



Features

- Energy efficient, advanced control algorithm along with the premium PIC 16F688 8MHz processor delivers maximum hopper performance
- Intelligent eye logic measures the paint feed rate and uses both sets of eyes for the fastest possible response time
- Programmable priming rate, feed rate, tension level, tension period and anti-jam rate allows for full control over hopper performance
- Foolproof fully automatic jam detection and removal reduces frustration when using reballs
- On demand jam removal / priming via push button
- On demand performance boost via push button allows for fast field adjustments
- Feed neck eye status indicator
- Low battery status indicator

Installation

1. Follow the manufacturer's instructions for disassembly and board removal.
2. Remove stock chip by gently sliding a small flat blade screwdriver underneath the chip and rotating the blade as you advance it until the chip is free from the socket. Avoid up and down prying motions as to prevent bending the pins.
3. Match the notch on the Nox Injector chip with the notch on the socket, carefully align all the pins with the socket and firmly press the chip into place.
4. Reassemble the hopper following the manufacturer's instructions.
5. Store the stock chip in the Nox static free packaging for safe keeping.

Note: If you are not comfortable with installing the chip, we suggest you have a qualified shop install the chip for you. Paintball Innovations LLC (Nox) is not responsible for any damage caused from improper installation.

Control Algorithm

The Nox Injector performance chip uses an advanced, real-time control algorithm to regulate the cone speed for optimum performance during priming, applying stack tension and high speed feeding. Each of these actions has a separate, programmable level setting to customize the hopper behavior to your style of play.

Eye Logic

The intelligent eye logic does more than just detect paint; it also measures the rate of paint flow and feeds this information back to the control algorithm to instantly determine the correct amount of energy to send to the motor for any given condition.

Automatic Anti-Jam

The automatic anti-jam routine processes feedback from the eye logic and motor load monitoring systems to quickly detect and remove jams by reversing the cone at a programmable rate for a brief time and then resume priming. This feature is especially helpful when using reballs. Should the anti-jam function activate seven times in a row without registering paint in the feed neck, it will automatically disable itself to prevent paint damage.

On Demand Anti-Jam / Priming

Pressing the push button briefly until LED lights orange and releasing will cause the cone to run in reverse at the programmed anti-jam rate for a brief period and then run the priming sequence. This feature is most useful for priming the stack with new paint after the previous priming sequence has timed out (15 seconds) from an empty hopper. This sequence is also run when the hopper is first powered on.

Performance Boost

Pressing and holding the push button until the LED lights red and releasing will simultaneously increment the feed rate, stack tension and priming rate. This feature is especially helpful for maintaining performance when the batteries are starting to decline or when a higher performance setting is desired while on the field. This may be repeated as required. Turning the power off and on again resets the settings to the programmed levels.

LED Status

Condition	LED Indicator	
Paint in Feed Neck		Green
Empty Feed Neck		Green Blink
Low Battery		Red/Green Blink
Manual Anti-Jam		Orange
Setting Boost		Red

Programming Menu

Setting	Range	LED Indicator	
Feed Rate	1-10		Red
Stack Tension	1-10*		Green
Tension Period	1-11**		Orange
Priming Rate	1-10		Red Blink
Anti-Jam Rate	1-6		Green Blink

* After the Tension Period is over, the tension level is smoothly tapered off to prevent the cone from springing away from the ball stack from a sudden release of pressure.

** Setting the Tension Period to 11 will turn off the tension feature and stop the motor as soon as paint is detected in the feed neck.

Entering Programming Mode

1. With the hopper powered on, press and hold the push button for five full seconds until the LED lights ORANGE, RED and then off.
2. Release the push button and the LED will light up RED after a moment to indicate the first menu item (Feed Rate).

Restoring Factory Defaults

1. Use same procedure as above, but hold push button for a full ten seconds until LED lights ORANGE, RED, OFF and ORANGE again.
2. Release the push button. You have now entered programming mode with factory settings restored.

Navigating the Programming Menu

To select a given menu item, use short presses of the push button to advance to the next menu item. The menu will wrap around should you go too far and start over.

Changing a Setting

1. After selecting the desired menu item, press and hold the push button for one second until the LED goes off.
2. Release the push button and use short presses to enter the new setting. Each time the button is pressed, the LED will light up to indicate the press is recognized. If more than the maximum setting is entered, the maximum allowed value will be used. If no setting is entered (no presses), the current setting is retained.
3. After two seconds of no activity, the new setting will be saved to memory and you will be returned back to the programming menu. This setting will be retained even when the hopper is powered off.

Exiting Programming Mode

You may exit programming mode at any time by powering off the hopper or after ten seconds of no activity, the chip will automatically reboot and return the hopper to normal operation.

Setting Definitions

1. **Feed Rate:** The cone rate used when actively feeding paint during a string.
2. **Stack Tension:** The amount of pressure applied to the paint stack from spring tension in the cone.
3. **Tension Period:** The amount of time in second's pressure is applied to the paint stack when not firing.
4. **Priming Rate:** The cone rate used to load paint into an empty feed neck.
5. **Anti-Jam Rate:** The cone rate used when running in reverse to clear a jam.

Note: Hopper performance and battery life is a tradeoff. Using lower settings levels will improve battery life.