SAFE GUN HANDLING

You should be fully familiar with the proper and safe handling with your Airsoft gun. The basic principles of gun safety require you to always apply the following rules when handling an Airsoft gun.

Never point at anything you do not intend to shoot.
Always treat the Airsoft gun as though it is loaded and with the same respect the Airsoft gun as the real firearm.
Always aim in a SAFE DIRECTION. Keep the muzzle pointed in a SAFE DIRECTION.
Always keep the selector lever on SAFE until ready to shoot.
Always keep your finger away from the trigger and trigger guard until ready to shoot.
When you or others are in the shooting range, please wear the eye protection that designed for Airsoft sport to protect your eyes.
Use 6mm plastic BBs only.
Do not shoot at hard surfaces or the surfaces of water; the plastic BBs may bounce off or ricochet and hit someone or something you do not want to hit.
DO NOT reuse fired plastic BBs because they might be damage your Airsoft gun.
Make sure ALL of the plastic BBs and power source are unload from the Airsoft gun.
Always store this Airsoft gun in a safe place.
Please make sure the gun is unloaded when getting form storage or another person.
DO NOT ATTEMPT TO DISASSEMBLE OR TAMPER WITH YOUR AIRSOFT GUN.
CONTACT CUSTOMER SERVICE AT VFC FOR REPAIR.

WARNING: DO NOT BRANDISH OR DISPLAY THIS AIRSOFT GUN IN PUBLIC - IT MAY CONFUSE PEOPLE AND MAY BE A CRIME. POLICE AND OTHERS MAY THINK THIS AIRGUN IS A FIREARM. DO NOT CHANGE THE COLORATION AND MARKINGS TO MAKE IT LOOK MORE LIKE A FIREARM. THAT IS DANGEROUS AND MAY BE A CRIME.

CAUTION: EYE PROTECTION REQUIRED
WEAR YOUR SHOOTING GLASSES

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WARNING: NOT A TOY. ADULT SUPERVISION IS REQUIRED. MISUSE MAY CAUSE SERIOUS INJURY, ESPECIALLY TO THE EYE. EYE PROTECTION DESIGNED FOR AIRSOFT GUNS MUST BE WORN BY THE USER AND ANY PERSON WITHIN RANGE. READ THIS OWNER’S MANUAL BEFORE USING. MAY BE DANGEROUS UP TO 220 YARDS (200 METERS).

MANUFACTURED BY VEGAFORCECOMPANY  MADE IN TAIWAN
Avalon Series – the most cutting-edge product series in VFC. Its name comes from the island with Eternal and Heroic spirit of King Arthur Legend, the birthplace of Excalibur! Which represents that VFC attempts to create the best AEG series for top Airsoft players in worldwide. As a quality brand of VFC, it comes with full metal body, nice surface finishing and high quality Avalon engravings. The Internal of Avalon includes new ECS gearbox and strong magnetic electric motor to let your AEG more powerful. The MOSFET electronic control unit is inside for higher efficiency and faster trigger response. Apart from this, Avalon has match grade hop rubber, precision inner barrel and CNC machined nozzle inside, which allows Avalon has better precision shooting level.

In the tactical Kit, built-in VFC Quick Response System accessories allow you to adjust the rifle fits your shooting touch, and also comes with Crusader Tech tactical accessories which are friendly for lefty with rapid application. All the detail and design are amazing.

This series has the most popular rail system with ample room for all sorts of sights and accessories. Just like the real gun, this kind of specification design makes things much easier when it comes to stabilizing yourself in each and every shot, same in the Airsoft, and also for aesthetics. This series will be your best choice of AEG.

Born to be EXCALIBUR!
For King’s Own Achievement, Make Craftsmanship Perfect and Performance Ultimate.
COMPONENTS

RIGHT SIDE
- Stock
- Rear Sight
- Ejection Port Cover
- Front Sight
- Flash Hider
- Magazine
- Magazine Release Button
- Pistol Grip

LEFT SIDE
- Bolt Catch
- Charging Handle
- Retractable Stock
- Barrel
- Handguard
- Trigger
- Selector Lever
- Stock Release Button

SAFETY SETTING

Safety Setting
(The trigger can not be pulled)
Always set lever to SAFE position when gun is not in use.

Semi Auto
(Single Shot)
The gun will fire one shot each time the trigger is pulled.

Full Auto
(Automatic Shot)
The gun will fire continuously while the trigger is depressed.

WARNING • CAUTION
- Do not operate the selector lever while the trigger is depressed. Damage and malfunction will occur if you attempt to do so.
- Do not pull the trigger while the selector is on SAFE. Doing so will damage the trigger and safety mechanisms.
**INSTALLING BATTERY**

**WARNING • CAUTION**
Before changing the battery, point the gun in a safe direction, remove the magazine, and set the selector to SAFE.

Open the battery cap, then plug in the battery.

**CAUTION**
When batteries have almost lost their charge they can cause gearbox malfunctions that require repair. Batteries should never be over-charged. This can damage the cell. Prolonged overcharging causes permanent damage to batteries. The battery should always be drained before charging. There is no warranty for batteries. Use only those batteries of min. 6.8 V 3000 mAh.

**LOADING MAGAZINE**

Press the magazine release button to remove the magazine.

Use only 6mm BB with the magazine.

**WARNING • CAUTION**
- Always use high quality 0.20 gram or heavier BB in your airsoft rifle.

We will not be held responsible for any damage or incidents arising from use of poor quality or underweight BB.

Consult with your dealer for proper BB.
ADJUSTING SIGHTS

**FOLDING SIGHT**

- **PRESS** Press the button to flip up front sight.
- **PRESS** Press the button to flip down front sight.
- **PRESS** Press the button to flip up rear sight.
- **PRESS** Press the button to flip down rear sight.

**ADJUSTING FRONT SIGHT**

- To adjust sight post downward, turn clockwise.
- To adjust sight post upward, turn counterclockwise.

**ADJUSTING WINDAGE KNOB**

- Turn the windage knob for windage adjustment.
- Forward: Move the sight to the right.
- Backward: Move the sight to the left.
- The sight can be flipped.
**ADJUSTING THE QRS STOCK**

Press the stock release button, then adjust the stock position.

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**CHARGING AND BOLT CATCH**

**CHARGING AND OPEN DUMMY BOLT**

The charging handle can be pulled and the dummy bolt will remain open.

**RELEASE DUMMY BOLT**

To release bolt, just press the bolt catch.

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**WARNING • CAUTION**

- Be careful not to catch your fingers when operating buttstock functions.

**Pinch Point Warning**

Keep fingers out of bolt area when releasing bolt catch.
**FIRING**

Set the Selector lever to "SEMI" or "AUTO".

- **Semi Auto** (Single Shot) | The gun will fire one shot each time the trigger is pulled.
- **Full Auto** (Automatic Shot) | The gun will fire automatically while the trigger remains pulled.

**WARNING**
- Confirm selector is off SAFE before firing the gun.
- Pulling the trigger while the selector is on SAFE will damage the gun and cause it to malfunction.

**CAUTION**
- Never put your finger on the trigger unless you are ready to shoot.

1. Set the selector lever to Semi-Auto or Full Auto.
2. Pull the trigger.

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**VARIABLE HOP-UP SYSTEM**

**Pinch Point Warning**
- Be careful not to catch your fingers in the dummy bolt.

Your VR16 rifle comes standard with a variable hop-up system. This hop-up system allows lift to be added to the bb's flight thus improving distance performance.

**WARNING - CAUTION**
- Too much hop up may cause BBs to jam. If a jam occurs, immediately dial back the hop up and test fire again. Otherwise, damage and malfunctions will occur with the gun.

- Open bolt to adjust the Hop-Up system.
- Gradually turn the adjustment dial in positive direction to increase hop up effect.
- Turning excessively adversely affects the trajectory. So, stop turning the dial when bullets fly horizontally.
**Improper Hop-Up Setting Troubleshooting**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB's flying upward</td>
<td>Hop-up setting too high.</td>
<td>Gradually return adjustment lever towards normal.</td>
</tr>
<tr>
<td>Short flying distance of bb's (less hop-up effect)</td>
<td>Hop-up setting too high.</td>
<td>Gradually return adjustment lever towards normal.</td>
</tr>
<tr>
<td></td>
<td>Hop-up system contaminated by oil or dirt</td>
<td>Clean using the clearing rod or consult your dealer or VFC for repair.</td>
</tr>
<tr>
<td></td>
<td>Worn or damaged Hop-up system.</td>
<td>Purchase the replacement part at your dealer or from VFC and replace it.</td>
</tr>
<tr>
<td>Can not adjust</td>
<td>Damaged adjustment lever or other parts</td>
<td>Purchase the replacement part at your dealer or from VFC and replace it.</td>
</tr>
<tr>
<td>Frequent BB jamming</td>
<td>Hop-up setting too high.</td>
<td>After the adjustment lever is returned to normal state, and the hop up is released adjust it again.</td>
</tr>
<tr>
<td></td>
<td>Improper or too large sized BB's</td>
<td>Only use quality Airsoft BB’s.</td>
</tr>
<tr>
<td></td>
<td>Dirty Hop-up system</td>
<td>Clean using the clearing rod or consult your dealer or VFC for repair.</td>
</tr>
</tbody>
</table>

**Troubleshooting Clinic**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>No operation at all</td>
<td>Selector lever is set to safety.</td>
<td>Set the selector lever to fire.</td>
</tr>
<tr>
<td></td>
<td>Battery is not charged.</td>
<td>Charge the battery.</td>
</tr>
<tr>
<td></td>
<td>Battery connector is disconnected.</td>
<td>Connect the battery.</td>
</tr>
<tr>
<td></td>
<td>The + and - of battery connector is reversed.</td>
<td>Connect the connector correctly.</td>
</tr>
<tr>
<td></td>
<td>Fuse is blown out.</td>
<td>Replace the fuse.</td>
</tr>
<tr>
<td>Motor is cycling but gun does not fire</td>
<td>BB’s are clogged inside the magazine.</td>
<td>Insert the charging cord into the magazine and move it up and down several times to remove jammed bb’s</td>
</tr>
<tr>
<td></td>
<td>BB’s are clogged in the chamber.</td>
<td>Remove jammed bb’s in chamber using a clearing rod.</td>
</tr>
<tr>
<td></td>
<td>Faulty gear.</td>
<td>Purchase the replacement gear from your dealer or VFC and repair.</td>
</tr>
<tr>
<td>Malfunction of full auto operation (automatic firing)</td>
<td>Insufficient battery power.</td>
<td>Charge the battery.</td>
</tr>
<tr>
<td></td>
<td>Faulty bb feed of connection.</td>
<td>Repair clogging of the magazine.</td>
</tr>
<tr>
<td>Malfunction of semi-auto operation</td>
<td>Poor electrical connection.</td>
<td>Consult your dealer, Umarex USA or VFC for maintenance or repair.</td>
</tr>
<tr>
<td>Malfunction of semi-auto operation (single shot)</td>
<td>Insufficient battery power.</td>
<td>Charge the battery.</td>
</tr>
<tr>
<td></td>
<td>Poor electrical connection.</td>
<td>Consult your dealer, Umarex USA or VFC for maintenance or repair.</td>
</tr>
<tr>
<td>Automatic firing become slow</td>
<td>Insufficient battery power.</td>
<td>Charge the battery.</td>
</tr>
<tr>
<td></td>
<td>Worn or damaged Hop-up system.</td>
<td>Consult your dealer, Umarex USA or VFC for maintenance or repair.</td>
</tr>
<tr>
<td></td>
<td>Worn or damaged piston packing (O-ring)</td>
<td>Replace the chamber packing piston packing(O-ring) and piston assembly.</td>
</tr>
<tr>
<td></td>
<td>Deteriorated piston spring.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Faulty BB (too small or heavy)</td>
<td>Only use quality Airsoft BB’s.</td>
</tr>
<tr>
<td></td>
<td>Shortage of Silicone oil.</td>
<td>Drop a few drops of silicone oil from under the chamber.</td>
</tr>
<tr>
<td></td>
<td>Gear problems caused by excessive blank firing.</td>
<td>Consult your dealer, Umarex USA or VFC for maintenance or repair.</td>
</tr>
<tr>
<td></td>
<td>Overly loud operating noise</td>
<td>Replace the chamber packing piston packing(O-ring) and piston assembly.</td>
</tr>
<tr>
<td></td>
<td>Bullets falling out from barrel end</td>
<td>Only use quality Airsoft BB’s.</td>
</tr>
</tbody>
</table>
MAINTENANCE

- After Operation
  - Point the gun in a safe direction, remove the magazine and fire the gun in semi auto mode to clear the barrel and release the internal spring. Then set the selector to SAFE.
  - Be aware a BB may still be in the barrel after the magazine is removed, or if the magazine is empty.

- Change to Motor and Battery Cautions
  - If the rate of fire noticeably drops, recharge the battery or replace with a fully charged one.
  - Allow adequate time (5-10 minutes) for motor and battery to cool after shooting 500 rounds continuously.

- When BB's Are Clogged
  - If a BB jam occurs, remove the magazine and clear the jam using a cleaning rod.
  - Apply a few drops of silicone oil to the Hop-up service port. If you are unable to clear the jammed BB's, contact your nearest authorized dealer for service.

BARREL CLEANING

Use patch holder to clean the inner barrel.

WARNING - CAUTION

- Never use Mineral oil based lubricants.
- Please read the warning on page 1 before shooting.

NOTE

- Never use Mineral oil based lubricants.
- Please read the warning on page 1 before shooting.
NOTE

SUPREME PRECISION GRADE BBs
For Your Gas Rifle And Pistol
100% Made In Taiwan

CERTIFICATIONS:
Biodegradable Test Report ISO 14855-1 in connection with DIN EN 13432
Certified EN71 part 3:2013
Compliant with ASTM D-6400-99 “Standard Specifications for Compostable Plastics”