



# CodeX DM4/5/C Chip

**DM4/5/C, LBI and Non-LBI Boards**  
**Semi, NXL, PSP, 60% Ramping**

**IMPORTANT NOTICE for PSP tournament players.** For PSP mode to be legal at tournaments you must set the ROF to 15bps or less and set the 3rd dip switch up. Whatever chip you have make sure you test it over a pact time before you go onto the field with it. You can adjust the ROF from 11-22bps or uncapped in All Modes, even in the PSP mode. We are not responsible for incorrect Fire Modes, ROF cap, or low Debounce settings.

## Features

**Tournament Lock** Set Dip Switch 4 to the OFF position for the tournament lock. Tournament lock disables the edit/config capability.

**Adjustable** Debounce, Dwell, ROF, AMB, Eye Delay, and Fire Mode (See Figure 3)

**Anti-Bolt Stick** Set Dip Switch 1 to the ON position to enable ABS.

**ROF Cap** from 11bps-25bps, or **Uncapped** in ALL modes.

**Low Battery Indicator** Dip Switch 4 must be in OFF position. Turn Marker on while holding down trigger. Red light blinks four times for full battery, three times for good battery, two times for almost low battery and once for a low battery.

**Force Shot**

## Dip Switches

Dip Switch	On	Off
1	ABS Enabled	ABS Disabled
2	AMB Enabled	AMB Disabled
3	Eyes On ROF Cap Enabled	Eyes On ROF Cap Disabled
4	Edit Mode Enabled	Tourney Lock, Edit Mode Disabled

Figure 1

The 2<sup>nd</sup> dip switch must be set to the ON position to see the AMB (Teal) Color in the programming menu.

## Turning on/off Marker

To turn on the marker hold down the top button of the membrane pad until the blue LED turns on. To turn off marker hold down the top button of the membrane pad for two seconds or until the LED turns off.

## Low Battery Indicator

To check the Low Battery Indicator the Dip Switch 4 must be in OFF position. Turn the Marker on while holding down the trigger. Red light blinks **four times for full battery, three times for good battery, two times for almost low battery and once for a low battery.**

## Force Shot

The Force Shot function is only available when the eyes are on and the LED is RED(no paint). Force Shot function allows you to fire the marker even when there is no paint in the breach. To fire a Force Shot, hold down the trigger for 2 seconds until the marker fires.

## Eye Function and Enabling/Disabling Eyes

To Disable Eyes hold down the Bottom Button of the membrane pad until the LED starts flashing RED. To Enable Eyes hold down the Bottom Button of the membrane pad until the LED turns solid GREEN or RED.

LED STATE	Eye Mode	Description
Solid Red	Eyes On	No Ball In Breach
Solid Green	Eyes On	Ball In Breach
Blinking Red	Eyes Off	The Eyes Are Disabled
Blinking Green	Eyes On	Eye Malfunction

Figure 2

## Code Activated Ramping

Ramping can be enabled by entering XXXXXX quickly on the membrane pad. Ramping can be disabled by holding down the trigger for 2 seconds or tapping the membrane pad. Do not lose your original manual, lost ramping codes can be difficult for tech support to find.

# Programming Mode

## TO ENTER PROGRAMMING MODE:

- Step 1. Turn off Marker
- Step 2. Remove screws on Grip of Trigger Frame
- Step 3 Flip 4<sup>th</sup> Dip Switch to ON
- Step 4 Hold down trigger and turn marker on as normal. Release trigger when you notice flashing colors
- Step 5. Pull and release trigger quickly to toggle through Settings/LED colors

## TO CHANGE THE VALUE OF A SETTING IN PROGRAMMING MODE:

- Step 1. While in Programming Mode, after the LED lights the color of the mode you wish to set, pull the trigger and continue to hold it down.
  - Step 2. The LED will flash to indicate the previous setting, to view the current setting continue to hold the trigger and count the number of LED blinks until it stops blinking
  - Step 3. After that, you can set the new value with the trigger. **Each pull increments 1ms or 1bps(except eye delay) starting from the first value in the range.**
- NOTE 1: After completing step 3 you can exit programming mode by turning off marker  
NOTE 2: Do not turn marker off during Step 2 or the setting will be set to 0ms or 0bps.

### For example, if you want to change the ROF to 15bps:

- Step 1. While in Programming Mode, Cycle through menus by pulling and releasing the trigger until the LED lights BLUE (ROF).
  - Step 2. Pull and hold the trigger until the LED starts to flash and continue to hold down trigger. If you want to skip checking the previous setting just release the trigger. To check the previous setting continue to hold down the trigger until the led stops flashing, it will flash the number of pulls that it was previously set to.
  - Step 3. When the LED stops flashing, pull and release the trigger five times in a fast pace. The new value is set after you have not touched the trigger for one second.
- The LED will cycle through all colors to indicate that the new value is saved. All other configurations are changed the same way. Just as in Step 2 above, change the mode to applicable LED color, see Figure 3.

Led Color	Setting	Range	Default
Green	De-bounce	0-50ms	5ms
Red	Dwell	1-35ms	18ms
Blue	ROF	11-25bps	20bps
Teal	AMB	1-40ms	10ms
Yellow	Eye Delay	1/2-20ms	1ms
Purple	Fire Mode	1 pull = Semi 3 pulls = PSP	2 pulls = NXL 4 pulls = Ramping

Figure 3

- Note 1. Settings are incremented starting from the lowest value in the range in 1ms or 1bps for all except Eye Delay, which is in 1/2ms.  
Note 2. The programming mode lets you have control over many functions of your marker so you can optimize performance. Changing these settings can also reduce performance if you are not sure how they work.  
Note 3. The first pull when programming a setting always starts at the lowest value in the range. For example when setting Debounce the first pull sets it to 0ms.

## Fine Tuning Your Settings

**Debounce** Debounce is the amount of time the trigger must be released before checking for another pull.

**Dwell** Dwell is the amount of time the solenoid is activated to cycle the marker.

**ROF.** Rate of fire is the maximum cycle speed while the eyes are off or if the 3<sup>rd</sup> dip switch is set to off. If the third dip switch is set to ON then ROF will be capped even with the eyes on.

**AMB** AMB is the amount of ms to increase the debounce on slow pulls. AMB allows precise adjustment for the debounce on slow and fast pulls. If your debounce setting is 1ms and AMB is 14 ms the debounce setting on slow pulls will be 15 ms and on fast pulls 1 ms.

**Eye Delay** Eye delay is the amount of time it waits for the ball to settle in the breach before the next shot. 1/2-4ms for force feed hoppers. 5-20ms for gravity feed hoppers. If eye delay is set to low it may result in chopping paint.

## FAQ

**Trouble Shooting Tip 1:** Change all settings identified in figure 3 to the default and test marker again.

**Trouble Shooting Tip 2:** Check your battery.

**My Gun Doesn't Shoot:** Make sure the dwell is correctly set at 18ms. If dwell is too low the solenoid will not activate long enough to shoot.

**My Gun Chops:** The eye delay could be set too low. Increase the eye delay.

**Will Code Activated Ramping Work With Eyes Off:** Yes, enter the ramping code after you turn off the eyes.

**My Gun Is Slow With Eyes On:** This could be caused by dirty eyes or a high eye delay setting. Clean your eyes and try lowering the eye delay.

**My gun seems to be ramping in SEMI mode:** You are getting bounce. You should adjust the bounce out of your marker with AMB turned off. After adjusting debounce then adjust your AMB.

**Green LED is blinking:** Eyes have malfunctioned and may be dirty or no ball in breach. Clean eyes.

**Teal Color not showing up.** The 2<sup>nd</sup> dip switch must be set to the ON position to see the AMB (Teal) Color in the programming menu.