

Spitronics - ECU - RapidFire Spinning - Guide

TuneBox



The TuneBox is a handheld controller that allows the driver to adjust RPM limits and exhaust effects in real time.

1. Overview

RapidFire Spinning Mode allows switching between:

- Engine Limiter (performance / control)
- Launch Limiter (noise / effects)

Control is done using:

- POT (rotary control)
- RapidFire button

👉 No map switching is required

2. Basic Operation

Engine Limiter Mode (POT > 95%)

When the POT is fully clockwise:

- Engine limiter is active
- No timing or fuel changes
- Maximum performance

You can:

- Adjust RPM using the POT
- Press the RapidFire button (POT > 95%) to change frequency

Launch Limiter Mode (POT < 95%)

When the POT is below 95% and the RapidFire button is pressed:

- Launch limiter is activated
- Timing retard and fuel enrichment are applied

You can:

- Adjust RPM using the POT
 - Press the RapidFire button to change bang frequency
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3. Important Rules

⚠ Do not mix controls incorrectly:

- Pressing the button while adjusting the POT may switch modes
 - POT > 95% → Engine Limiter
 - POT < 95% + button press → Launch Limiter
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4. Error Codes (Normal Operation)

- Code 9 → Engine Limiter active
- Code 12 → Launch Limiter active

👉 These are informational only, not faults

5. Engine Limiter Setup

Go to:

Sensor Configuration → POT

Set:

- Mode → Spinning

POT Sensor

POT Selection ⚠

POT Value

Go to:

Features → **Engine Limits** → **Engine Safety Limits**

Set:

- Normal RPM Limit (maximum)
- Limiter Type

Normal RPM Limit (RPM)

Limiter Type

Rapid Fire Frequency

Limiter Type Options

- Hard Cut → most common
- Spark Only → loud, erratic bangs
- RapidFire → constant machine-gun effect
- RapidFire Frequency (0–10)

Notes

- No timing or fuel changes in this mode
 - Engine runs at full performance before the limiter
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6. Launch Limiter Setup

Go to:

Features → **Launch/Spinning Control** → **Engine Safety Limits**

Set:

- Limiter Type
- RapidFire Frequency (0–10)
- Timing (during RapidFire)
- Fuel Enrichment (during RapidFire)

Limiter Type	<input type="text" value="Spark Only"/>
Rapid Fire Frequency	<input type="text" value="4"/>
Timing	<input type="text" value="6"/> (*BTDC)
Fuel Enrichment	<input type="text" value="10"/> (%)
Launch Activation Method	<input type="text" value="POT"/>

Notes

- This mode is used for sound effects and flames
- Not intended for drag racing launch control

Recommended Setup

- Limiter Type → Spark Only + RapidFire
 - RapidFire Value → controls bang frequency
 - Timing:
 - 30 = no timing change
 - Lower values = more aggressive
 - Fuel Enrichment:
 - 0% = no extra fuel
 - Increase for louder bangs
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7. Control Behaviour

RapidFire Button

Each button press:

- Frequency decreases → faster bangs
- When minimum is reached → resets to maximum

POT Behaviour

- Fully clockwise → Engine Limiter only
 - Turn anti-clockwise → lowers RPM limit
 - Below 95% → enables Launch Limiter (with button press)
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8. Disable Launch Limiter

To return to normal operation:

👉 Turn the POT fully clockwise

Quick Summary (Driver Use)

- POT full → Engine limiter (clean, strong)
- POT down + press button → Launch limiter (bangs & flames)
- Button → controls sound speed
- POT → controls RPM