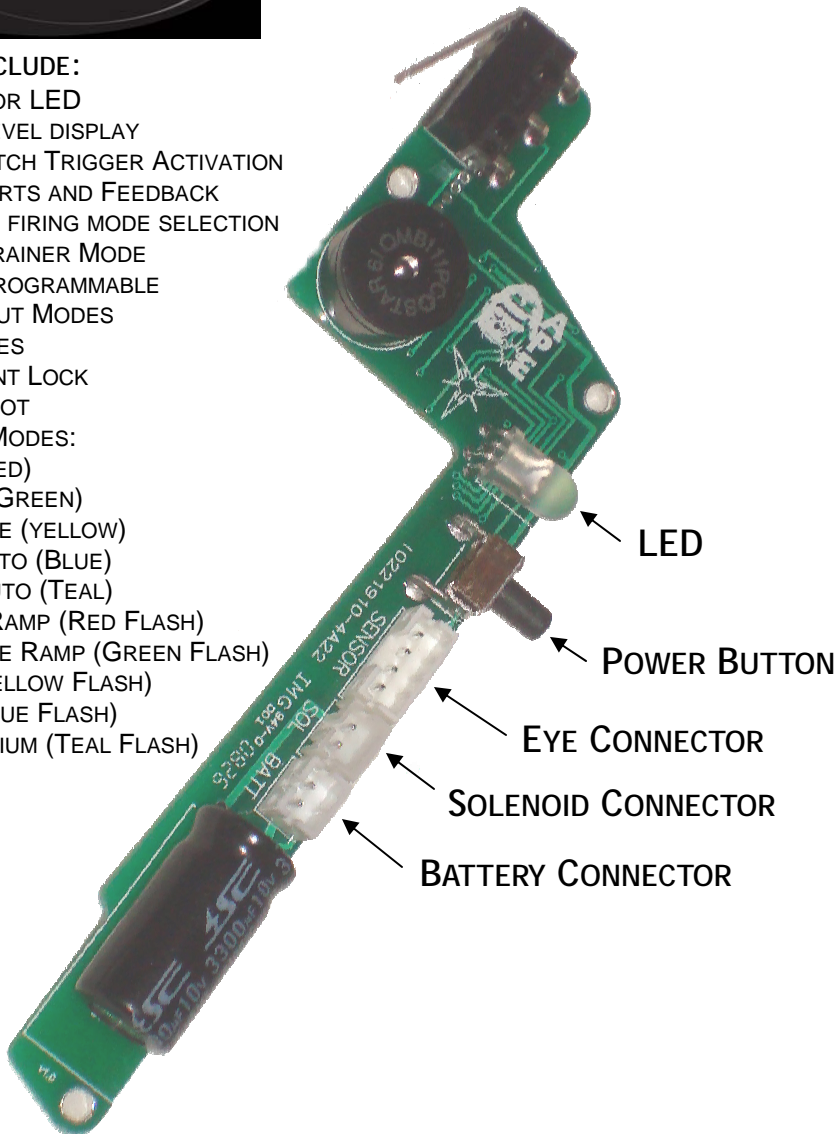




Dangerous Power G3/IQ Upgrade Board

FEATURES INCLUDE:

- ❑ MULTI COLOR LED
- ❑ BATTERY LEVEL DISPLAY
- ❑ MICRO SWITCH TRIGGER ACTIVATION
- ❑ SOUND ALERTS AND FEEDBACK
- ❑ ONE TOUCH FIRING MODE SELECTION
- ❑ TRIGGER TRAINER MODE
- ❑ TRIGGER PROGRAMMABLE
- ❑ 12 BREAKOUT MODES
- ❑ 5 EYE MODES
- ❑ TOURNAMENT LOCK
- ❑ FORCED SHOT
- ❑ 10 FIRING MODES:
 - SEMI (RED)
 - BURST (GREEN)
 - REACTIVE (YELLOW)
 - FULL AUTO (BLUE)
 - STEP AUTO (TEAL)
 - BURST RAMP (RED FLASH)
 - REACTIVE RAMP (GREEN FLASH)
 - PSP (YELLOW FLASH)
 - NXL (BLUE FLASH)
 - MILLENNIUM (TEAL FLASH)



POWER ON/OFF

Press the Power button to activate the marker. While pressed the battery level is displayed (Green = above 8.5V, Yellow = above 7.5V, Red = below 7.5V). If a ball is present the marker starts in 1st programmed Firing Mode. If the breech is empty, the Empty Breech alert is displayed (Solid Purple). Tap the power button to start the marker with Eyes Off, or load the breech with paint. To turn the marker OFF, press/hold the power button for 3 seconds.

EYE CONTROL AND STATUS

During firing operations, press/hold the Power Button for 1 second to toggle the Eyes On or Off. The Eye status is as follows: (Solid Purple = Empty Breech / Slow Purple Flash = Eyes Off / Fast Purple Flash = iFault Detected).

MARKER CONTROL SETPOINTS

Feature	LED (Multicolor)	Default Value	Min/Max Value
MGRF - Eyes On	Red	13	5/36*
MGRF - Eyes Off	Red Flash	10	5/20
BPS Fine Tune	Red Flicker	1	1/10
Tournament Mode	Green	8	1/10
Tournament Mode Ramp Point	Green Flash	3	1/8
Breakout Mode	Green Flicker	13	1/13
Trigger Debounce (ms)	Yellow	10	1/20
Breach Delay (ms)	Yellow Flash	3	1/30
Eye Mode	Yellow Flicker	2	1/5
Solenoid Dwell (ms)	Blue	15	1/30
ABS Dwell (ms)	Blue Flash	8	1/8
Bolt Return Delay (ms)	Blue Flicker	25	1/40
Burst Rounds	Purple	3	2/5
Reactive Pull Rounds	Purple Flash	1	1/5
Reactive Release Rounds	Purple Flicker	1	1/5
Burst Ramping Point	Teal	4	2/8
Reactive Ramping Point	Teal Flash	4	2/8
Step Auto Rate	Teal Flicker	3	1/10
Firing Mode Group 1 Enable/Disable	White	31	1/32
Firing Mode Group 2 Enable/Disable	White Flash	31	1/32
Auto Shut Off Timer	White Flicker	1	1/20

* A MGRF EYE ON SETTING OF 36 UNCAPS THE FIRING RATE

FIRING MODE CONTROL

Tap the Power button to select the next mode. No mode changing if Eyes Off or empty breech.

PROGRAMMING MODE

To enter Programming Mode, press and hold the trigger while powering on the marker. Release the trigger. Use the trigger to scroll to the Setpoint you wish to change, then tap the Power button. The LED will blink the current value. Tap the Power button again to indicate you wish to change the value. Use trigger pulls to enter the value. Tap the Power button once more to store the new value. The LED will then blink the new stored value. Scroll to another setpoint with the trigger, or exit programming mode via power off.

TRIGGER TRAINER MODE

To enter Trigger Trainer Mode, power the marker on and Hold the button for 5 seconds. (LED will faintly flicker WHITE). To use TTM - Pull the trigger as fast as you can. Your per second pull rate is displayed in real time as you pull (Blue - 1 to 5 pulls / Green - 6 to 10 pulls / Yellow - 11 to 15 pulls / Red - 16 to 20 pulls). When the trigger is released, the LED will first blink blue with the average pull rate you achieved, then blink red with the max pull rate you achieved. To exit TTM, power off.

SETPOINT DEFAULT

While in programming mode, pull and hold the trigger for 5 seconds to reset all setpoints to default.

MARKER CONTROL SETPOINT DEFINITIONS

MGRF Eyes ON

This sets the "Eyes On" Max Global Rate of Fire (in Balls per second) of all firing modes.

MGRF Eyes OFF

This sets the "Eyes OFF" Max Global Rate of Fire (in Balls per second) of all firing modes.

BPS Fine Tune

This adds a fractional bps to the MGRF Setting. For example a value of 1 would add .1 to the MGRF.

Tournament Mode

Determines what mode will be locked in for Tournament play when the Tourney Mode Lock Switch is ON. Activate the Tournament mode by placing the Tourney Switch in the ON position and power cycling the marker (the switch is on the back side of the board). Tournament Mode deactivates the MODE button for programming. Setpoint values 1 thru 10 represent each available firing mode in scrolling order (1= Semi ... 10 = Millennium)

Tournament Mode			
1	Semi	6	Burst Ramp
2	Burst	7	Reactive Ramp
3	Reactive	8	PSP3
4	Full Auto	9	NXL
5	Step Auto	10	Millennium

Tournament Mode Ramp Point

Sets ramping point operation of PSP, NXL, and Millennium modes. PSP and NXL modes use the setpoint as the number of required semi shots before ramping (set to 3 for a tournament legal setting). Millennium mode uses the ramp point as "pull rate" to ramp (set to 6 for a tournament legal setpoint).

Breakout Mode

This setting allows you to select several different styles of breakout modes. All shots prior to full auto are semi auto. Breakout mode is off by default. Refer to the table for operation

Value	Breakout Modes
1	Fires a Full Automatic Burst at MGRF on the 1st Trigger Pull and Hold
2	Fires a Full Automatic Burst at MGRF on the 2nd Trigger Pull and Hold
3	Fires a Full Automatic Burst at MGRF on the 3rd Trigger Pull and Hold
4	Fires a Full Automatic Burst at MGRF + 2bps on the 1st Trigger Pull and Hold
5	Fires a Full Automatic Burst at MGRF + 2bps on the 2nd Trigger Pull and Hold
6	Fires a Full Automatic Burst at MGRF + 2bps on the 3rd Trigger Pull and Hold
7	Fires a Full Automatic Burst at MGRF + 4bps on the 1st Trigger Pull and Hold
8	Fires a Full Automatic Burst at MGRF + 4bps on the 2nd Trigger Pull and Hold
9	Fires a Full Automatic Burst at MGRF + 4bps on the 3rd Trigger Pull and Hold
10	Fires a Full Automatic Burst Uncapped on the 1st Trigger Pull and Hold
11	Fires a Full Automatic Burst Uncapped on the 2nd Trigger Pull and Hold
12	Fires a Full Automatic Burst Uncapped on the 3rd Trigger Pull and Hold
13	Breakout Mode Disabled

Trigger Debounce

This value sets amount of time (in milliseconds) the trigger must remain inactive prior to accepting a new trigger pull. Lowering this value can cause your marker to fire errantly when making successive trigger pulls. Raising this value will prevent errant firing and provide reliable firing in sync with your trigger pulls.

Breach Load Delay

This setpoint establishes the amount of time (in milliseconds) the eyes must see a ball in the breach. This ensures a ball has dropped fully into the breach before the marker fires. This can also compensate for reflective shelled paints. A breach delay of 1-15 runs the marker in "queued" eye operation with a delay between 1 and 15 ms. A breach delay of 16-30 runs the marker in "series" eye operation (subtract 15 from the setpoint value to derive the breach delay). For example: if your setting is 20 (20-15 = 5), you'll get a 5ms series breach delay.

Eye Mode

While your eyes are functioning, your marker will fire at the MGRF Eyes ON BPS rate. If your marker's eyes become disabled, iFault™ will automatically switch to the MGRF Eyes OFF BPS rate automatically. If your eye functionality returns, iFault™ will automatically resume firing at the MGRF Eyes ON BPS rate. Refer to the table for Eye operation values.

Value	Eye Modes
1	Eyes On Operation with iFault™ Processing ENABLED - Allows manual Eye On/Off Operation via Eye Pushbutton
2	Eyes On Operation with iFault™ Processing DISABLED (Default) - Allows manual Eye On/Off Operation via Eye Pushbutton
3	Eyes Bypass Mode with iFault™ - Dry Firing Mode Only - Provides test mode for Bolt Return delay adjustment (via iFault™ alarm) - Marker operates at EYES ON MGRF - Eye processing bypassed EXCEPT for iFault™ - Bypasses power-up "no ball in breach" indicator
4	Eye Bypass Demo Mode - Dry firing mode only - Marker defaults to EYES ON MGRF - Eye processing bypassed including power-up "no ball in breach"
5	Eye Disable Mode - Use for broken or missing eyes - All Eye Processing and Eye functions disabled - Defaults to EYES OFF MGRF

Solenoid Dwell

This setting allows you to adjust how long the solenoid is energized (in milliseconds) . Higher Dwell times will consume more power/air when firing the marker. Lower Dwell times consume less power/air. Lowering this value too much may prevent the solenoid valve from opening altogether.

Anti Bolt Stick Dwell

This setting allows you to add additional dwell time (in milliseconds) to your solenoid dwell setpoint. This will only affect the first shot fired after the Bolt Stick Reset Time is exceeded. A setpoint of 1-3 will provide 1-3 ms of additional dwell and provide a 10 second reset time. A setpoint of 4-7 will provide the same 1-3ms additional dwell, but requires a 20 second reset time. You should only use this setting IF you experience first shot drop off. Values of 4 and 8 provide no anti bolt stick operation.

Bolt Return Delay

This setpoint establishes the amount of time (in milliseconds) after firing a round that the marker waits to see the bolt transition back past the eyes. This value can be lowered when using high performance aftermarket bolts or when a proper tuning procedure is performed. This delay also provides the time out period to determine if an eye fault (iFault™) has occurred.

Burst Mode Rounds

This value sets the number of rounds fired for each trigger pull in Burst Mode.

Reactive Pull Mode Rounds

This value sets the number of rounds fired for each trigger pull in Reactive Mode.

Reactive Release Mode Rounds

This value sets the number of rounds fired for each trigger release in Reactive Mode.

Burst Ramping Point

This value sets the pull rate for Burst Ramping. When the setpoint pull rate is reached, the marker transitions to 2-shot burst. When the 2x the setpoint pull rate is reached, the marker transitions to 3-shot burst.

Reactive Ramping Point

This value sets the pull rate for Reactive Ramping. When the setpoint pull rate is reached, the marker transitions to 1-shot reactive. When the 2x the setpoint pull rate is reached, the marker transitions to 2-shot reactive.

Step Auto Rate

This determines the BPS step rate in Step Auto mode. The Step 1 BPS rate is MGRF - 2x the rate setpoint, Step 2 BPS is MGRF - the rate setpoint, Step 3 BPS is at the MGRF.

Group 1 Firing Mode Enable

Allows you to enable/disable the Group 1 Firing Modes. Refer to the Group 1 Firing Mode Table for values.

Group 1 Firing Mode enable						
Value	Step Auto	Auto	Reactive	Burst	Semi	
1	Off	Off	Off	Off	On	
2	Off	Off	Off	On	Off	
3	Off	Off	Off	On	On	
4	Off	Off	On	Off	Off	
5	Off	Off	On	On	Off	
6	Off	Off	On	On	On	
7	Off	Off	On	On	On	
8	Off	On	Off	Off	Off	
9	Off	On	Off	On	On	
10	Off	On	Off	On	Off	
11	Off	On	Off	On	On	
12	Off	On	On	On	Off	
13	Off	On	On	Off	On	
14	Off	On	On	On	Off	
15	Off	On	On	On	On	
16	On	Off	Off	Off	Off	
17	On	Off	Off	Off	On	
18	On	Off	Off	On	On	
19	On	Off	Off	On	On	
20	On	Off	On	Off	Off	
21	On	Off	On	Off	On	
22	On	Off	On	On	Off	
23	On	Off	On	On	On	
24	On	On	Off	Off	Off	
25	On	On	Off	Off	On	
26	On	On	Off	On	Off	
27	On	On	Off	On	On	
28	On	On	On	Off	Off	
29	On	On	On	Off	On	
30	On	On	On	On	Off	
31	On	On	On	On	On	
32	Off	Off	Off	Off	Off	

Group 2 Firing Mode Enable

Allows you to enable/disable the Group 2 Firing Modes. Refer to the Group 2 Firing Mode Table for values.

Group 2 Firing Mode enable					
Value	Millenn	NXL	PSP3	Reactive Ramp	Burst Ramp
1	Off	Off	Off	Off	On
2	Off	Off	Off	On	Off
3	Off	Off	Off	On	On
4	Off	Off	On	Off	Off
5	Off	Off	On	Off	On
6	Off	Off	On	On	Off
7	Off	Off	On	On	On
8	Off	On	Off	Off	Off
9	Off	On	Off	Off	On
10	Off	On	Off	On	Off
11	Off	On	Off	On	On
12	Off	On	On	Off	Off
13	Off	On	On	Off	On
14	Off	On	On	On	Off
15	Off	On	On	On	On
16	On	Off	Off	Off	Off
17	On	Off	Off	Off	On
18	On	Off	Off	On	On
19	On	Off	Off	On	On
20	On	Off	On	Off	Off
21	On	Off	On	Off	On
22	On	Off	On	On	Off
23	On	Off	On	On	On
24	On	On	Off	Off	Off
25	On	On	Off	Off	On
26	On	On	Off	On	Off
27	On	On	Off	On	On
28	On	On	On	Off	Off
29	On	On	On	Off	On
30	On	On	On	On	Off
31	On	On	On	On	On
32	Off	Off	Off	Off	Off

Auto Shut Off

Allows you to adjust IF or WHEN your marker will auto shut off after NO firing activity. Auto Shut Off values range from 2 to 20, with each increment adding 3 minutes of time to the delay (6 to 60 min.). A value of 1 will defeat the Auto Shut Off feature, and your marker will remain on until you shut it off.

Non-adjustable features:

Forced Shot

You can force the marker to fire during empty breach conditions by holding the trigger down for one second. Forced Shot is useful for initial paint loading using sound activated hoppers.

Trigger Buffering

Trigger buffering allows you to fire a smooth stream of paint.

FOR SUPPORT WITH THIS PRODUCT, PLEASE CONTACT
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