

## Version 2.9

### Check setting:

1. Turn Marker OFF.
2. Set dip switches to desired setting. Example debounce = off,off,on,off
3. Turn marker on.
4. **Green** LED will flash the settings current value. Example if debounce is 8mS the LED will flash 8 times.
5. Turn marker off.
6. Set the dip switches to desired mode of operation. Semi only, User defined or PSP.
7. Marker ready to be used when power switch is turned ON.

### Program setting:

1. Turn Marker OFF.
2. Set dip switches to desired setting. Example debounce = off,off,on,off
3. While marker is OFF, pull trigger and hold. Make sure barrel bag is used and marker is not connected to air source.
4. Turn ON Marker and release trigger.
5. **Green** LED will flash the settings current value. Example if debounce is 8mS the LED will flash 8 times.
6. **Green** LED will stay off for 2 seconds and then turn on.
7. Now slowly pull the trigger the desired number of times to enter the setting. Each time you pull trigger the **Orange** LED will momentary go on to show recognition of the trigger pull. Example if you want debounce to be 10mS you should slowly pull the trigger 10 times.
8. After a few seconds of trigger inactivity the **Green** LED will go out.
9. **Red** LED will now flash the settings new value. Example if debounce is 8mS the LED will flash 8 times.
10. Turn Marker OFF
11. Next you can use the above *Check Settings* procedure to verify entered setting was valid and stored. Entering an invalid setting will result in setting reverting back to factory default.
12. Set the dip switches to desired mode of operation. Semi only, User defined or PSP.
13. Marker ready to be used when power switch is turned ON.

### Disabling the Eye sensor by trigger: Works in any mode

Refer to *Failed EYE ROF* setting for max rate of fire after turning eye sensor off.

1. Turn Marker OFF.
2. Pull trigger and hold.
3. Turn Marker ON.
4. Continue to hold trigger while Green LED.
5. After **Orange** LED Release trigger.
6. Eye sensor is now disabled and max ROF is limited to 11BPS or 15BPS.

**Changing modes via the trigger:** Only when using User Defined Mode. Dip on,off,off,off

Training mode, solenoid off, chirps on trigger pull: ROF set by setting 7: 19BPS max rate of fire.

1. Turn Marker OFF.
2. Pull trigger and hold.
3. Turn Marker ON.
4. Continue to hold trigger while Green LED.
5. Continue to hold trigger while Orange LED.
6. Release trigger when White LED.
7. Eye sensor is now disabled and max ROF is limited by ROF setting 7. (max 19bps)

Switch from Semi auto to user defined.

1. Turn Marker OFF.
2. Pull trigger and hold.
3. Turn Marker ON.
4. Continue to hold trigger while Green LED.
5. Continue to hold trigger while Orange LED.
6. Continue to hold trigger while White LED.
7. Release trigger when Red LED.
8. Marker turns off
9. Press On/Off button to power on board.
10. Switch over mode is off. Back to User Defined Mode.

Switch from user defined to semi auto.

1. Turn Marker OFF.
2. Pull trigger and hold.
3. Turn Marker ON.
4. Continue to hold trigger while Green LED.
5. Continue to hold trigger while Orange LED.
6. Continue to hold trigger while White LED.
7. Continue to hold trigger while Red LED.
8. Release trigger when Blue LED.
9. Marker turns off
10. Press On/Off button to power on board. 2 Blue LED flashes to show Semi auto mode.
11. Switch over mode is active. Uses semi even though dip switches are set to user defined.
12. If dip switches are changed the switch over mode off.

#### **Vibe alert: Patent Pending**

The vibrator/buzzer will alert the user if excessive hopper load time is discovered and when force-feed hoppers are running low. Also the vibe alert will remind user to reload after first 120 paintballs are fired. While reloading holding the trigger in for one second will reset the reload alert counter to 120.

#### **Low battery:**

The board will chirp every 5 sec and flash red LED.

#### **Hopper delay settings:**

This feature is used to stop chops that occur when a hopper is almost empty and popcorn effect is happening. Set H delay to match your hoppers speed. If chirp/vibe alarm is going off to often then H delay is too sensitive. Try increase the H delay so that the alarm does not activate during normal operation. If set correctly this delay does not slow down marker unless hopper is almost empty.

Individual dip switches do not set modes, only the combination of all

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dip	dip	dip	dip	mode
1	2	3	4	
off	off	off	off	<b>Marker ON: semi only</b> <b>Marker ready to be used:</b> <b>ROF unlimited: Semi auto: EYE ON:</b>
on	off	off	off	<b>Marker ON: user defined firing mode &amp; ROF</b> <b>Marker ready to be used with any combination of settings from 1 (fire mode), 5 (eye), 7 (ROF), 10(SSR)</b> Example: PSP 3, dry fire & ROF=13BPS. Example: Ramp 2, Eye ON & ROF=unlimited
on	on	on	on	<b>Marker ON: PSP mode</b> <b>Marker ready to be used.</b> <b>ROF=15BPS: PSP RAMP 2: EYE ON: SSR 1</b>

settings	dip	dip	dip	dip	mode		min	max		
1	2	3	4				1	16		
1	off	off	off	on	program setting	<b>fire mode</b>				
						1	semi: one shot per trigger pull			
						2	nxl full auto: after 4 trigger pulls full auto			
						3	PSP 3: after 4th trigger pull, 3 shots per trigger pull			
						4	PSP 2: after 4th trigger pull, 2 shots per trigger pull			
						5	PSP ramp 3: After 4th trigger pull and ramp activation point is met, 3 shots per trigger pull			
						6	PSP ramp 2: After 4th trigger pull and ramp activation point is met, 2 shots per trigger pull			
						7	PSP active ramp: After 4th trigger pull and ramp activation point is met, 2 or 3 shots per trigger pull			
						8	break out 1: 3 shot for first 15 seconds then semi-auto			
						9	3 shot: On 2nd trigger pull, 3 shots per trigger pull			
						10	2 shot: On 2nd trigger pull, 2 shots per trigger pull			
						11	ramp 3: When ramp activation point is met, 3 shots per trigger pull			
						12	ramp 2: When ramp activation point is met, 2 shots per trigger pull			
						13	active ramp: When ramp activation point is met, 2 or 3 shots per trigger pull			
						14	break out 2: 3 shot for first 5 seconds then semi-auto			
						15	break out 3: PSP Ramp 3 18BPS for first 15 seconds then PSP ramp 2 15BPS			
16	break out 4: PSP Ramp 3 18BPS for first 5 seconds then PSP ramp 2 15BPS									
2	off	off	on	off	program setting	<b>debounce</b>	length of time trigger is ignored after trigger pull. Low settings may result in trigger bounce.	1	50	mS
3	off	off	on	on	program setting	<b>dwll</b>	length of time bolt is in forward position allowing air to push ball.	5	24	mS
4	off	on	off	off	program setting	<b>delay</b>	added delay time after ball reaches final shooting position. Gravity feed hopper may need higher settings. The higher the setting the slower the max rate of fire.	0	50	mS
5	off	on	off	on	program setting	<b>eye</b>	set the eye usage	1	4	
						1	eye on			
						2	eye off: limited 11BPS or 15BPS by Setting 12			
						3	dry fire: limited by setting 7. Max19BPS			
4	Chirp on trigger pull (solenoid off): limited by setting 7. Max19BPS									
6	off	on	on	off	program setting	<b>Bolt Delay</b>	Delay for bolt to move past eyes. Unless extreme cases this setting will not cause marker to fire faster or slower. Setting to low may cause marker to dry fire.	1	34	mS
7	off	on	on	on	program setting	<b>ROF</b>	max rate of fire or unlimited.	1	10	
						1	11BPS			
						2	12BPS			
						3	13BPS			
						4	14BPS			
						5	15BPS			
						6	16BPS			
						7	17BPS			
						8	18BPS			
						9	19BPS			
10	unlimited rate of fire. Will fire as fast as loader feeds paintballs									
9	on	off	off	on	program setting	<b>Ramp activation point</b>	higher number will start ramping at lower BPS: 4= most aggressive 1=least aggressive	1	4	
10	on	off	on	off	program setting	<b>SSR</b>	Shot Sequence Registration: Max number of trigger pulls stored during one shooting sequence. higher number can store more trigger pulls. Sequence of more than one and debounce set too low can lead to more trigger bounce.	1	3	
11	on	off	on	on	program setting	<b>Mechanical Bounce</b>	Higher number filters out more mechanical bounce.	1	5	
12	on	on	off	off	program setting	<b>failed eye ROF</b>	ROF if eyes fail	1	2	
						1	11BPS			
2	15BPS: only use with true force feed hoppers.									
13	on	on	off	on	program setting	<b>H delay</b>	Hopper delay: stop broken balls when hopper runs near empty	1	5	
						1	fast hopper			
						2	medium fast hopper			
						3	Ave hopper			
						4	gravity feed hoppers			
5	OFF:									
14	on	on	on	off	program setting	<b>vibe/chirp</b>		1	8	
						1	100 ball count: breakout warning then misfeed warnings			
						2	120 ball count: breakout warning then misfeed warnings			
						3	140 ball count: breakout warning then misfeed warnings			
						4	100 ball count: breakout with trigger rest & misfeed warnings			
						5	120 ball count: breakout with trigger rest & misfeed warnings			
						6	140 ball count: breakout with trigger rest & misfeed warnings			
						7	slow hopper warnings only			
8	OFF									

Set H delay to match your hoppers speed. If vibe is to sensitive increase H delay