

Talonaxe Armory Brushless Flycore Firmware Instructions

1) Basic Operation

Once you have powered on the unit, it will play its start up tones along with the Djinn Logo on the OLED, followed by a confirmation tone signaling the system is ready to fire, and the Home Screen on the OLED.

The Home Screen has most information needed for safe operation of the blaster.

OLED - Home Screen:

1st Line: Top Left - Bat volts: 11.4v, Top Right - Game Timer

2nd Line: Select fire mode: Single / Burst: X / Full Auto

3rd Line: ROF: MAX

4th Line: Pwr: 50% (Power to the ESCs)

Ammo Counter (Large Digit) (disabled in configuration menu by default)

Please note that ROF and Pwr can change relative to your select fire mode and your profile settings within the configuration menu.

Select Fire

This kit includes 3 fire modes, Single Fire, Configurable Burst and Full Auto.

To cycle the Select Fire Modes, quickly press and release on the encoder (Short Press).

You can see which fire mode you are in by looking at the 3rd Line of the Home Screen which will read Single / Burst 3 / Auto

The Burst Fire is set to 3 Rounds by default, but can be changed in the System menu.

Rate of Fire (ROF)

ROF is set to Max by default. You may change this in the configuration menu depending on which fire mode you are in. See the table below

Configuration Menu

The Configuration Menu gives you access to almost all of the settings for the firmware. You can make any changes you wish to your profile, to experiment with what works best for you. If you make a change which you cannot recover from, you may reload the Default Profile.

Menu Option	Function
EXIT	Exit config back to Home screen
GameT	Game Timer
Power1	Flywheel Stage1 Power 30 - 100%
Power2	Flywheel Stage2 Power 30 - 100%
A ROF	Full Auto, Rate Of Fire 0(Max) - 150
B ROF	Burst, Rate Of Fire 0(Max) - 150
Burst	Burst Rate (number of darts to fire) 2-99
MagS	Mag Size capacity 0-99
Ramp U	Fly Wheel Start Ramp Up time 0 – 5000
Ramp D	Fly Wheel Stop Ramp Down time 0 – 5000
Dwel U	Ramp up Dwell time (hold rev) 0 - 5000
Dwel D	Ramp down Dwell time(hold rev) 0 - 5000
SP Hi	Solenoid Pulse High Time 0 - 1000
SP Low	Solenoid Pulse Low Time 0 - 1000
SP Ret	Solenoid Pulse Retract Time 0- 1000
Bat Type	3S or 4S Battery
Bat Off	Battery Offset for calibration, increments of 0.1
MagSw	Mag Sw sensor On/Off

Power2 – Only matters if you have a dual-stage motor setup. This number can never be lower than Power1.

Game Timer - This is an operator preset countdown timer, representing the game mode time to be played. Set in minutes. E.g. 00:20 = 20 minute Game Time. On exit from Config screen, if this is not at zero, timer will start counting down from value set. At 1 minute from timer expiry, screen will flash, to indicate end of game coming in less than a minute.

Bat Type – Default set to 3S. While the system is capable of 4S, only select it if you have a 4S battery installed, as this matters for Voltage Protection and Low Power Cutoff.

Bat Off – a Battery Offset to correct for any errors in the OLED reading compared to a voltmeter. Can be adjusted in .1v increments.

MagSw – Turns off or on the Mag Switch detection. Off by default as the Djinn doesn't use a Mag Switch. Disables the Ammo Counter and "Mag Dropped" display"

Restoring Default Profile

To load the default profile and restore the unit to Factory Settings, simply hold the trigger while powering up the unit, and releasing when the OLED informs you to do so.

Solenoid Calibration

The kit comes pre-flashed with settings that the development team has found works best for their setup using the ***OutofDarts Neutron High Rate of Fire (double spring) Solenoid*** on a ***Tattu R-line 750 3S*** battery.

If you use a different battery, or swap to 4S, then you will have to recalibrate your solenoid for better ROF and performance.

In order to calibrate your solenoid, you will need to edit the following Lines:

SP Hi (Solenoid Pulse on Time High)

SP Low (Solenoid Pulse on Time Low)

SP Ret (Solenoid Pulse Retract Time)

For the first step, we want to focus on the Retraction Rate (**SP Ret**)

SP Ret Calibration:

1. Fully Charge your battery
2. Set the fire rate to Auto
3. Start with SP Ret 100 (Pulse Retract time 100ms) to see if the Solenoid is fully retracting between shots. Use your finger to feel for the retract if nessacary
4. Adjust SP Ret up or down as needed, until you have a consistent and reliable retraction. Because Solenoids will retract slower with a full magazine, add approx. 10ms to this number.

After you have completed the SP Ret calibration, you can then move onto your Pulse time (SP Hi, SP Lo)

SP Hi and SP Lo Calibration

1. Fully Charge battery
2. Adjust SP Hi and SP Lo to 150ms
3. Slowly lower each setting (keeping them the same) until the strokes are quick, but not short stroking the solenoid (extending the solenoid before full retraction).
4. Use your finger to gauge how hard the solenoid is hitting it
5. Keep reducing the time until it starts to feel weaker
6. Add a small amount of (5-10ms) as a safety margin.
7. Test the firing rate. Write this value down for future reference. (SPHi)
8. Bring the Battery to Storage charge. Then repeat steps 3 – 7 for SP Lo, adjusting up or down as needed.

Once you have set up your Retraction and Pulse Times for your solenoid, make sure to write these values down in case you ever have to change them, or reset to factory settings. Reducing these values will make the solenoid fire faster, but at the cost of reliability.