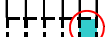


RAMPAGE™ QUICK REFERENCE

Legend/Description

Solid LED Display
Blinking LED Display

LED ID



Indicates
Power button
LED

Startup Options Menu

To access the Startup Options, pull and hold the trigger, power on the marker, then release the trigger. The rapid flickering LEDs indicate you have successfully accessed the Startup Options menu. Use the trigger to scroll to the different Startup Menu options. To select an Option, press and release the Power button.

Programming Mode
Profile Load
Trigger Trainer
Stat Display
Setpoint Default



Profile Load Menu

Use the trigger to scroll to the Profile you wish to program. To select the Profile, press and release the Power button.

Default Profile
Profile 1
Profile 2
Profile 3
Profile 4



Programming Setpoint Menu

To Scroll to the NEXT top level Setpoint Group, pull and release the trigger. To select a Group, Pull and Hold the trigger (Approx. 1 second).

Once a group is selected, the first Setpoint in the group is displayed. To scroll through the Setpoints, pull and release the trigger. To select a Setpoint pull and hold the trigger (Approx. 1 second).

Firing Control Setpoints
Marker Control Setpoints
Rampage 1 Setpoints
Rampage 2 Setpoints



When selected, the Setpoint will "flash" it's current value (in blue). To modify the current Setpoint, pull and hold the trigger until the LED stops flashing, then enter the new value via the trigger. Press the Power button to accept the new value. The Blue LED will flash the new value.

To "backup" or "move back" through the programming menu, tap the Power button. To Exit programming mode, press and hold the Power button for 3 seconds. The values will be stored and the marker powered off. Refer to the *Programming Examples* provided herein for more information.

Eye Control

To toggle your eyes On or Off, press and hold the Power button for 1 second.

Slow Flash / Overrides Lightbar Mode (unless stealth)
Fast Flash / Overrides Lightbar Mode (unless stealth)
Empty Breach Alert (Only if EYES ON)



To power your marker Off, Press and hold the Power button for 3 seconds.

Firing Mode Setpoints	Default	Min/Max
Cap Mode	2	1/2
Max Global Rate of Fire (Eyes ON)	15	10/40
Max Global Rate of Fire (Eyes OFF)	12	10/20
Burst Mode Rounds	3	2/5
Reactive Pull Rounds	1	1/5
Reactive Release Rounds	1	1/5
Tournament Mode (when active)	7	1/8
Group 1 Firing Mode enable	15	1/15
Group 2 Firing Mode enable	15	1/16
Breakout Mode	13	1/13

Marker Control Setpoints	Default	Min/Max
Power Up Profile	5	1/5
Trigger Debounce (ms)	10	2/20
Anti Mechanical Bounce	5	1/20
Solenoid Dwell (ms)	15	1/30
Dwell Modulation (ms)	10	1/20
Bolt Stick Dwell (ms)	16	1/16
Bolt Stick reset time (sec)	15	1/25
Breach Load Delay (ms)	3	1/10
Bolt Return Delay (ms)	35	1/40
Eye Mode	2	1/5
Eye Type	1	1/2
Auto Shut Off (3 min ticks)	3	1/5
LED Controls	1	1/16
Audio Controls	1	1/25

Rampage Mode 1 Setpoints	Default	Min/Max
1st Ramp Mode (semi/burst/reactive/auto)	2	1/4
1st Ramp Mode Rounds	2	1/10
1st Ramp Mode BPS	10	10/40
1st Ramp Point Pull Rate	4	2/10
2nd Ramp Mode (semi/burst/reactive/auto)	2	1/4
2nd Ramp Mode Rounds	3	1/10
2nd Ramp Mode BPS	15	10/40
2nd Ramp Mode Reset Timer	20	1/20
2nd Ramp Point Pull Rate	8	2/10
3rd Ramp Mode (semi/burst/reactive/auto)	2	1/4
3rd Ramp Mode Rounds	4	1/10
3rd Ramp Mode BPS	20	10/40
3rd Ramp Mode Reset Timer	20	1/20

Rampage Mode 2 Setpoints	Default	Min/Max
1st Ramp Mode (semi/burst/reactive/auto)	4	1/4
1st Ramp Mode Rounds	10	1/10
1st Ramp Mode BPS	10	10/40
1st Ramp Point Pull Rate	-	2/10
2nd Ramp Mode (semi/burst/reactive/auto)	4	1/4
2nd Ramp Mode Rounds	10	1/10
2nd Ramp Mode BPS	15	10/40
2nd Ramp Mode Reset Timer	10	1/20
2nd Ramp Point Pull Rate	-	2/10
3rd Ramp Mode (semi/burst/reactive/auto)	4	1/4
3rd Ramp Mode Rounds	-	1/10
3rd Ramp Mode BPS	20	10/40
3rd Ramp Mode Reset Timer	10	1/20

* These setting are not used with the Auto Firing Mode

Firing Mode Setpoints

Cap Mode – (1 = Uncapped / 2 = Capped). When Uncapped (1), the marker will fire as fast as the marker and hopper can feed. When Capped (2), the max rate of fire will not exceed the MGRF Eyes ON (with eyes ON) or the MGRF Eyes OFF rate (when eyes are OFF).

MGRF Eyes ON – When operating in "Capped" mode, this sets the "Eyes On" Max Global Rate of Fire (in Balls per second) of all firing modes (except ramping). If the Cap Mode is "Uncapped", this value is not used.

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

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

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

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

Tournament Mode – Determines what mode will be locked in for Tournament play when the Tourney Mode Lock Switch is ON. Refer to the table below for Mode Values.

Value	Mode
1	Semi
2	Burst
3	Reactive
4	Full Auto
5	Rampage 1
6	Rampage 2
7	PSP3
8	NXL

Activate the Tournament mode by placing the Tourney Switch in the ON position and power cycling the marker. Tournament Mode deactivates the Firing mode selection and caps the rate of fire at 15 BPS. (Semi mode operates UNCAPPED if Cap Mode = 1).

Group 1 Firing Mode Enable - Allows you to enable/disable the Group 1 Firing Modes. By default, all modes in this group are enabled. Refer to the Group 1 Firing Mode Table for values.

Group 2 Firing Mode Enable—This setting allows you to enable or disable Group 2 Firing Modes. By default, all modes in this group are enabled. Refer to the Group 2 Firing Mode Table for values.

Group 1 Firing Mode enable	Auto	Reactive	Burst	Semi
1	No	No	No	YES
2	No	No	YES	No
3	No	No	YES	YES
4	No	YES	No	No
5	No	YES	No	YES
6	No	YES	YES	No
7	No	YES	YES	YES
8	YES	No	No	No
9	YES	No	No	YES
10	YES	No	YES	No
11	YES	No	YES	YES
12	YES	YES	No	No
13	YES	YES	No	YES
14	YES	YES	YES	No
15	YES	YES	YES	YES

Group 2 Firing Mode enable	NXL	PSP3	Ramp2	Ramp1
1	No	No	No	YES
2	No	No	YES	No
3	No	No	YES	YES
4	No	YES	No	No
5	No	YES	No	YES
6	No	YES	YES	No
7	No	YES	YES	YES
8	YES	No	No	No
9	YES	No	No	YES
10	YES	No	YES	No
11	YES	No	YES	YES
12	YES	YES	No	No
13	YES	YES	No	YES
14	YES	YES	YES	No
15	YES	YES	YES	YES
16	No	No	No	No

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

NOTE—THESE MODES ARE FOR PRACTICE ONLY. THEY ARE ILLEGAL TO USE IN A GAME OR TOURNAMENT.

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

Marker Control Setpoints

Power Up Profile— This setting allows you to chose which profile you want your marker to automatically start in when powered on. (1=Red, 2=Yellow, 3=Green, 4=Blue & 5=Teal (Default)).

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.

Anti Mechanical Bounce—Used in Semi Automatic Mode only. This trigger filter prevents inadvertent firing due to marker recoil. Raising this value provides more filtering during slow trigger pulls.

Solenoid Dwell – This value controls the amount of time (in milliseconds) the solenoid is energized. If too low, the bolt will partially stroke and not fire properly. If the value is too high the valve remains open for too long, wasting air and battery power.

Dwell Modulation – This setting allows you to adjust (in milliseconds) how much of the dwell time is modulated (pulsed at 70 KHz). Lower Dwell Modulation times will consume more power when the solenoid is energized. Higher Dwell Modulation times consume less power when the solenoid is energized. Raising this value too high may prevent the solenoid valve from opening altogether.

Bolt Stick Dwell — This setting allows you to add additional milliseconds of dwell to your existing dwell setting. This will only affect the first shot fired after the Bolt Stick Reset Time is exceeded. You can add up to 15 milliseconds of dwell or choose a value of 16 (default) to disable the Bolt Stick Dwell setting. You should only use this setting IF you experience first shot drop off.

Bolt Stick Reset Time (seconds) - This setting allows you to set the amount of time the trigger can remain idle before adding the Bolt Stick Dwell setting. This value is ignored if the Bolt Stick Dwell is disabled.

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.

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 aftermarket high performance bolts. This also establishes the amount of time to recharge for the next shot, and provides the time out period to determine if an eye fault has occurred.

Eye Mode - Your Rampage board comes with unmatched Eye control using our exclusive iFault™ technology. iFault™ provides advanced eye logic for your marker. 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 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 below for Eye operation values.

Value	Mode
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 (factory default) - Allows manual Eye On/Off operation via eye pushbutton.
3	Eye 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. - EYES OFF MGRF available via Eye PB tap (displays EYES OFF indicator) - 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. - EYES OFF MGRF available via Eye PB tap (displays EYES OFF indicator) - 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

Eye Type—This setting allows you to select the type of eyes that are in your marker. 1=Reflective (Default) and 2=Break Beam

Auto Shutoff – This setting allows you to adjust if or when you would like your marker to shut off automatically after no firing activity. Auto Shutoff values range from 2 – 20, with each increment adding 3 minutes of time to the delay. This provides shutoff times from 6 to 60 minutes. A value of 1 defeats the Auto Shutoff feature, and your marker will remain on until you manually shut it off.

LED Controls – This setting controls the LED characteristics of your Rampage board. Refer to the table below for LED operation values.

Audio Controls – This setting controls the Audio characteristics of your Rampage board. Refer to the table below for Audio operation values.

LED Control Mode enable	Value	Stealth	Fire Mode	Fire LED
1	No	No	No	Yes
2	No	No	Yes	No
3	No	Yes	No	Yes
4	Yes	No	No	Yes
5	Yes	No	Yes	Yes
6	No	Yes	Yes	No
7	No	Yes	Yes	Yes
8	Yes	No	No	No
9	Yes	No	No	Yes
10	Yes	No	Yes	No
11	Yes	No	Yes	Yes
12	Yes	Yes	No	No
13	Yes	Yes	No	Yes
14	Yes	Yes	Yes	No
15	Yes	Yes	Yes	Yes
16	No	No	No	No

Rampage Mode 1 Setpoints

Rampage Mode 2 Setpoints

Ramp Mode – This option determines the firing mode for each stage of ramping. Choose Semi (1), Burst (2), Reactive (3) or Auto (4).

Ramp Mode Rounds – This option sets the number rounds that apply to the selected firing mode.

Semi Mode - defines the number of rounds to fire at the defined Pull Rate in order to ramp to the next stage.

Burst Mode - defines the number of rounds fired for each trigger pull.

Reactive Mode - defines the rounds fired for each trigger pull & release.

Auto Mode - defines the number of successive rounds fired in order to ramp to the next stage.

Ramp Point Pull Rate – This option sets the trigger pull rate required (in Hz / triggers per second) to transition to the next ramping stage. It is not used for Auto Mode operation.

Ramp Mode BPS – This option sets the ball per second (BPS) cap rate for the current ramping stage. This value can be set from 10bps to 40bps and relies upon operational eyes. The Ramping BPS rate is overridden by the MGRF Eyes OFF rate if the marker eyes are disabled.

Ramp Mode Reset Timer – This option sets the amount of time the trigger can be at rest and yet still remain in the current ramping stage before reverting back to the 1st Ramp Mode. This time value is entered in 10ths of a second.



Powered by RAMPAGE!

Did you know your Rampage™ Shocker board can measure the exact voltage of your battery, track your total shots, track your trigger pulls and monitor your operational efficiency? Get the details in our download section at www.GoApeOnline.com