

RAIDEN Product Function Specification

Product Code: BED02 (BOLT RAIDEN)

Product Name: RAIDEN Multifunction Trigger Device

Product function description

Features:

- ① Suitable for Version 2 Gearbox
- ② Due to wiring considerations, there will be two versions of the rear outlet and the front outlet.

- ③ Limited to below M130 spring
- ④ Motor: Recoil High Torque Motor
- ⑤ Battery: Li-Poly 2S or 3S (7.4V or 11.1V), Li-Fe 3S (9.9V) above 850mAh / above 15C

- ⑥ Working temperature, ambient temperature -5 °C ~ 40 °C

It is not guaranteed to work normally if it exceeds the working temperature range

- ⑦ In the non-powered condition, temperature range: -30 °C to 80 °C

- ⑧ Software can be updated through the battery connector (Under Development)

- ⑨ During 3 rounds and auto firing, the piston rod must be released to the front position. To avoid the spring is compressed and degraded for a long time.

- ⑩ Enable Semi Pre-cocking function.

- ⑪ During 3-burst and auto firing, the piston rod must be released to the front position to avoid the spring being compressed and degraded for a long time.

- ⑫ Infrared detection chip to detect if there is a magazine. Replica cannot fire when there is no magazine. (Software or hardware reserved disable magazine detection setup to prevent the gun from falling when the chip is broken)

- ⑬ 30shots (Mode 2) and 50shots (Mode 3) selectable, terminate power after reached the number of shots selected. (Simulate real gun's "no shots when no bullets" function.)

- ⑭ 4 mode settings (mode can be memorized)

MODE	Condition			Motor Sounding	Other
1	SAFE	SEMI	AUTO	1 beep	
2	SAFE	SEMI	3-BURST	2 beeps	Stop after 30 shots, reset by reload
3	SAFE	3-BURST	AUTO	3 beeps	Stop after 30 shots, reset by reload
4	SAFE	Pre-cocking	Single Released	4 beeps	

1. In any mode, switch the selector to the semi position. When the trigger is pressed for 5 seconds, the motor will make a vibration sound. After the ringing is completed, release the trigger to complete the mode setting. (It will fire when pressing the trigger, please pay attention to safety)

2. After holding the trigger for 5 seconds, the motor will emit 1 beep sound

(MODE 1) in succession , and 2 beeps (MODE 2) after 2 seconds and 3 beeps

(MODE 3) after 2 seconds, and so on

- ① Low voltage protection: when the voltage of 3 strings of li-poly batteries is lower than 9V, or the voltage of 2 strings of li-poly batteries is lower than 6V, whether in semi or Press the trigger at the auto position, and the motor intermittently vibrates 4 times, which indicates low battery voltage

- ② Overcurrent protection: When the motor is stuck or short-circuited, 3-BURST function will automatically turn off the MOSFET to prevent MOSFET burned out

- ③ Automatic power saving function after 30 minutes of inactivity

- ④ To wake up from hibernation in any mode, you must switch to safe and then switch back to semi or auto to enter normal work.

Notes for use:

- ① When the ambient temperature changes too fast, such as when entering from indoor to outdoor in winter, single shots may turn into 2 shots, or pre-cocking may not be pulled accurately. In this case, make 5 to 10 shots then it will become stable. After stabilization, switch the selector to safe and the multi-function brake will save the learned parameters

- ② Under extremely low temperature environment, the mechanical lubrication will be deteriorated, also the motor's efficiency will be reduced, so the progress speed will be slower than normal temperature. The current loss will also increase, which is a reasonable physical phenomenon

- ③ During assembly, the gear oil should not fill the gap between the gears. Excessive lubricant sprayed on the infrared sensor may cause the gear signal detection incorrect and pre-cocking or triple-shot is not accurate

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Problem solving:

	Indicator	Action	Solution
LED	Fast Flash once	Switch Mode to leave power saving state From SAVE mode to Semi or Auto	Switch Mode to leave power saving state From SAVE mode to Semi or Auto
Motor	The motor is not running	Short circuit protection (instantaneous current is greater than 100A)	Please check if the line is shorted or the motor gear is stuck.
	Beep 1	1. The battery is placed till low voltage (not on Save Mode)  2. Low voltage detected during bursting  3. Overcurrent protection detected during firing (The current lasts for 0.13 seconds and is greater than 45A)  (3 strings are less than 8.6V, 2 strings are less than 6.2V)	1. Remove and charge the battery  2. Please remove the battery and charge it, or replace the battery if the battery performance declines.  3. The load is too large, please check if insufficient gear lubrication or modified spring or motor performance decline
	Beep 2	1. 2 strings of batteries were detected on the battery  2. Detecting gear errors during motor operation	1. This is to tell the user that the battery connected is two cells. If the battery is connected to three cells, please check if the battery is low power or has a cell damaged.  2. Installation error can not detect the gear Or the optical component is shielded (eg lubricant)
	Beep 3	1. 3 strings of batteries were detected on the battery 2. When bullet counting function is on, the number of shooting bullets reaches the set value	1. This is to tell the user that the battery connected is a three-string battery. 2. Remove the magazine and reload it.
	Beep 4	1. Detect that the battery voltage is too high when connect the battery (voltage is greater than 13.6V)  2. Detect battery low voltage when firing	1. Please check if the battery is abnormal.  2. Please charge the battery or degradation battery performance  3. Please confirm if the magazine is installed and confirm that the reflective sticker is in the correct position.
	Beep 5	The battery is connected but the firmware is not activated.	The switch will be fully inspected at the factory, and the Bee five sounds indicate that there is a missing factory test. Please return it directly to the factory for retesting
	Beep 6	Detect that the trigger is buckled when plug the battery on	Do not hold the trigger when the battery is connected to avoid accidental hits. Please confirm that the trigger is in the correct position, remove the battery, and then connect the battery after 10 seconds.

電子板機說明書

產品型號: BED02 (BOLT RAIDEN)

產品英文名稱: RAIDEN Multifunction Trigger Device

產品中文名稱: 電子板機

產品功能說明

特色:

- ① 適用於2代 Box

- ② 由於布線考量將會有後出線與前出線2個版本.

- ③ 限用彈簧 M130以下

- ④ 馬達:後座力專用馬達

- ⑤ 電池 :Li-Poly 2S or 3S(7.4V or 11.1 V), Li-Fe 3S(9.9V) 850mAh 以上 /15C 以上.

- ⑥ 工作溫度:環境溫度攝氏溫度-5度~40度.超過工作溫度範圍不保證能正常工作.

- ⑦ 在未通電的儲存溫度範圍:攝氏溫度-30~80度C.

- ⑧ 可透過電池接頭更新軟體.

- ⑨ 具備單發Pre-cock功能.

- ⑩ 具備3連發功能及AUTO擊發時活塞齒棒可復歸前端原點,以避免彈簧長期壓縮變形

- ⑪ 紅外線偵測電路板.偵測是否有彈匣.當偵測沒有彈匣時不能擊發.(軟體或硬體預

留disable magazine detection setup,以防止當開關損壞時槍枝無法動作)

- ⑫ 可設定擊發彈數.到達設定發數即切斷電源(模擬實槍無彈不擊發)

- ⑬ 4種模式設定(mode可記憶.出廠預設為modeA)

MODE	Condition			Motor Sounding	其他功能
1	SAFE	SEMI	AUTO	1響聲	
2	SAFE	SEMI	3-BURST	2響聲	單發30發卸斷電. reset byreload
3	SAFE	3-BURST	AUTO	3響聲	單發30發卸斷電. reset byreload
4	SAFE	單發預拉	單發釋放	4響聲	

1. 在任何模式之下.將mode開關切换到semi位置.按下板機持續5秒時馬達會發出震動聲響.當聲響結束後放開板機即完成mod設定(按下板機時會擊發請注意安全)

2. 持續按住板機5秒後馬達會依續發出1響聲(MOD1).間隔2秒後發出2響聲(MODE2).間隔2秒後發出3響聲(MODE3).以此類推.

- ① 低電壓保護.當3串li-poly電池電壓低於V或者2串lpoly電池電壓低於6V.不論是在semi或auto的位置按下板機.則馬達間歇性震動4次表示為電池低電壓.

- ② 過電流保護.當馬達發生卡死或短路現象.三連發多功能電閥將自動關閉MOSFET以防止MOSFET 燒毀.

- ③ 閒置30分鐘自動休眠省電功能.

- ④ 在任何 mode下進入休眠.必須切到safe再切回semi或auto即進入正常工作.

使用注意事項:

- ① 當環境溫度變化過快.比如冬天從戶外進入室內時.可能會產生單發變2發或者單發預拉不確實的情況.只要單發多擊發5~10發後就會穩定.穩定後將模式切換鈕切到saf後.多功能電閥就會儲存學習後的參數.

- ② 在極低溫環境下.機械潤滑度會變差.馬達運轉效能也會降低.所以運轉速度將會比正常溫度慢.電流耗損也會變大.這屬於合理的物理現象.

- ③ 廠內組裝時齒輪上油不可填滿齒輪間的縫隙.過多的潤滑油噴濺到紅外線sensor可能導致齒輪信號偵測不良而發生單發預拉或三連發不確實.

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Problem solving:

	指示方式	動作	解決方法
LED	快閃一下	切換Mode. 從SAVE 切到 Semi 或 Auto 離開後電狀態	此功能為表示工作狀態正常
Motor	馬達沒運轉	短路保護(瞬間電流大於100A)	請檢查線路是否短路. 或者馬達齒輪卡死.
	Beep 1響	1.電池放到低電壓(沒有切到Save Mode)  2.運轉過程中偵測到低電壓  3.擊發過程中偵測到過電流保護  (電流持續0.13秒大於45A) (3串電壓小於 8.6V.2串小於6.2V)	1.將電池移除並且充電  2.請將電池移除並且充電. 或者電池性能衰退請更換電池  3.負載過大. 請檢查是否有改裝彈簧. 或者齒輪潤滑不足. 或者馬達性能衰退
	Beep 2響	1.電池接上偵測到2 串電池 2.馬達運轉過程中偵測齒輪錯誤	1.同左 2.安裝誤差導致無法偵測齒輪或者光學元件被遮蔽(例如潤滑油)
	Beep 3響	1.電池接上偵測到3 串電池 2.自動彈簧啟動功能.射擊子彈數量達到設定值	1.同左 2.解除彈簧. 再重新裝上
	Beep 4響	1.電池接上偵測到電池電壓過高 (電壓大於 13.6V) 2.擊發偵測電池低電壓 (3串電壓小於 8.6V.2串小於6.2V) 3.自動彈簧偵測.沒有偵測到彈簧	1.請檢測電池是否異常 2.請將電池充電或者電池性能衰退 3.請確認彈簧是否裝上. 並且確認反射點線在正確位置
	Beep 5響	電池接上偵測到軟體程式沒有裝通	同左
	Beep 6響	電池接上偵測到板機被扣住	接上電池時請勿將板機扣住.避免誤擊.請確認板機在正確位置後移除電池. 10秒後再接上電池