricochet and the broken pieces fly in all directions. So the shooter shall wear the goggles and protective gear.
- ④ As the gun is loaded with LG filled magazine, the safety must be set on and never point the muzzle to any person. The teenager below 18 is prohibited to use it.
- ④ Never point the muzzle of the BB gun with LG filled magazine to avoid injury to person and animal.
- ④ The firing range of the BB gun is much affected by the wind direction, the temperature and other natural factors. In firing practice, consideration shall be given to projectile deflection beyond the prearranged fire range which might cause personnel and animal injury.
- ④ The shooter shall never fire aiming at person, public utilities and property, for it will constitute a criminal.
- ④ Unless it is definitely sure that the target is aimed, never extend your fingers into the protection bow.

8.In fire practice, make no public nuisance and disturbance of community peace.

- * The borders of the firing range shall be well isolated and protected to avoid property damage, or a safer place should be selected for fire practice.
- * The projectile of a ricochet is unpredictable when the BB bullet hits the hard material, so an effective prevention shall be taken.
- * When a plurality of shooters practice the fire together, all shooters shall wear goggles.
- * Reduce the unnecessary triggering (with LG filled but no bullet loaded) to the minimum because this practice accelerates the parts wear and tear, deterioration and shortens the life span.

(1)At the end when the whole magazine is fired, the bolt is retracted to 1/3 position.

The prior art of M-11 BB gun was designed to retract the bolt to rear end, but the bolt of the HFC M-11 BB gun is designed to 1/3 position as a way to remind the shooter to replace the magazine.

(2)At the end of firing practice.

Check and make sure no bullet is left in the bore. Take off the magazine and press trigger once again, return the bolt to the front position, set up the safety, retract the shoulder rest, empty the magazine, clean the bore and parts and return it to the packing box.

If it is intended to take a break, unload the magazine to avoid incidental firing.

9.What is the meaning of HOP UP?

HOP UP is a means to patch up the elastic rubber with high abrasion and low abrasion on the upper side and lower side in the bore, thus forces the fired bullet to create a swivel movement and a higher parabolic trajectory to increase the firing range and hitting concentration.

↓ How to develop the maximum performance of HOP UP

* Select very similar size of bullet ranged from 5.9 mm to 5.98 mm or 6 mm in diameter and from 0.2g to 0.25 g in weight. The light weighed bullet would fly in the sky and the heavy-weighted bullet would fall to the ground.

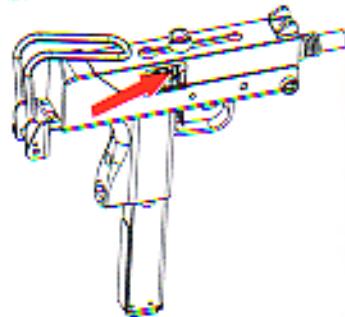
* The projectile force shall be kept to gain the maximum stability in an attempt to gain an extremely similar parabolic projectile for each firing. In fact, it is very difficult to maintain the stable pressure of the LG; however, a good shooter shall pay special attention to temperature of the magazine and maintain it not too cold nor too hot so as to have a stable pressure desired.

* Always keep the magazine part in a neat and working condition and properly lubricated to sustain smooth operation.

* The external factors =>

(1)A tranquil wind is good for development of HOP UP environment.

(2)The ambient temperature shall be above 20°C to maintain a stable pressure.



Regulating HOP UP

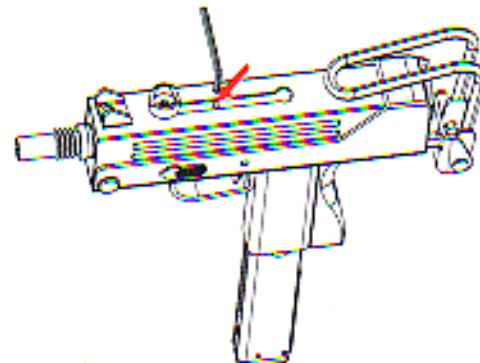
The regulation of HOP UP entails a 20 m long trial range.

(1)Take a normal firing posture and aim to fire 10-20 bullets to obtain the first impact group served as a basis for calibration. (In general firing, it usually takes 2-3 bullets for calibration. The calibration for HOP UP is different, because the error occurred in the 5-6 bullets fired shows no variation.)

(2)Calibration

Pull off the magazine, and regulate the HOP UP ring by using the feeler gauge attached to the BB gun. The regulating method is illustrated in the enclosed drawings.

(3)The impact area of the first 10-20 bullets is used as the target point for HOP UP calibration, move the regulating ring of HOP UP upward to obtain the second impact area in 20 m range and move the regulating ring downward to obtain the third impact area.



HOP UP performance	Trajectory Profile	Improvement Required
Null	Natural physical parabolic trajectory	Regulating clockwise
Small	It flies a straight line, then falls to ground naturally	Slight regulation in clockwise
Most optimal:	flies a straight line with long distance	No regulation required.
Great	It flies a short straight line and then change the course and fly in sky	Slight regulation in counter-clock wise
Irregular scattering	The projectiles fly up and down with very large scattered impact area	Regulating clockwise

(4) Repeat the process of regulating - trial fire, regulating to obtain the optimal projectile profile.

Attention:

A. The regulation is processed only under one circumstance that all parts of BB gun are in good condition. The regulation on the worn out parts will result in difference or a failure. Please approach your distributor for consultation and assistance.

B. Variation in bullet weight creates a variation in influence. In the projectile calibration, fire the bullet of the same lot and same weight.

C. Wrong regulation: The user is liable for any damage as a result of disassembly, modification and replacement of parts on the HFC BB gun, however, the distributor will provide assistance in service and repair and the user has to pay the actual cost incurred.

10. Application of HOP UP

HOP UP applies a principle in which an elastic abrasion rubber is posted on the upper part of bore directly contacting with the BB bullet. When fired, the bullet produces a swivel movement along the trajectory course. This design requires more energy and decreases the initial firing velocity but not so significant. Nevertheless, the change of the trajectory profile is largely dependent on the abrasion and BB bullet (weight and shape).

The key problem of the gas-powered gun lies on the gas pressure. The most optimal temperature to operate the BB Gun is 20°C - 30°C, in which even under the condition that the cold would lead to poor evaporation of LO, it can be warmed up by hands to increase the pressure to a desired level. (Caution: Never use fire to warm up). Overheating would lead to trouble and risk.

1. Warning / Precaution for Applying HOP UP

- (1) Trial fire: The trajectory calibration shall be processed in accordance with the instruction provided in this manual. (Strict maintenance of range rules and personnel safety.)
- (2) Familiarity with Operation and Mechanism of M-11 as described in this manual.
- (3) Under HOP UP firing, the maximum range is 80m, clean up all material and personnel with this range.
- (4) Holding gun in tilt position, pointing muzzle aimlessly, side wind blowing and ricochet would invite unpredicted accident.

11. Trouble Shooting for HOP UP

Case	Reason	Deposition
Severe flying up	1.HOP UP performance is too strong 2.BB bullet is too light	1.Counter clock wise regulation. 2.Use really round bullet weighed 0.25g each.
Severe falling down	1.The abrasion rubber is worn too much 2.BB bullet is not in really round	1.Clock wise regulation. 2.Use really round 6mm bullet weighed 0.25g each.
HOP UP with scattered impact, no way to calibrate	1.Badly worn abrasion rubber 2.Abrasion rubber is greased 3.No real round bullet 4.Improper calibration of HOP UP	1.Replace the abrasion rubber. 2.Remove grease from abrasion rubber. 3.Use really round bullet in same weight. 4.Carry out proper calibration.
HOP UP regulation failure	1.Worn abrasion rubber. 2.Worn parts.	1.Replace the abrasion rubber. 2.Replace the worn parts.
No projectile	1.Poor BB bullet 2.Worn abrasion rubber 3.HOP UP is too light 4.Dirty bore	1.Use really round 6mm bullet. 2.Replace with new one. 3.Counter clockwise regulation to loosen HOP UP. 4.Clean the bore with cotton stick.
Poor performance of HOP UP	1.G pressure too low (too cold on magazine) 2.The blow back gets insufficient bleeding. 3.Worn HOP UP parts	Take a break till the magazine is warmed up. (1)Trigger several times with no bullet, let the blow back part to recover to normal operation, or clean and lubricate the blow back parts. (2)Replace the worn parts.

12. Storage, Carrying, Assignment and Scrapping

- ④ At the end of operation, clean it and check to make sure that there is no bullet left in the barrel. Pull off the magazine and empty the bullet from the magazine. Drain the residual LG. Store the gun, the magazine and BB bullet in separate location in the packing box. Store it in a safe place and keep out of reach of children.
- ④ The user has the sole responsibility to prevent the children or any person who are not familiar with the BB gun from using it. If the user is willing to lend to other people, he shall teach the borrower the safe rules of operation.
- ④ Good custody of the BB gun is a unique obligation the holder has to take. The holder is liable for legal action in the event any hazard and criminal has derived from the poor custody. We have declared this criticalness in our operation manual.
- ④ If it is intended to use the BB gun after long storage, please clean and lubricate properly and check the working condition of each parts. Adequate lubrication is the way to keep its long life span and smooth operation.
- ④ When carrying BB gun along, please pack it in the packing box or in the carrying bag. Never carry the BB gun and walk along the street. It might create a public disturbance and violate the regulatory rules and invite police interrogation.
- ④ When it is intended to assign, sell or donate the BB gun to the other person, the recipient shall be provided with this manual including the regulatory and moral obligations.
- ④ When it is intended to discard the BB gun, all parts shall be destroyed, packed and marked with a label indicating "Discarded Toy Gun."

13. Maintenance

1. Warning !

- ④ Negligence in inspection and maintenance means a shortening of life span and invitation of high trouble with the BB gun.
- ④ Never defy the rules and method set forth for inspection and maintenance. Arbitrary maintenance will lead to an unexpected outcome.

Recommended Lubricant and Lubrication Method

It is strongly recommended to use the "Silicone" lubricant or "Teflon" lubricant because they will not damage the rubber parts. Other lubricant, even useful, would render hazard to the parts. Remember to use "silicone" or "Teflon" lubricant to always keep the BB gun in perfect working condition.

Precaution to Apply HFC Brand "Silicone" Spray

- (1)Never place it near fire (it is flammable).
- (2)Never place it in an environment above 40°C or under direct sunshine.
- (3)Use it in the place with good air circulation.
- (4)Never drink it (no poison material).

Pre-operation Inspection

- (1)Check any damaged or missing parts.
- (2)Check to see the working condition.
- (3)Check to see any LG leakage and abnormal action.
- (4)Check if the load of BB bullets is smooth and if the projectile is stable.
- ⊕Find out the case of trouble, understand the reasons and research the solution.
These are ways to keep your gun always in workable condition.

Maintenance of Magazine

When the valve on the bottom plate of the magazine is pressed down, it opens a flow channel to bleed out LG... If it is the case to drain a large amount of LG out of the magazine, the rubber parts might be deteriorated due to great coldness and high velocity flow. The ejected LG might bring up the pollutant, loosen the parts and incidentally injure personnel.

Warning!

The drained LG forms a high velocity flow containing heat absorptive volatile material; which may injure eyes, face and skin, and even cause frostbite.

Proper Method to Bleed LG

Place a finger on the rubber seal on the valve, slightly press down the rubber seal and bleed a small amount of LG at each pressing and press 4 to 6 times to bleed out the amount as desired.

② Maintenance of Magazine

Clean the channel where the bullet is loaded to the fire chamber. Never grease this channel. The greased BB bullet will adversely affect the projectile of HOP UP. The valve and the rubber seal shall be lubricated frequently.

Gun Body

- * Blow back parts (nozzle and nozzle seat) shall be lubricated frequently to keep the passage unclogged.
- * The movable parts shall be checked, swiped and lubricated.
- * Apply the Silicone lubricant with adequate viscosity. Heavy viscous Silicone lubricant gains bad result.

Integral Attention

- ⊕The air passage parts such as the flow channel in the magazine, the rubber seal of the valve, the nozzle and the nozzle seat, the piston rubber ring shall be lubricated frequently.
- ⊕(The movable parts shall be lubricated frequently, but not so frequently as the above parts.)
- ⊕Periodic cleaning on barrel and HOP UP parts. Greased and dirty bore will hurt the accuracy of shooting.
- ⊕For long storage, it shall be stored in the dry place. Heavy compression would lead to trouble.
- ⊕The BB gun is designed with anti-modification measures. Modification at will is illegal and it might incite injury.

14. Disassembly

- * In the disassembly process, care shall be taken to prevent eye's injury by the flying elastic parts (such as the spring, ball, and so forth and the possible missing parts.)
- * Detail disassembly is not permitted. If necessary, please approach the distributor for assistance in detail disassembly or the repair for the damage caused in the detail disassembly by user himself.
- * The disassembled parts shall be arranged in order to avoid confusion and missing.
- * Children shall be prevented from swallowing the disassembled parts.
- * The user is liable for damage caused by the disassembly not compliant with the disassembly instructions provided in this manual.

⊕Major part disassembly (Assembly is in the reverse sequence)

- (1)Pull off the magazine, press the trigger and move the bolt to the front position.
- (2)On the right side of gun body, turn downward the hook at the front end of joint pin, separate the male pin and female pin lift up the gun body.

④ Assembly

Insert the male pin and female into the hole from both sides, at this moment, pay attention and assure that the hook on the front of the male pin must catch the groove on the female pin.

(1) Hold the barrel with hand, lightly lift it up and separate from the gun body.

* The assembly is in the reverse sequence, pull back the bolt and turn the bolt handle to the left side (or right) at 90 degree and fix it at the rear. (Set up the safety), convenient for combining the gun body.

(2) After the gun body is separated, pull the bolt backward to the rear position and remove the recoil rod. When the handle groove points to the front, lift up the bolt handle and retract the bolt. This is the end of major part disassembly.

15. Trouble Shooting

Case	Reason	Solution
No way to refill LG into the magazine	1.The magazine temperature is too high. 2.The LG can't contain sufficient LG or pressure. 3.The nozzle is damaged or out of work	1.Bleed the magazine in order to cool the temperature for refilling 2.Replace with new LG can. 3.Replace the nozzle.
Leakage in the magazine	1.Leakage in refilling valve. 2.Can nozzle damaged. 3.Quick bleeding causes shrinkage or wear in rubber parts	1.Replace with new grease valve. 2.Replace with new one. 3.Try again after it is cooled down. Replace if leakage is found.
Bullet is not smooth to be loaded into the fire chamber	1.Too many BB bullets loaded. 2.The magazine is deformed. 3.Deformed guide flap in the magazine	1.It is overloaded more than 48 rounds. Remove few rounds and pay attention to layering 2 & 3. Replace the magazine.
Unable to load bullet to the fire chamber	1.Deformed guide flap in the magazine. 2.Deformed BB bullet	1.Replace the deformed parts and bullets.
No fire action actuated by the bolt	1.Poor load of bullet. 2.Deformed float nozzle, pedestal and piston. 3.High resistance due to no lubrication. 4.Deformed magazine.	1.See the above solution. 2.Repair, calibrate and replace. 3.Apply proper lubricant. 4.Replace with new magazine.

	5.The piston of the float nozzle falls off	5 Disassemble the bolt, regulate and fix the piston and lubricate it.
Failure on the trigger or no fire on the bolt	1.Safety is on. 2.The retainer of the bolt fails to work. 3.The latch under the bolt is worn out	1.Release the safety. 2 & 3, Repair it or approach the distributor for help.
The bolt is unable to move forward to actuate the fire	The bolt handle is turned at 90 degrees position	Recover the bolt handle and press the trigger.
The recoil stroke is not enough, no auto firing.	1.Insufficient blow back pressure 2.The bolt or the body is deformed	1.Replenish the magazine with LG or increase the magazine temperature. 2.Replace with new parts.
No BB bullet comes out of the nozzle	1.The magazine is not inserted to the proper position. 2.Air flow shift valve is out of work. 3.Bullet entrance rubber is worn out. 4.Wrong operation, leaves BB bullet in the bore. 5.High pressure in the magazine renders no fire. 6.Trigger failure	1.Re-insert the magazine to the proper position. 2.3 & 6. Replace with new parts. 4.Remove the BB bullet in the bore. 5.Bleed the magazine to reduce the temperature of the magazine.
Press trigger once, LG leaks out entirely	1.Insufficient pressure in the magazine 2.The piston ring of the float nozzle falls off or is deteriorated.	1.Replenish LG to the magazine. 2.Replace with new parts and lubricate it.
BB bullet falls down to ground after coming out of muzzle.	1.Worn bullet entrance rubber 2.Two round of bullet are loaded simultaneously	1.Replace worn rubber. 2.Check the bullet guide to check any deformation.
Poor trajectory and target hitting	1.Incorrect firing posture. 2.Poor quality BB bullet. 3.Inadequate regulation of HOP UP. 4.Mechanical parts work not so smooth	1.Please refer to the firing posture instructions. 2.Use the BB bullet as recommended. 3.Please refer the calibration of HOP UP. 4.Inspect, clean or replace the worn parts.

Low velocity, short projectile range	1.Insufficient LG filled. 2.The magazine is too cold. 3.The bullet entrance rubber is abnormal. 4.Poor quality bullet. 5.Inadequate regulation of HOP UP. 6.Failure of piston ring of the float nozzle. 7.The piston cylinder of the float nozzle is broken. 8.Trouble occurs in flow shift valve.	1.Refill LG. 2.Use hand to warm it up. 3.Use cotton sack to clean up. If no improvement, replace with new rubber. 4.Use the BB bullet as recommended. 5.Please refer to the calibration of HOP UP. 6.7&8 Replace with new parts.
Failure in fire selection	1.Parts failure. 2.Insufficient LG leads to the failure of auto fire.	1.Replace with new parts. 2.Replenish LG or warm up the magazine.
Firing process not smooth once fired few round, once no round at all.	1.The magazine is too cold. 2.Poor quality BB bullet. 3.Deformed magazine. 4.No regulation of HOP UP	1.Warm up the magazine to resume the pressure required. 2.Use the bullet as recommended. 3.Replace with new one. 4.Use adjusting tool to regulate HOP UP.
Safety failure	Parts damaged.	Replace it
Trouble in blow back	1.The magazine is too cold/low pressure. 2.The piston of the float nozzle is dirty. 3.The piston and parts in the float nozzle are worn out. 4.The body and barrel are not properly assembled. 5.The piston cylinder is broken. 6.The bullet entrance rubber is worn out. 7.The joint surface of the bolt is worn out. 8.The pedestal of the piston is deformed.	1.Warm up the magazine to resume the pressure. 2.Clean and lubricate it. 3.Apply the lubricant as recommended. 4.Reassemble them as instructed. 5.6 & 8. Replace them. 7.Inspect, clean, lubricate and replace it necessary.