GEN 2 PREMIUM FCU
OWNER'S MANUAL
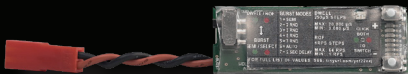
WOLVERINE AIRSOFT

Table of Contents

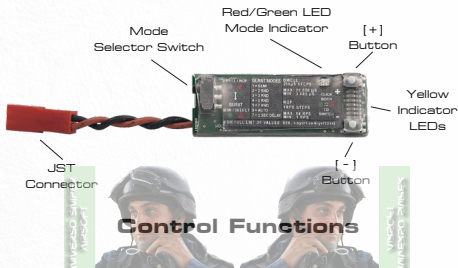## Don't Forget to Register Your Warranty!

Your GEN 2 PREMIUM FCU is backed by Wolverine Airsoft's limited warranty. Scan the QR code or visit www.wolverineairsoft.com/warranty to read our full warranty and register your product.

* If you purchased your FCU with an engine, you only need to register your engine kit.

Getting Started

Your GEN 2 PREMIUM FCU will allow you to unlock the potential of your Wolverine Airsoft HPA engine. Before you begin, please see the diagram below and familiarize yourself with each component.

Mode Selector Switch

Red/Green LED Mode Indicator

[+] Button

Yellow Indicator LEDs

JST Connector

[-] Button

Control Functions

Press and hold the [+] and [-] buttons for 5 seconds to activate the settings mode. The Mode Selector Switch selects whether the user is programming Dwell and ROF or if they are setting the burst modes for semi and select fire. Press [+] and [-] at the same time again to toggle the LED Mode Indicator between red and green. Pressing and releasing the [+] and [-] buttons will increase or decrease the selected setting. Settings mode will time out after 2 minutes and LED's will be turned off to save battery.

Selector Switch	Green LED	Red LED
Up	Dwell	ROF
Down	Burst (Semi Auto)	Burst (Select Fire)

Burst Programming

Burst is the number of rounds that is fired when the trigger is pulled. Different values can be set for both Semi Auto and Select Fire modes.

1. Enter programming mode by holding down both [+] and [-] buttons for 5 seconds.

2. Switch the Mode Selector Switch down to "Burst" mode.

3. Press [+] or [-] simultaneously to switch between Semi Auto [Green] or Select Fire [Red] modes.

4. Press [+] or [-] to select the desired setting indicated below.

Default Values

Semi Auto: 1
Select Fire: 6

| Option Number	Value
7	DMR Mode [Semi-auto with 2 second delay between shots]
6	Full-auto
5	7-Round Burst
4	5-Round Burst
3	3-Round Burst
2	2-Round Burst
1	Single Round

Rate of Fire Programming

Rate of fire is the number of rounds that fire each second when in burst or full-auto mode.

1. Enter programming mode by holding down both [+] and [-] buttons for 5 seconds.

2. Switch the Mode Selector Switch up to "Dwell/ROF" mode.

3. Press [+] or [-] simultaneously to switch to **ROF mode [Red]**.

4. Press [+] or [-] to select the desired setting indicated below to increase or decrease the rate of fire. See the table on page 8 for exact values for each setting.

Understanding the LEDs

When setting ROF or Dwell, the stack of 7 yellow LED's functions as a status bar which progressively fills as the set value increases. As you increase the value, an LED will flash slowly, then fast, and then the next LED will begin flashing. Once LED 7 is reached, the bottom LED will turn solid and then process will repeat until all LEDs are solid. See the table on page 8-9 for exact values for each setting.
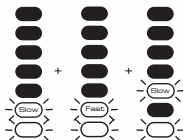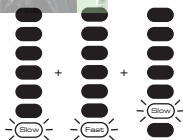
Tuning

Tuning is the process of adjusting the regulator air pressure and the engine dwell to achieve maximum performance. The dwell is a measurement of the length of time that the solenoid valve is opened, allowing air to flow from the air tank to propel the BB. For maximum efficiency the dwell time must be set precisely to provide just enough air to carry the BB to the end of the barrel. If the dwell time is too high, air will be wasted out the end of the barrel with each shot. If the dwell time is too low, velocity will be inconsistent, causing inaccuracy.

Dwell Programming

1. Connect your high pressure air [HPA] tank and regulator.

2. Set regulator pressure, checking with a chronograph to achieve desired velocity. NEVER EXCEED YOUR ENGINE'S SPECIFIED OPERATING PRESSURE. DOING SO MAY DAMAGE TO THE PRODUCT OR CAUSE SERIOUS INJURY.

3. Enter programming mode by holding down both [+] and [-] buttons for 5 seconds.

4. Switch the Mode Selector Switch up to "Dwell/ROF" mode.

5. Press [+] or [-] simultaneously to switch between to the **Dwell mode [Green]**.

6. Press [+] or [-] to increase or decrease the Dwell. [See the table on page 9 for exact values for each setting.]

INFERNO, HYDRA and SMP

7. Check that increasing the dwell setting does not increase the velocity. If it does increase the dwell past the point where the velocity stops increasing, and then set your air pressure to achieve the desired velocity.

8. To achieve maximum air efficiency, turn the dwell time down as far as possible until the velocity begins to drop. This is the precise point at which you are providing just enough air through to carry the BB to the end of the barrel. If you don't have a chronograph to do this step, you can also watch the flight of the BB and listen to the sound of the gun firing. When you see a reduction in range or velocity and the muzzle crack becomes muffled, you have turned the dwell down too far and you are no longer providing enough air. Turn the dwell back up just enough to achieve the desired velocity.

REAPER

7. Set the dwell to max.

8. Reduce the dwell to the minimum value which allows reliable feeding.

ROF Values [Rounds Per Second]

		Flashing LEDs [Slow / Fast]							
		0	1	2	3	4	5	6	7
Solid LEDs	0		1/2	3/4	5/6	7/8	9/10	11/12	13/14
	1	15		16/17	18/19	20/21	22/23	24/25	26/27
	2	28			29/30	31/32	33/34	35/36	37/38
	3	39				40/41	42/43	44/45	46/47
	4	48					49/50	51/52	53/54
	5	55						56/57	58/59
	6	60							61/62
	7	63							

Dwell Values [Milliseconds]

		Flashing LEDs [Slow / Fast]							
		0	1	2	3	4	5	6	7
Solid LEDs	0		3/3.25	3.5/3.75	4/4.25	4.5/4.75	5/5.25	5.5/5.75	6/6.25
	1	6.5		6.75/7	7.25/7.5	7.75/8	8.25/8.5	8.75/9	9.25/9.5
	2	9.75			10/10.25	10.5/10.75	11/11.25	11.5/11.75	12/12.25
	3	12.5				12.75/13	13.25/13.5	13.75/14	14.25/14.5
	4	14.75					15/15.25	15.5/15.75	16/16.25
	5	16.5						16.75/17	17.25/17.5
	6	17.75							18/19
	7	20							

Troubleshooting

Symptom

The LED lights flash several times and the FCU powers off.

Solution

The Gen 2 Premium FCU has built-in short detection. When a short is detected, the LED lights will flash several times and the board will power off. Please disconnect the battery and find/correct the source of the short before powering the FCU back on.

Need professional help?

To find a retailer close to you visit:
www.wolverineairsoft.com/dealers