



MacDev Militia Board

Suits Cyborg 06 and 07



How to use your Militia Board

Indicator Lights: Green – ball in breach, Red – no ball in breach, Flashing Red – eyes off

Disabling eyes:

To disable the eyes on your Cyborg, please hold the trigger, the gun will force one shot, and then if you continue holding the trigger, the indicator light will begin flashing red. This means the eyes are disabled.

Tourney Lock:

To tourney lock the gun, you must open the grip panels to access the tourney lock button on the board. Press the button with a plastic implement, like a q-tip (**do not use a hex key**) until the light flashes red/green. It will flash this way a few times and end on red or green. The ending colour will indicate if the board is locked or unlocked.

Programming:

To program the X7 board, turn the gun off. Hold down the trigger whilst turning the gun on. The indicator light will turn white, continue to hold the trigger until it goes blue (debounce register). Press the trigger once to advance to the next setting as given below. When you have a setting you would like to change, hold the trigger until the indicator light goes out. Release the trigger, and the indicator light will flash to show the current setting. Then when it goes black, input the new setting by the trigger and wait for the indicator light to go solid again. The settings are:

LED Colour	Setting	Default
Blue	Debounce (1/2ms increments)	10
Red	Dwell (1ms increments)	6
White	Fire mode	1 (semi uncapped)
Green	Max ROF - only used in capped and ramp modes	5 (15bps)
Yellow	Loader delay (1/2ms increments)	2
Teal	Anti Mechanical Bounce	2
Purple	Anti Bolt Stick	1 (off)
Flickering Blue	Ramp Start (used on ramping fire modes)	5bps
Flickering Red	Cycle filter	2
Flickering White	Eye Mode	2 (forced shot)
Flickering Green	Bolt Tracking Delay (ms)	10
Flickering Yellow	Test Mode Dwell (ms)	2

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| <p>Fire modes:</p> <ol style="list-style-type: none"> 1 Unlimited semi 2 Capped semi 3 PSP Auto Response 4 PSP/Millennium mild ramp 5 PSP/Millennium max ramp 6 PSP Z-Burst 7 NXL Full Auto |
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Settings Detail

Debounce (Blue) – Increase this setting to remove trigger bounce from the marker. To remove trigger bounce, increase this slowly.

Dwell (Red) – Adjustment for the solenoid on time. This should be set to 6 or 7, do not use other settings unless you are an advanced user.

Fire mode (White) – use this to set the gun to different fire modes. Always observe the rules in the locality in which you are playing.

Max ROF (Green) – in uncapped modes, the ROF will only be limited by the speed of the gun and hopper. However, if you use a capped mode (like PSP or Millennium), the mode will obey this max ROF. The ROF is adjustable from 14bps to unlimited in 1/4bps increments (1=14, 2=14.25, 3=14.5, 4=14.75, 5=15 ... 26=uncapped).

Loader Delay (Yellow) – This is a small dwell included to allow the ball to settle into your marker breach before firing. For a very fast hopper, this may be set to 1, for slow hoppers it should be higher.

Anti Mechanical Bounce (Teal) – This is a parameter used to remove mechanical bounce (causing multiple shots). To remove mechanical bounce, increase this slowly.

Anti Bolt Stick (Purple) – if your marker has sticking o-rings or parts, this setting can increase the dwell temporarily if your marker has been sitting around. 1-10ms, setting 1 is off.

Ramp Start (Flickering Blue) – When using a ramp mode, this setting can be used to set the fire rate at which ramping starts – adjustable from 4-14bps (default 5).

Cycle Filter (Flickering Red) – Your software allows the buffering of a single shot in case you pull the trigger during a cycle. This filter can be used to reduce the time allowed to buffer this shot. Adjustable from 1 (full buffer) to 10 full cycle filter. Higher settings will reduce the amount of mechanical bounce in the marker.

Eye Mode (Flickering White) – setting 1=delayed (if there is no ball in breach when trigger is pulled, the software will wait ½ sec and fire) 2=forced (trigger can be held to force a shot) 3=test mode with full dwell, 4=test mode with adjusted dwell (test mode dwell setting).

Bolt Tracking Delay (Flickering Green) – This is the delay used to ensure that bolt tracking works correctly. Do not change this unless directed to by a MacDev tech.

Test Mode Dwell (Flickering Yellow) – this mode is used to see how fast a user can cycle the marker. Using this setting, the dwell can be reduced to reduce air consumption. Whilst firing in test mode, the max ROF is set to uncapped, and the LED reports the following findings: red:less than 10bps, yellow:10-15bps, green:15-20bps, blue:20-25bps, white:25+bps.

Programming Example: Millennium Ramping – set fire mode to 5 (PSP/Millennium ramping), ensure Max ROF is set to 5 (15bps), set Ramp Start to 8bps.