

WARNING: Airsoft guns are not toys. Misuse or careless use may cause serious injury, especially to the eye. Eye protection designed for airsoft guns must be worn by the user and any person in range. May be dangerous up to 100 yds (91.44m). Read owner's manual before using.

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 it 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.

Buyer and user have the duty to obey all laws about the use and ownership of this airsoft gun.

WARNING: This product may contain one or more chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

Your airsoft gun was designed to work with Valken branded airsoft ammunition. Use of other ammunition may cause your gun to malfunction and may void your warranty.

GUIDELINES

1. Handle and operate the airsoft gun safely.
2. Select safe and proper targets.
3. Care for and maintain the gun properly.
4. Store the gun unloaded in a safe and proper manner, and check to see that the gun is unloaded when removed from storage or received from another person.
5. Treat every airsoft gun as if it were loaded. Using a barrel cover is recommended.
6. Always wear eye protection designed for airsoft guns when handling or shooting or in range of any airsoft gun, and wear them over prescription glasses.
7. Keep your finger off the trigger until ready to shoot.
8. Never point the airsoft gun at anything you do not wish to shoot.
9. Keep the airsoft gun on safe until ready to shoot.
10. Avoid ricochet. Never shoot at a hard or flat surface or at water.
11. Backstops should be inspected for wear before and after each use. Discontinue use if the backstop surface shows signs of failure. Since backstop surfaces eventually fail, always place the backstop in a location that will be safe should the backstop fail. Discontinue the use of a backstop if the projectile rebounds or ricochets.
12. Perform routine inspection and maintenance, including:
 - a. The airsoft gun was modified internally. Modification of the gun's internal mechanisms may cause it to malfunction. Such tampering with an airsoft gun may make it unsafe to use.
 - b. The airsoft gun suddenly operates differently. Any change in the performance, such as lowered trigger force and shortened trigger travel, grinding, or severely lowered FPS indicates possible wear and that such guns should be inspected, replaced, or properly repaired. Repairs should only be performed by qualified personnel.
 - c. If the airsoft gun is dropped or externally damaged. Check any gun that has been dropped to ensure that its function has not been affected.
 - d. Information shall be included to indicate how to obtain service and locate authorized repair shops.

VALKEN ONE YEAR WARRANTY

Your Valken AEG is warranted to be free of defects in materials and workmanship for one year to the original owner. This warranty does not cover damages due to fair wear and tear, failure to provide routine maintenance, and does not include batteries or accessories. A copy of the original proof of purchase clearly stating the date of purchase is required to make any claim under this warranty. This warranty lasts for twelve months from the date of purchase and applies to the original purchaser, and is not transferable. In the event of a defect under this warranty, we will, at our option, repair or replace the product for the first 90 days provided our inspection indicates that an original defect exists: after the initial 90 days and up to twelve months, Valken will supply replacement parts to the original purchaser via surface mail at no charge. Valken reserves the right to replace any product which is no longer available with a product of comparable value and function. If Valken determines the repair is not covered under the warranty guidelines, there could be a charge to you for the cost of the repair and/or any required parts. This is a limited warranty and does not cover damages caused by misuse, improper handling or installation or maintenance provided by someone other than Valken Incorporated. Any modifications made to this product may result in this warranty being null and void. This limited warranty does not include consequential damages, incidental damages, or incidental expenses, including damage to property or any other expense. Valken disclaims any implied warranties. Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on implied warranties so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state and country to country.

AIRSOFT SAFETY TAPE WARNING



Valken Incorporated is committed to providing our customers the very best Airsoft products in the marketplace. Recent government legislation has raised questions related to the appearance of air soft guns with regard to realism and potential confusion of non-game participants related to personal danger. This includes law enforcement officials who always deserve our utmost respect and support for their personal sacrifice to maintain the public safety.

As an airsoft gun owner it is your responsibility to operate your airsoft gun in a safe manner. This includes ensuring that non-game participants are not misinformed as to any potential danger to them or others. You are also required to ensure your airsoft gun meets all local, state or federal regulations. Never modify your airsoft gun so that it does not meet these requirements. Breach of any of these regulations could result in severe penalties. Anytime you see anyone who is not a game participant entering the field of play its best to stop the game and set down all airsoft guns slowly so to indicate their is no danger to uninvolved individuals. Never brandish or threaten anyone with an airsoft gun in any way. If you see law enforcement officials coming toward your playing area, you should immediately suspend the game and set you airsoft guns on the ground in a slow non-threatening manner.

To assist you in meeting any special marking requirements in your state we have included a special marking tape which can be easily applied to your product to ensure it meets the requirements. We have also included images of the required marking for airsoft guns used within California (after Dec 31st, 2015) and New York State. Please review these images and mark your airsoft gun so it resembles the images provided. The amount of tape provided is more than three times the amount required to complete this task. It is recommended you store the unused tape in a dry safe location for future use if needed. You should also review the various legal requirements for airsoft guns online on the appropriate government website. Always play safe and smart!

CALIFORNIA REQUIRED MARKINGS



Apply the orange safety tape in the highlighted areas if you are in California.

NEW YORK REQUIRED MARKINGS



Apply the orange safety tape in the highlighted areas if you are in New York.

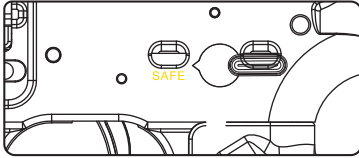
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REQUIRED EQUIPMENT (SOLD SEPARATELY)

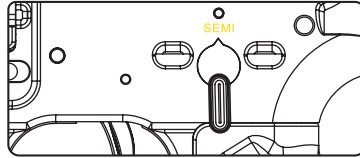


- 7.4v 250mAh LiPo battery with E-flite/JST connector. We recommend the Valken 7.4v 250mAh LiPo Battery with JST connector #63019.
- Remote hose line. We recommend Valken SLP QD Air Rig 36" Hose Only #81914.
- LPR Regulator*. We recommend Valken Ultra Reg LP #79577.
- Compressed Air System **. We recommend Valken GSTN 48/3000 Tank DOT-TC #49495.

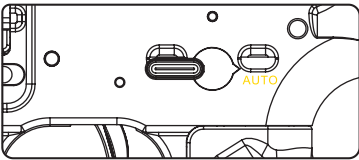
SAFETY AND FIRE SELECTOR



Safety Setting: The trigger can not be pulled. Always set the lever to SAFE position when the V12 is not in use.



Semi Auto: Single shot. The V12 will fire one shot each time the trigger is pulled.



Full Auto: Automatic shot. The V12 will fire continuously while the trigger is depressed.

WARNING: Always use the proper eye protection and use the safety when not in play. Using a barrel cover is recommended. Keep your finger off the trigger until ready to shoot.

USAGE

- Assure the air source and battery are connected.
- Flip the select fire switch from SAFE to either SEMI or AUTO.
- A blue light will flash, when the gun is on.
- Flip the Select Fire Switch back to SAFE to turn OFF.

PROGRAMMING

- Refer to V12 Programming section.

WARNING: *Recommended LPR Operating pressure range is 80-120 PSI ** Do not use liquid CO2 or HP (High Pressure Output) Tanks.

If applicable, remove the stock. Remove the upper and lower receivers, OEM gearbox, motor, and wire harness.

V12 INSTALLATION LOWER RECEIVER

- Remove the airline quick connector from the V12 Engine.
- Place the V12 engine into the lower receiver.
- Move and align the external selector to line up with the V12 selector plate.
- Check that the rear body pin and flora pin hole are aligned, then install the rear body pin.
- Install the motor grip, then install the (2) screws that mount the grip to the V12 engine.
- Before continuing with the rest of the installation, refer to "Test : Firing modes."

TEST FIRING MODES










- Connect the V12 Engine to a 7.4v 250mAh LiPo Battery with and E-Flight/JST connector.
- "SAFE" position: Pull the trigger to make sure that there is no activation of the solenoid.
- "SEMI" position: The LED light will flash blue once, pull the trigger and you should hear the solenoid click.
- "FULL or AUTO" position: Hold the trigger down and you should hear rapid clicking.
- If "SAFE", "SEMI", and "FULL" all function properly, continue with the installation.

TEST FIRE

- Place the selector into "SAFE."
- Make sure rifle is not loaded.
- Point rifle in a safe direction.
- Connect the battery and air source.
- Test the V12 cycle and airflow.

To view or edit a setting make sure the desired color is showing on the LED. Then pull and hold the trigger until the LED turns off. When you release the trigger, the current value will blink. Each blue blink is multiplier of 10 and each red blink is multiplier of 1, some settings are in milliseconds and some are fractions 1/10th of a millisecond. For example, if you check the max rate of fire setting and the LED blinks blue 2 times and red 4 times, the current value is 24 bps. You can halt the current blinking value by pulling the trigger one time. This will not count towards a new setting. Immediately after the LED stops blinking there is a 3 second window to begin entering a new value (if desired) by using the trigger. The selector on the gun allows you to enter a new value in increments of 10 or 1 based on it's position. If the selector is on SEMI, each trigger pull blinks the LED red and counts for a multiplier of 10. If the selector is on AUTO, each trigger pull blinks the LED blue and counts for a multiplier of 1. The last setting adjusted is remembered when you exit programming, so that you don't have to cycle back to it each time you enter programming mode.

1. Set the select fire switch to "SAFE."
2. Hold trigger down and change the select fire switch to "SEMI."
3. Release trigger once green LED turns on.
4. Pull trigger to cycle through 8 programming options. Each color adjusts the following settings.

- | | | | |
|---|-------------------------------------|---|------------------------------------|
|  | 1. Red - Rate of Fire Delay |  | 2. Green - Sec. Fire Selector Mode |
|  | 3. Blue - Sniper (Closed Bolt Mode) |  | 4. Purple -Dynamic timing |
|  | 5. Aqua - Poppet dwell |  | 6. Flash red - bolt dwell |
|  | 7. Flash green - return to battery |  | 8. Flash blue - trigger debounce |
|  | 9. Flash purple - settings lock | | |

5. Pull the trigger until you are on the desired color/mode.
6. Pull and hold the trigger until the light goes out.
7. Release trigger and the LED will flash the current setting of the selected mode.

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1. Red - Rate of Fire Delay

1-60 rounds per second. AUTO Selector multiplier of 10. SEMI Selector multiplier of 1. The setting is linked to setting 4 (Timing Mode). In manual mode the rate of fire will not exceed the determined settings of 5, 6, & 7. In dynamic mode the rate of fire will auto tune all settings to achieve your desired rate of fire. Range 1-60 bps (Factory Default 20bps.)

AUTO	10	20	30	40	50	60	ms
SEMI	1	2	3	4	5	6	ms

2. Green - Secondary fire selector mode

This setting modifies the AUTO position on the rifle. 1 is Semi. 2 is Full-Auto (default). 3-9 are burst. 10 is Binary Trigger*. 15 is Full-Auto on both SEMI and AUTO. *The Binary Trigger is a function that fires one round on the trigger pull, and fires one round on trigger release. Please note the Binary has a safety mechanic where holding the trigger for more than 1 second won't fire on release or when the selector is moved from the AUTO to SEMI position. Burst modes will only continue to fire the burst while the trigger is held down. (Factory Default 2, Full-Auto.)

TRIGGERPULL 1.SEMI 2.AUTO 3-9.BURST 10.BINARY
15.FULL-AUTO on BOTH SEMI AND AUTO

3. Blue - Sniper (Closed Bolt Mode)

1 Closed Bolt Disabled (default)
 2 Closed Bolt Enabled

This mode controls the order in the bolt cycles and the poppet firing. *Sniper Mode fires the poppet first then cycles the bolt chambering the next round. *when inserting a fresh magazine in closed bolt (Sniper) mode the first shot will be a dry fire because it is chambering the first round. (Factory Setting 1, Closed Bolt Disabled)

4. Purple - Dynamic Timing

1 is Manual
 2 is Dynamic (default)

Dynamic timing cycles the gun based on the chosen rate of fire and the poppet dwell. Manual timing uses the values in the bolt dwell and return to battery timing, along with the poppet dwell, to cycle the gun. Manual timing will ignore the chosen rate of fire if the combined values result in a slower rate of fire than the max rate of fire setting. (Factory Setting 2, dynamic)

5. Aqua - Poppet dwell

The amount of time current is applied to the poppet to fire or remain open. This setting uses 1 milliseconds and 1/10th of a millisecond increments.

AUTO = 1ms increments

SEMI = 0.1ms increments

Range is 0.1-10ms

(Factory Setting 6ms)

6. Flash red - bolt dwell

This setting is only recognized when manual timing is enabled. Sets the amount of time for the bolt to open during the firing cycle.

AUTO = Multiplier of 10ms

SEMI = Multiplier of 1ms

Range 1-70ms

AUTO	10	20	30	40	50	60	ms
SEMI	1	2	3	4	5	6	ms

7. Flash green - return to battery

This setting is only recognized when manual timing is enabled. Sets the amount of time for the bolt to close during the firing cycle.

AUTO = Multiplier of 10ms

SEMI = Multiplier of 1ms

Range 1-70ms

AUTO	10	20	30	40	50	60	ms
SEMI	1	2	3	4	5	6	ms

8. Flash blue - trigger debounce

Trigger debounce is a delay setting for recognizing trigger input during firing.

Increments of 0.5 milliseconds.

Range of 1-70 (0.5 - 35 ms).

(Factory Default is 20 =10.0ms)

9. Flash purple - settings lock

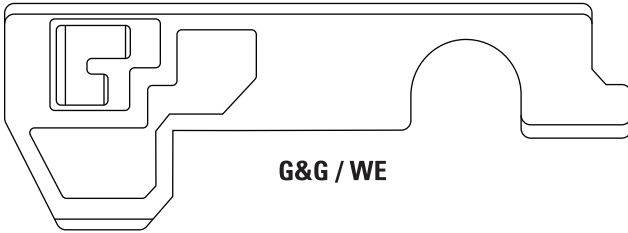
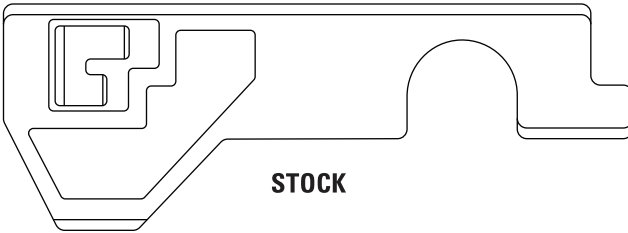
The Program Lock-Out feature for various rule sets. To activate pull and hold trigger for 10 seconds. Red light will flash once. All settings will remain locked even if the power is turned off. To exit lock-out:

1. Set Firing Mode selector to "SAFE"
2. Pull and hold down the trigger then move the Select Fire Switch to "SEMI" then release the trigger.
3. Pull and hold down the trigger for 2 minutes until the LED blinks green twice.

*Set ROF and Select Fire Mode **BEFORE** activating program-lock out.

1. Set Select Fire Switch to "SAFE"
2. Pull and hold the trigger and move the Select Fire Switch to "SEMI"
3. Continue to hold the trigger until the green light is solid, then release trigger.
4. While the green light is on, pull and hold the trigger for 10 seconds until after all (9) LED colors cycle.

CHANGING FACTORY SELECTOR PLATE



The V-12 now comes with a Stock Plate Pre-installed that is compatible with a majority of AR/V2 bodies, and we now include a second G&G/WE plate for your convenience. Please Refer to the above images for reference. Before changing out your selector plate you must disassemble the engine and remove the FCU. If you attempt to remove the plate without first removing the FCU you will damage the board and void your warranty.